RESULTATIVE CONSTRUCTIONS IN KOREAN

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY OF HAWAI'I IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN LINGUISTICS

DECEMBER 2004

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Acknowledgements

I would like to thank the following people for their help in completion of my dissertation.

I am greatly indebted to my advisor, William O’Grady, whose determination and devotion to his work has always inspired me. He guided me through every stage of the writing of my dissertation with constant support and honest evaluation of the strong and weak points of my ideas. His ever-insightful comments helped me to formulate better arguments, and his pointed suggestions led me to more clearly express my ideas. Through discussions with him, I learned a great deal about how to approach problems in a principled way, which helped me to better handle the data and provide more insights on the topic.

I am deeply grateful to Ho-min Sohn, whose insights about Korean linguistics have always amazed me, for his warm encouragement and support. He was generous with his time and sharing his profound knowledge with me, which broadened my knowledge of Korean Linguistics.

I benefited a great deal from discussions with John Haig, who was kind enough to agree to serve as a member of my committee although I never took classes from him. His insights on the Japanese language helped me to keep an objective view on the topic. His warm support and encouragement were greatly appreciated.

I am very grateful to Robert Bley-Vroman, whose questions and comments helped me to evaluate my ideas from a different view. His questions at the defense led me to look more into topics discussed in chapter 3. Many heart-felt thanks also go to the outside member of my committee, Shi-qiang Zhang who also provided warm support and encouragement to me.

I would also like to thank my Master’s thesis committee members at the University of California, Davis. Without their help and support, I would not have been able to make it this far.

I am immensely grateful to Mary Schleppegrell, my Master’s thesis advisor, for her patience and trust in me. Her genuine interest in my success helped me to excel in what I do, and her constant care helped me through my graduate study at UCDavis.

I cannot thank enough Steven Lapointe, who set the high standards for me and believed in me. My stay at UCDavis would not have been the same without his help and support. This will always be deeply appreciated. I also thank Patrick Farrell for his comments and questions.
I thank my fellow students, who helped me with native judgments and/or practical matters of life during my stay in Hawaii. They include: Sang-yee Cheon, Sun-young Lee, Jee-won Han, Hsiu-chuan Liao, Jae-yeon Kim, In-kyu Park, In-sung Ko, and Jung-hee Kim. In particular, I thank Sang-yee Cheon for her kindness, Sun-young Lee for discussions of ideas at early stages of my stay in Hawaii, and Hsiu-chuan Liao for her willingness to share the information about the dissertation writing process with me. I also thank Jennifer, the Linguistics Department secretary, who was kind enough to listen to my problems both within and outside the Department.

I thank the Department of Linguistics for providing me with financial support during my stay in Hawaii.

I thank my friends who gave me emotional and moral support during my graduate study. My best friend, Eun-pa Cho, was more than willing to share her native intuitions with me whenever I needed her help. She was always ready to discuss linguistic matters with me and did her best to provide stimulating discussions, although she was extremely busy with her own study and teaching responsibilities. My high school friend, Hye-cheon Ha, and a friend from UCDavis, Ping-hsuan Fung, gave me emotional support and encouragement at various stages of my graduate study. A friend from the University of Hawaii, Jun-tsu Chao, shared with me invaluable lessons she learned from her own experience as a doctoral student. Her stories gave me comfort because they made me realize that every doctoral student deals with the problems I faced.

Finally, special thanks go to my family members, who have patiently endured my absence in their lives and provided me with never-ending support and love. My parents’ unconditional love and confidence in me have given me strength to move forward. My father, Gil-yeon Lee, who would have been very proud of me, encouraged me with firm belief that I can excel in what I do. My mother, Jin-sun Park, has been the biggest supporter and inspiration for me. Knowing that I am in her prayers and thoughts every day keeps me going.

My sister, Eun-jung, gladly provided me with Korean judgments throughout the writing of my dissertation, despite the fact that she was juggling three kids. She also gave me steady support during my graduate study, along with her husband, Ho-hyen Kim. My brother, Sung-su, who has taken up the burden of being the head of the household since the spring of 2002, also had confidence in me and provided support to me.

This thesis is dedicated to the memory of my father, who tried his best to be a good provider for his family with limited resources available to him, and whose logical and analytical thinking has had a profound impact on me.
Abstract

The main goal of this thesis is to provide a general description of Korean resultative constructions based on unergative, unaccusative and transitive verbs and to examine the syntactic structure associated with each construction. It is concluded that Korean unergative verbs do not normally permit the predicative type of resultative patterns, which involves a secondary resultative predicate, in contrast to unaccusative and transitive verbs. In addition, as will be shown in chapter 3, Korean does not allow patterns in which a resultative predicate is predicated of the subject of a matrix verb. Based on these facts, it is argued that resultative constructions in Korean are constrained by the Direct Object Restriction, which states that a resultative phrase is predicated only of direct objects (Levin and Rappaport 1995), and that the resultative construction can therefore be used as diagnostic for unaccusativity in Korean.

An examination of the syntactic behavior of each construction also reveals that resultative patterns based on unaccusative verbs cannot occur with verbal resultative predicates, whereas resultative patterns built around transitive verbs can. It is argued in chapters 4 and 5 that this contrast can be accounted for by an aspectual constraint (i.e., the Single Delimiting Constraint) on delimiting eventualities, which states that the event described by a verb may be delimited only once (Tenny 1994). The fact that resultatives based on unaccusative verbs cannot occur with verbal resultative predicates is attributed to lexical delimitation of the matrix verb and the resultative predicate, which leads to
double delimiting of a verb phrase, inconsistent with the Single Delimiting Constraint. On the other hand, the occurrence of verbal resultative predicates in resultatives built around transitive verbs does not violate the Single Delimiting Constraint, in that the matrix verb is not lexically delimited and a verb phrase therefore involves only one single delimiting.

Another finding of this thesis, which is the main focus of chapter 6, is that resultative constructions built around transitive verbs are of two types. In contrast to patterns involving an adjectival resultative predicate, only those occurring with a verbal resultative predicate allow a nominative-accusative alternation on the NP of which a resultative phrase is predicated. A closer examination of the case-alternating patterns reveals that nominative-marked patterns do not have the same syntactic structure as accusative-marked patterns. Based on the results of tests involving negative polarity items, it is argued that nominative-marked patterns are biclausal while accusative-marked patterns are monoclausal.
Abbreviations

The following abbreviations are used to label the linguistic terms employed in this thesis.

- NOM: nominative marker
- ACC: accusative marker
- DAT: dative marker
- TOP: topic marker
- LOC: locative
- DE LIM: delimiter
- HaN: honorific
- POST: postposition
- PAST: past tense
- PRES: present tense
- DECL: declarative
- CAUS: causative
- IND: indicative suffix
- PERF: perfective
- PROG: progressive
- PL: plural
- CL: classifier
- ADV: adverb
- COMP: complementizer
- PASS: passive
- NEG: negative
- IMP: imperative
- CONJ: conjunction
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Chapter 1

Introduction

1.1 Introduction

The main goal of this thesis is to explore the syntactic properties of the resultative construction in Korean. This thesis focuses on two main interests. The first involves the relation between unaccusativity and the resultative construction. This thesis argues that resultative construction in Korean reflects the unaccusative-unergative distinction, in that unergative verbs do not form resultative patterns whereas unaccusative verbs do. In particular, unlike English, Korean observes the Direct Object Restriction, which hinges on unaccusativity, since Korean does not allow a resultative phrase to be predicated of a subject of a matrix verb.

The other main interest involves resultative constructions based on transitive verbs, which can be grouped into two subtypes (Type I and Type II) with respect to a case alternation on the NP of which a resultative phrase is predicated. Focusing on patterns involving a verbal resultative predicate (Type II), which allow a case alternation, this thesis delves into the syntactic structure of nominative-marked patterns (NP-nom [NP-nom V-key] V) and accusative-marked patterns (NP-nom NP-acc V-key V). It is argued that these two patterns do not have the same syntactic structure.
1.2 Types of resultative construction

The ‘resultative construction’ refers to expressions that designate the result state (a resulting event) brought about as a result of the action denoted by a verb (a causing event). This broad sense includes the clausal type that involves subordinate clauses or two separate sentences as well as the predicative type that involves secondary predication (i.e., a phrase lacking a syntactic subject). In the predicative type, which is the interest of this thesis, a causing activity is described by the matrix verb, and the result state is denoted by a resultative phrase. Examples of each type in English and Korean are provided in (1) and (2), respectively.

(1) Resultative construction in English

   a. Predicative resultatives
      (i) Mary pounded the metal [flat].
      (ii) The river froze [solid].
      (iii) John shouted himself [hoarse].

   b. Clausal resultatives
      (i) Mary pounded the metal [until it was flat].
      (ii) Mary hammered the metal; [consequently, the metal became flat].
           (Wechsler and Noh 200: 393)

(2) Resultative construction in Korean

   a. Predicative resultatives

          Kim-NOM wall-ACC red-KEY paint-PAST-DECL
          ‘Kim painted the wall red.’

---

1 In this sense, expressions such as *He is gone* may be also referred to as ‘resultatives’ (Trask 1993: 240). But, in this thesis, the term *resultative* is reserved for the predicative type.
(ii) hoswu-ka [tantanha-key] el-ess-ta.
lake-NOM solid-KEY freeze-PAST-DECL
‘The lake froze solid.’
(J-B Kim 1993: 471)

b. Clausal resultatives

Sumi-TOP rice-ACC stomach-NOM full-KEY eat-PAST-DECL
‘Sumi ate rice to the point where her stomach (she) was full.’

Tom-TOP shoe-NOM threadbare-KEY run-PAST-DECL
‘He ran to the point where his shoes were threadbare.’

A defining characteristic of the predicative construction is that a matrix verb shares an argument with the resultative predicate (Wechsler 1997, Wechsler and Noh 2001). In particular, an argument of the matrix verb functions as the semantic subject of the resultative predicate. In *John pounded the metal flat*, the verb *pound* takes two arguments (an external and an internal argument), and the adjective *flat* takes an (external) argument (Carrier and Randall 1992: 177). The NP *the metal* is an argument of the resultative predicate *flat* as well as that of the verb *pound*. In contrast to the situation for the predicative type, no argument-sharing is found between matrix verb and resultative predicate in the clausal type, as in (1b) and (2b) (Wechsler 1997, Wechsler and Noh 2001). In the clausal resultative *John pounded the metal until it was flat*, the pronoun *it* is an argument of the adjective *flat*, but not an argument of the verb *pound* since the adjective *flat* and the verb *pound* occur in separate clauses. For the same reason, the NP *the metal* is not an argument of the adjective *flat*. 
Another defining characteristic of the predicative construction is that a resultative predicate lacks a syntactic subject. The NP of which a resultative predicate is predicated is syntactically tied to the matrix verb, not to the resultative predicate (Levin and Rappaport 1995, Simpson 1983, among others). In the sentence *John pounded the metal flat*, the NP *the metal* is a direct object of the matrix verb. The same holds for resultative constructions based on unergative verbs occurring with non-subcategorized NPs (i.e., *fake objects* in Simpson's (1983) terminology), which do not have argument-sharing between matrix verb and resultative predicate. In *John shouted himself hoarse*, the NP *himself* is a direct object of the verb, as indicated by the case marking, although it is not an argument of *shout*.

1.3 Resultative constructions and unaccusativity

It has been argued that the resultative construction may be used as a diagnostic for unaccusativity (Levin and Rappaport 1995, among others). The claim is based on the observation, first made by Simpson (1983), that unergative verbs (e.g., *He ran tired*) cannot occur in the resultative construction in English whereas unaccusative verbs (e.g., *The river froze solid*) can. However, this idea has been challenged by counterexamples in which a resultative phrase is predicated of the subject of a matrix verb (Wechsler 1997, Wechsler and Noh 2001). Although few in number, the existence of patterns in which a resultative phrase is predicated of the matrix subject (e.g., *The wise men followed the star out of Bethlehem*; Wechsler 1997: 313) seriously undermines the claim that the unaccusative-unergative distinction is reflected in the English resultative construction.
However, as will be shown in chapters 3 and 4, the unaccusative-unergative distinction holds for the Korean resultative constriction since unergative verbs in Korean only form CLAUSAL resultatives, in contrast to unaccusative verbs that occur in PREDICATIVE resultatives.

1.3.1 The Unaccusativity Hypothesis

The Unaccusative Hypothesis, first formulated by Perlmutter (1978) and later adopted by Burzio (1986), proposes that there are two classes of intransitive verbs, unergative and unaccusative verbs. The claim is that the two classes of intransitive verbs are associated with different syntactic configurations. Subjects of unaccusative verbs originate in direct object position whereas subjects of unergative verbs are generated in subject position. The sole argument of an unaccusative verb moves to subject position to get Case because unaccusative verbs do not have the ability to assign accusative Case (Burzio 1986). The difference between unaccusative and unergative verbs at deep structure can be represented as follows:

(3) a. Unaccusatives: $[s \quad [v_p \ V \ NP]]$ (deep structure)

    $[s \ NP_i \ [v_p \ V \ t_i]]$ (surface structure)

b. Unergatives: $[s \ NP \ [v_p \ V]]$

Since the introduction of the Unaccusative Hypothesis, many studies have examined various languages and found several phenomena that bear the unaccusative-unergative distinction (Belletti 1988, Bresnan and Kanerva 1990, Bresnan and Zaenen...
1990, Gerdts 1982, Harris 1987, Holisky 1987, Kishomoto 19996, Legendre 1989, McClure 1990, Merlan 1985, Miyagawa 1989, Tsujimura 1990a & b, Williamson 1979, Zaenen 1988). Some studies take a syntactic approach to unaccusativity, arguing that the unaccusative-unergative distinction is syntactically encoded (Burzio 1986, Perlmutter 1978, 1989, to name a few). On the syntactic approach, unaccusativity is reduced to a single syntactic property that involves a direct internal argument, but no external argument. Hence, various phenomena that manifest the unaccusative-unergative distinction can be described in the same way with reference to this single property.2 On the other hand, other studies resort to semantic explanations which rely on verb meanings alone (Goldberg 1992, Van Valin 1987, 1990, Zaenen 1988, among others).3, 4

On the syntactic approach, by hypothesis, unaccusative and passive verbs have a direct internal argument, but no external argument. This assumption is supported by the fact that several syntactic constructions, such as the perfective auxiliary selection,

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2 In search for a consistent semantic characterization, Van Valin (1990) utilizes the notion of macrorole (ACTOR and UNDERGOER) in the context of Role and Reference Grammar. In his account of the English resultative construction, unaccusativity is found only with verbs that take an undergoer argument. But, the problem is that the notion ‘undergoer’ cannot be reduced to a single semantic feature, given that the macrorole UNDERGOER subsumes a number of specific thematic relations such as patient, theme, and locative.

3 Rosen (1981) points out that some verbs with similar meanings across languages may belong to different classes, even though a striking semantic similarity is found between unaccusative verbs across languages in many cases, as noted by Perlmutter (1978). For example, the verb corresponding to ‘die’ is an unaccusative verb in Italian whereas it is an unergative verb in Choctaw. Similarly, the verb meaning ‘sweat’ is an unergative verb in Italian and an unaccusative verb in Choctaw.

4 For a discussion of unaccusative mismatches, see Levin and Rappaport (1989), and for an overview of unaccusativity, see Grimshaw (1990).
participial absolutes and *ne*-cliticization in Italian, group unaccusative and passive verbs together (Burzio 1986, Perlmutter 1989, Rosen 1984).

Italian has two perfective aspectual auxiliaries *essere* 'be' and *avere* 'have.' The auxiliary *essere* (è) 'be' occurs with unaccusative verbs and passive verbs while the auxiliary *avere* (ha) 'have' is compatible with transitive and unergative verbs (Burzio 1986, Perlmutter 1989, Rosen 1981). The contrast is illustrated in the examples in (4), which are taken from Burzio (1986: 53-4).

(4) Perfective auxiliary selection in Italian

a. **Transitive verb**
   Giovanni la **ha** accusata.
   Giovanni her has accused (fem.)
   'Giovanno has accused her.'

b. **Unergative verb**
   Giovanni **ha** telefonato.
   Giovanni has telephoned
   'Giovanni has telephoned.'

c. **Unaccusative verb**
   Maria è **arrivata.**
   Maria is arrived (fem.)
   'Maria has arrived.'

d. **Passive verb**
   Maria è stata accusata.
   Maria is been accused (fem.)
   'Maria has been accused.'

Similarly, the participial absolute construction in Italian distinguishes unergative verbs from unaccusative verbs in that the former is not compatible with the construction, as (5) and (6) illustrate.
(5) Unaccusative verbs

a. Cadute dall’albero, le arancie sono rimaste a terra.  
   ‘Fallen from the tree, the oranges remain on the ground.’

b. Uscite le donne, gli uomini hanno cominciato a discutere.  
   ‘The women having left, the men began to discuss them.’
   (Perlmutter 1989: 67-8)

(6) Unergative verbs

a. *Starnutito all’improvviso, Giorgio non sapeva cosa fare.  
   ‘Having sneezed unexpectedly, Giorgio didn’t know what to do.’

b. *Gridato ai bambini, Giorgio è uscito.  
   ‘Having shouted to the children, Giorgio left.’
   (Perlmutter 1989: 68)

The observation that only unaccusative verbs are compatible with participial absolutes is further supported by examples such as (7), in which the nominal in a participial absolute can be interpreted only as a direct internal object. It cannot be construed as a subject, as illustrated in (7a).

(7) Vinti i Frabiani, scoppiarono gli applausi.  
Won the Frabiani exploded the applause

a. ‘*The Frabians having triumphed, applause broke out.’

b. ‘The Frabians having been defeated, applause broke out.’
   (Rosen 1981: 48)

1.3.2 The Direct Object Restriction

It has been argued that the resultative construction can be used in English as a diagnostic for unaccusativity (Carrier and Randall 1992, Levin and Rappaport 1995,
Simpson 1983, Van Valin 1990, to name a few). This was based on the observation that a resultative phrase can be predicated of direct objects of transitive verbs, as in (8), and subjects of unaccusative and passive verbs, as in (9) and (10), but not subjects of unergative verbs, as in (11).

(8) Resultative constructions based on transitive verbs
   a. Mary burned the cake [black].
   b. Tom painted the house [red].

(9) Resultative constructions based on unaccusative verbs
   a. The river froze [solid].
   b. The bottle broke [open].

(10) Resultative constructions involving passive verbs
    a. The table was wiped [clean].
    b. She was shaken [awake] by the earthquake.

(11) Resultative constructions based on unergative verbs
    a. *We yelled [hoarse].
    b. *He walked [tired].

The fact that subjects of unergative verbs cannot be associated with resultative phrases whereas subjects of unaccusative verbs can, just like subjects of passive verbs, can be explained based on the assumption that subjects of unaccusative verbs and passive verbs originate in direct object position. Given this assumption, the generalization appears to be that resultative phrases can be predicated only of direct objects and that the distribution of NPs of which a resultative predicate is predicated can be described in terms of their grammatical role (i.e., a direct object). That is, their distribution is reduced
to a syntactic requirement such as the Direct Object Restriction, which states that a resultative phrase is predicated only of direct objects (Levin and Rappaport 1995).  

Further support for the Direct Object Restriction (the DOR, hereafter) comes from unergative-based resultative constructions involving non-subcategorized NPs (i.e., *fake objects* in Simpson’s (1983) terms), as in (12). In these patterns, a resultative phrase is predicated of a direct object, not of a subject.

(12) **Unergative-based resultatives involving non-subcategorized NPs**
    a. Mary shouted herself [hoarse].
    b. He sneezed his handkerchief [soggy].

In addition, the ungrammaticality of the unaccusative-based resultatives in (13) can be easily explained with reference to the DOR.

(13) a. *During the spring thaw, the boulders rolled the hillside bare.
    b. *The snow [VP melted t [NP the road] slushy].

(Levin and Rappaport 1995: 71)

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5 On Van Valin’s (1990) semantic account, the notion ‘direct object’ is replaced by the notion ‘undergoer’. In this account, in which verbs are classified into those denoting activity, state, achievement, and accomplishment based on their aspectual properties, only the latter two are compatible with resultative constructions (Van Valin 1990: 255). This is attributed to the fact that they have an aspectual component, the STATE, which is always predicated of an undergoer argument. Unergative verbs are typically activity verbs which do not have the STATE in their logical structure, while unaccusative verbs typically denote achievement. However, Van Valin’s account fails to explain why sentences such as (13) are ungrammatical despite the presence of the STATE in the logical structure of the matrix verb.
The sentences in (13) are ungrammatical because two NPs must occupy the same direct object position—the NP *the road* and the trace of the NP *the snow*, which moves to subject position to get Case (Burzio 1986), as illustrated in (13b).

Although the DOR comes close to providing an accurate description of the English resultative construction, it ultimately fails for English because of patterns in which a resultative predicate is predicated of a matrix subject (Wechsler 1997, Wechsler and Noh 2001). Examples of this type (i.e., *subject-oriented patterns* in Rappaport and Levin’s (2001) terminology) are provided in (14) and (15).

(14) **Subject-oriented patterns based on transitive verbs**
   a. The wise men followed the star [out of Bethlehem].
   b. The sailors managed to catch a breeze and ride it [clear of the rocks].
   c. He followed Lassie [free of his captors].
   (Wechsler 1997: 313)

(15) **Subject-oriented patterns based on unergative verbs**
   a. Robert ran [clear of the fire].
   b. However, if fire is an immediate danger, you must jump [clear of the vehicle].
   (Levin and Rappaport 1995: 186)

The existence of subject-oriented patterns involving transitive verbs such as (14), and those involving unergative verbs such as (15) seriously compromises the DOR. However, this does not mean that the validity of the Unaccusative Hypothesis should be questioned, as pointed out by Rappaport and Levin (2001). It only means that the resultative construction is not a diagnostic for unaccusativity in English.

In contrast with the situation in English, the DOR seems to hold for Korean in that Korean unergative verbs do not form (predicative) resultative constructions, as will be
shown in chapter 3. In particular, a serial verb complex is used instead of a simple verb to indicate a change in location described by a resultative phrase in patterns equivalent to subject-oriented patterns in English. That is, Korean does not allow the type of subject-oriented patterns English does. In Korean, resultative phrases are not predicated of subjects of transitive and unergative verbs, and only direct objects of transitive verbs and subjects of unaccusative verbs are associated with resultative phrases.

1.4 The organization of the dissertation

The discussion of the dissertation proceeds in the following manner.

Chapter 2 consists of two parts. The first part discusses general issues related to resultative constructions such as types of resultative predicates, requirements for resultative formation and the argument structure of verbs in the resultative construction. The second part focuses on an aspectual constraint (the Measuring-Out Constraint), which was formulated by Tenny (1987, 1994). It reviews the key points of the constraint that are relevant to the discussion of chapters 4 and 5.

Chapter 3 discusses resultative patterns based on unergative verbs in Korean, in comparison with English unergative-based resultative patterns. It is argued that Korean unergative verbs do not form (predicative) resultative patterns, unlike English unergative verbs. First, it is shown that Korean does not permit subject-oriented patterns and that a serial verb complex is used in place of a simple verb to indicate direction. Second, it is argued that grammatical patterns such as incorporated-theme patterns (i.e., patterns in which a theme argument is incorporated into a resultative phrase) and patterns involving
non-subcategorized NPs are clausal. In particular, the status of non-subcategorized NPs is closely examined to show that they are syntactically tied to the resultative predicate, not the matrix verb. Then, chapter 3 gives a brief discussion of degree interpretations which are normally associated with resultatives based on unergative verbs.

Chapter 4 considers three issues regarding resultative constructions built around unaccusative verbs. First, the status of key-marked phrases occurring in this construction is examined, based on the arguments put forward by Wechsler and Noh (2001). This thesis attempts to show by examining a variety of examples that some key-marked phrases occurring in resultatives based on unaccusative verbs are not adverbs, contrary to Wechsler and Noh’s (2001) claim. The second half of chapter 4 attempts to explain the ill-formedness of unaccusative-based patterns involving verbal resultative predicates, based on the Single Delimiting Constraint, which states that a verb phrase may involve only one measuring out and be delimited only once (Tenny 1994: 79). Then, the last section discusses the relation between the agentivity of matrix verbs and their ability to participate in resultative formation. This thesis argues that agentivity is not a factor in resultative formation, based on several pieces of evidence, which suggests that unaccusative verbs can form resultatives.

Chapters 5 and 6 are devoted to resultative constructions based on transitive verbs. Chapter 5 aims to show that the well-formedness of patterns involving verbal resultative predicates follows from the fact that they observe the Single Delimiting Constraint (Tenny 1994). Then, this thesis shows that transitive-based resultatives involving verbal resultative predicates are not causatives, based on the negation facts,
which show that transitive-based resultatives involving verbal resultative predicates behave the same as those involving adjectival resultative predicates. Lastly, this chapter discusses the semantic properties of resultative predicates occurring in resultatives based on transitive verbs with respect to stativity, agentivity and telicity.

Chapter 6 focuses on transitive-based resultatives involving verbal resultative predicates, which exhibit a nominative-accusative alternation on the NP of which a resultative predicate is predicated. Tests such as those involving negative polarity items and adverb modification are used to show that nominative-marked patterns have a different syntactic structure than accusative-marked patterns. In particular, based on the results of tests involving negative polarity items, it is argued that nominative-marked patterns (NP-nom [NP-nom V-key] V) are biclausal whereas accusative-marked patterns (NP-nom NP-acc V-key V) are monoclausal.

Lastly, Chapter 7 summarizes the arguments presented in this thesis and gives concluding remarks.
Chapter 2

Issues involving resultative constructions

2.1 Introduction

This chapter consists of two parts. The first part considers several general issues involving resultative constructions, such as types of resultative phrase, requirements for resultative formation, the argument structure of verbs, and the interpretation of the resultative construction. Although languages may differ with respect to the types of resultative phrase they permit, generalizations made about the other issues seem to hold true across languages. For example, the observation that stative verbs cannot participate in resultative formation is true for Korean as well as English because it follows from the more general fact that stative verbs do not have properties that can create eventualities with an endpoint (Levin and Rappaport 1995).

The second part of the chapter considers an aspectual constraint (the Measuring-Out Constraint) on direct internal arguments of a verb, which is relevant to the discussion of chapters 4 and 5. It reviews the key points of the constraint, focusing on three types of measuring out, which entails delimitedness, since what is meant by measuring out and delimitedness is crucial to the discussion of a more general constraint (the Single
Delimiting Constraint) in chapters 4 and 5. I then discuss the role of resultative phrase from an aspectual perspective (Tenny 1987, 1992, 1994).

2.2 Issues involving resultative constructions

This section considers several issues associated with resultative constructions. Section 2.2.1 discusses types of resultative phrase that occur in English and Korean, while section 2.2.2 is devoted to two properties required of verbs that form resultative patterns (Rapoport 1990, 1993). Section 2.2.3 then focuses on the argument structure of verbs in the resultative construction. Several syntactic processes are examined in support of the view that a verb projects the same argument structure in a resultative construction as it does when it appears in isolation. Lastly, section 2.2.4 briefly discusses the interpretation of the resultative construction.

2.2.1 Types of resultative phrase

Languages differ with respect to the type of resultative predicates they allow. In Italian, prepositional resultative phrases are very common. Adjectival resultative phrases are also allowed, although not as common as prepositional resultative phrases (Napoli 1992). However, noun phrases cannot occur as a resultative predicate in Italian, unlike English, which allows nominal resultative predicates, as in (1c) (Carrier and Randall 1992, Simpson 1983). In English, resultative predicates expressed by adjectives, as in (1a), are very common although resultative predicates expressed by prepositional phrases, as in (1b), are also permitted.
Types of resultative phrase in English

a. Tom pounded the metal [AP flat].

b. I painted the car [NP a pale shade of yellow].

   (Simpson 1983: 143)

c. Mary broke the bottle [pp to little pieces].

Korean also differs from English in that Korean does not permit nominal resultative phrases. They must be accompanied by a postposition –ulo, which makes them into a postpositional phrase (J-B Kim 1993). As (2) illustrates, a sentence becomes ungrammatical without the postposition.

Resultatives occurring with a postpositional phrase

a. ku-nun censen-ul sey-katak-* (ulo) call-ass-ta.
   he-TOP wire-ACC three-part-POST cut-PAST-DECL
   ‘He cut the wire into three parts.’
   (J-B Kim 1993: 479)

b. pyeng-i sey-ccok-* (ulo) kayci-ess-ta.
   bottle-NOM three-piece-POST break-PAST-DECL
   ‘The bottle broke to three pieces.’

Korean differs from English in another aspect. Unlike English, which does not allow verbal resultative predicates, Korean allows verbal as well as adjectival resultative predicates.

Patterns involving an adjectival resultative predicate

   Mary-NOM ice-ACC solid-KEY freeze-CAUS-PAST-DECL
   ‘Mary froze the ice solid.’

   mother-NOM hair-ACC short-KEY cut-PAST-DECL
   ‘Mother cut her hair short.’
(4) Patterns involving a verbal resultative predicate

   John-NOM balloon-ACC explode-KEY inflate-PAST-DECL
   ‘John blew the balloon to the point where it exploded.’

b. ai-tul-i [ttamna-key] ttwui-ess-ta.
   child-PL-NOM sweat.come.out-KEY run-PAST-DECL
   ‘Children ran to the point where they became sweaty.’

The distinction between adjectives and verbs in Korean may not be as clear as that in English due to the fact that both adjectives and verbs in Korean are conjugated. However, there are several tests which distinguish one from the other. Compatibility with the non-past indicative form \(-\text{nu}\)n is one of those tests. Verbs can occur with the non-past indicative form \(-\text{nu}\)n (Sohn 1999: 210), whereas adjectives cannot. Hence, a sentence involving an adjective becomes ungrammatical if the non-past indicative form \(-\text{nu}\)n is added, as illustrated in (6).

(5) Verbs

a. ai-ka pap-ul mek-nun-ta.
   child-NOM rice-ACC eat-IND-DECL
   ‘The child eats the rice.’

b. phwungsen-i theci-n-ta
   balloon-NOM explode-IND-DECL
   ‘The balloon explodes.’

\textsuperscript{1} The alternation between the forms \(-\text{nu}\) and \(-n\) is phonologically conditioned. The form \(-\text{nu}\) occurs with a stem ending in a consonant and the form \(-n\) is added to a stem ending in a vowel.
Identifying resultative patterns by reference to the syntactic category of resultative phrases with which they occur helps provide a more systematic description of the resultative construction in Korean. For example, the fact that certain unaccusative-based patterns are not acceptable may appear to be random. However, a closer examination of resultative phrases reveals that unaccusative verbs can occur with adjectival resultative predicates, but not with verbal resultative predicates. In addition, in resultative patterns built around transitive verbs, a (nominative-accusative) case alternation is typical of patterns occurring with verbal resultative predicates.

2.2.2 Requirements for resultative formation

It has been observed that two properties are required for a (matrix) verb to participate in resultative formation. The first required property is that the verb must denote an activity or a process (Rapoport 1990: 40). In other words, stative verbs, whether expressed by transitive verbs, as in (7), or by intransitive verbs, as in (8), cannot occur with resultative phrases. Examples are taken from Carrier and Randall (1995; cited in Levin and Rappaport 1995).
Resultatives based on transitive stative verbs
a. *The appraisers felt the rug [threadbare] through their shoes.
b. *The botanist smelled the moss [dry] from across the room.

Resultatives based on intransitive stative verbs
b. *The POWs survived [into frustration].

Incompatibility of stative verbs with resultative phrases follows from the (typological) fact that there is “no such eventuality as a delimited state” (Levin and Rappaport 1995: 61).² That is, the addition of a resultative phrase cannot create a state that has a definite endpoint from stative verbs. Stative verbs contrast with activity verbs in that they can create delimited activities when a resultative phrase is added. The addition of a resultative phrase provides an endpoint for the event denoted by an activity verb, which makes an activity verb into an accomplishment verb (Levin and Rappaport 1995: 62).

For example, the event described by the matrix verb in (9a) and (9b) below may not have a definite endpoint without a resultative phrase. However, when the resultative

² In Vendler’s (1967) classification, only achievements and accomplishments describe delimited eventualities in that they have a definite endpoint.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>- No inherent endpoint</td>
<td>push the cart, walk</td>
</tr>
<tr>
<td>State</td>
<td>- No initial point and endpoint</td>
<td>know, own, resemble</td>
</tr>
<tr>
<td>Achievement</td>
<td>- Instantaneous culmination</td>
<td>reach the top</td>
</tr>
<tr>
<td></td>
<td>- Inherent endpoint</td>
<td></td>
</tr>
<tr>
<td>Accomplishment</td>
<td>- Inherent endpoint with some length of duration</td>
<td>write a letter, draw a circle</td>
</tr>
</tbody>
</table>
phrase is present, the meaning of the sentence entails that the event described by the verb reaches an endpoint. The culmination of the event takes place when the referent of the direct object achieves the state expressed by the resultative phrase.

(9)  

a. John hammered the metal [flat].
b. Mary wiped the table [clean].

The second required property is that the verb must entail some sort of contact with or effect on its object (Rapoport 1990: 40, Simpson 1983). The second property, which refers to transitive verbs, is based on the observation that many transitive verbs describe activities that are performed upon the referent of a direct object and entail some sort of effect on it. Transitive stative verbs cannot participate in resultative formation, as shown in (10), since they do not entail physical contact or effect on their arguments.

(10)  

*Medusa saw the hero [stiff].
(Rapoport 1990: 39)

Despite the fact that the second required property holds for the majority of resultative patterns in English, it should be modified due to the existence of patterns in which a resultative phrase is predicated of the subject of a matrix verb (*subject-oriented patterns* in Rappaport and Levin’s (2001) terminology), as exemplified in (11).³

³ Rappaport and Levin (2001) point out that subject-oriented patterns are not productive. This is due to the fact that the NP that undergoes some sort of change in sentences built around transitive verbs is normally realized on the referent of a direct object, and it hardly occupies the subject position (Rappaport and Levin 2001, Wechsler and Noh 2001).
(11) **Subject-oriented patterns**
   a. The wise men followed the star [out of Bethlehem].
   b. The sailors managed to catch a breeze and ride it [clear of the rocks].
   c. He followed Lassie [free of his captors].
   (Wechsler 1997: 313)

In examples such as (11), the referent of the subject, not the direct object, undergoes some sort of change as a result of the action described by the matrix verb. In particular, a change is brought about in the location of the entity denoted by the subject NP. Given the existence of subject-oriented patterns, the second property cannot be described in terms of the position (i.e., a subject or a direct object) occupied by the NP of which a resultative phrase is predicated. Instead, the second requirement for resultative formation should state that the verb must entail some sort of effect or change in the referent of the NP of which the resultative phrase is predicated, as argued by several researchers (Goldberg 1995, Wechsler 1997, among others).4

However, it should be noted that the reformulated requirement is not precise enough to predict whether a resultative phrase is predicated of the subject or the direct object of a matrix verb. Drawing on Croft’s (1991) work, Rappaport and Levin (2001: 786) point out that only resultative patterns involving non-canonical transitive verbs have a resultative phrase that is predicated of a subject. In contrast, resultative phrases in patterns involving canonical transitive verbs are predicated of a direct object. According

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4 In the arguments put forward by Goldberg (1995) and by Wechsler (1997), the notion of affected theme is invoked to account for the NP of which a resultative phrase is predicated. Goldberg (1995: 188) states that “resultatives can only be applied to arguments which potentially undergo a change of state as a result of the action described by the verb.”
to Croft (1991), the prototypical event type associated with transitive verbs involves "a transmission of force from one entity to another" (p.170-3). That is, an action expressed by a transitive verb is conceptualized as an event that transfers force from one participant to the other. To take an example, in the event described by the sentence *John broke the boulder*, there is a transmission of force from John to the boulder (Croft 1991: 170). As a result of the force transmission, the second entity (the boulder) is affected by the action described by the verb and undergoes a change of state. In sentences involving canonical transitive verbs, the force recipient is normally encoded as the direct object.

The fact that a resultative phrase is predicated of the direct object in patterns involving canonical transitive verbs (i.e., *object-oriented patterns* in Rappaport and Levin’s (2001) terminology) naturally follows from this. A resultative phrase cannot be predicated of the subject because the entity denoted by the subject NP is not the force recipient. This explains why (12a) cannot mean that the referent of the subject *the waiter* is in the state described by the resultative phrase *clean*, being predicated of it, as illustrated in (12c).

(12)  **Resultative pattern involving a canonical transitive verb**

a. The waiter wiped the table [*clean*].

b. The waiter wiped [*the table*], [*clean*].

c. *[The waiter], wiped the table [*clean*].

In contrast, a resultative phrase can be predicated of the subject when a non-canonical transitive verb is involved (Rappaport and Levin 2001: 786). The reason is that
non-canonical transitive verbs do not have an NP denoting an entity that is the force recipient. The examples in (13) help illustrate the point.

(13) **Resultative pattern involving a non-canonical transitive verb**

a. The wise men followed the star [out of Bethlehem].
   (Wechsler 1997: 313)

b. [The wise men], followed the star [out of Bethlehem].

c. *The wise men followed [the star], [out of Bethlehem].

In (13), neither the subject nor the object is the force recipient since a transmission of force is not associated with the meaning of the verb *follow*. The entity denoted by the direct object is not affected by the action described by the verb, and it does not undergo a change (i.e., a change in location). Therefore, as (13c) illustrates, the resultative phrase *out of Bethlehem* cannot be predicated of the direct object *the star*. That is, (13a) cannot yield the interpretation that the star was out of Bethlehem due to the action described by the verb *follow*.

Rappaport and Levin (2001: 786-7) argue that the fact that the direct object of a non-canonical transitive verb is not the force recipient is highlighted by its inability to appear in the *What X did to Y was* frame, which Jackendoff (1987: 394, 1990: 125-30) uses as a test for patienthood. According to them, the *What X did to Y was*... frame identifies an affected entity, in that only the affected entity can appear as Y in the frame. As illustrated in (14), a direct object of a canonical transitive verb can appear as Y in the *What X did to Y was*... frame.
Resultative pattern involving a canonical transitive verb

a. The waiter wiped the table [clean].
b. What the waiter did to the table was to wipe it.

Resultative pattern involving a non-canonical transitive verb

a. The wise men followed the star [out of Bethlehem].
b. *What they did to the star was to follow it.

(Rappaport and Levin 2001: 787)

This is consistent with the observation that direct objects of canonical transitive verbs are affected by the action described by a matrix verb. However, this is not possible with a direct object of a non-canonical transitive verb, as shown in (15) above, which suggests that a direct object of non-canonical transitive verbs such as follow is not an affected entity.

To sum up, in describing the second property required for verbs to participate in resultative formation, what is important is whether a (transitive) verb contains an argument denoting an entity that is the force recipient. The resultative phrase is predicated of the direct object if the verb involves an NP denoting an entity that is the force recipient. Otherwise, the resultative phrase is predicated of the subject.

2.2.3 The argument structure of verbs in the resultative construction

As for lexical relations between a resultative predicate and the NP of which it is predicated, Carrier and Randall (1992), Levin and Rappaport (1995) and Simpson (1983) argue that a verb projects the same argument structure in a resultative construction as in isolation. This view contrasts with that of several analyses such as those proposed by Hoekstra (1988, 1992) in that the latter assume that a matrix verb projects a different
argument structure in a resultative construction than it does when it appears in isolation. These two views greatly differ in their account of resultative constructions based on transitive verbs. The former (e.g., Carrier and Randall 1992) argues that the NP of which a resultative predicate is predicated in a transitive-based resultative construction is an argument of the matrix verb, as is the case in the non-resultative counterpart, whereas the latter (e.g., Hoekstra 1988) argues otherwise.

2.2.3.1 Hoekstra’s (1988) Small Clause account

Hoekstra (1988) claims that a resultative predicate and the NP of which it is predicated form a constituent, namely a small clause. The crucial assumption behind Hoekstra’s claim is that a subject and its predicate always form a constituent and that the predication relation between them must be encoded in a clausal structure (Stowell 1981). On Hoekstra’s account, resultative constructions have the same structure regardless of verb type (i.e., transitive, unergative or unaccusative), as illustrated in (16) and (17), since a postverbal NP functions as the semantic subject of a resultative predicate.

(16) **Resultative constructions based on a transitive verb**
   a. He \([_{VP} \text{hammered} [_{SC} \text{the metal flat}]]\).
   b. The owner \([_{VP} \text{painted} [_{SC} \text{the house red}]]\).

(17) **Resultative constructions based on an unergative verb**
   a. He \([_{VP} \text{sang} [_{SC} \text{himself hoarse}]]\).
   b. The joggers \([_{VP} \text{ran} [_{SC} \text{their Nikes threadbare}]]\).

As mentioned earlier, the claim that a resultative predicate and the NP of which it is predicated form a clause makes different predictions about postverbal NPs in
resultative constructions based on transitive verbs. Unlike Carrier and Randall (1992), Levin and Rappaport (1995) and Simpson (1983), Hoekstra (1988) denies that the NP of which a resultative predicate is predicated (e.g., the metal in (16a)) is an argument of the matrix verb, although this may be the case in the non-resultative counterpart (He hammered the metal). The verb hammer lexically selects the NP the metal as its argument in the non-resultative sentence whereas it does not do so when it occurs in the resultative construction. Rather, the verb selects a result small clause as a complement even though it has no such lexical property (Hoekstra 1988: 123).  

Hoekstra's (1988) Small Clause analysis resonates better with resultative constructions based on unergative verbs. This is because postverbal NPs in unergative-

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5 Three types of small clauses are proposed in Hoekstra's analysis. The subject of a small clause can be a lexical NP, as in (16) and (17), an NP-trace, as in (i) and (ii), or a PRO, as in (iii). Lexical NP subjects are case-marked by the matrix verb, and NP-trace subjects are properly governed by a matrix verb, although not case-marked by it (Hoekstra 1988: 123). Unlike resultative constructions built around transitive and unergative verbs, as in (16) and (17), those based on unaccusative and passive verbs involve an NP-trace that functions as the subject of a small clause (Hoekstra 1988: 122), as (i) and (ii) illustrate. In these patterns, the surface subject is a direct internal argument of the verb, which moves to subject position to get Case, leaving the trace behind (Burzio 1986).

(i) The lakei [vp froze [sc t₁ solid]].
(ii) The tablei was [vp wiped [sc t₁ clean]].

On Hoekstra's account, the ungrammaticality of resultative constructions built around unergative verbs is also explained by reference to small clause. Unergative-based resultatives such as (iii) involve a PRO, which functions as the subject of a small clause that is governed by the verb. The unacceptability of (iii) results from the fact that the PRO is governed, which is a violation of the PRO Theorem (A PRO cannot be governed; Chomsky 1981).

(iii) *Susani [vp ran [sc PROi tired]].
based resultative constructions are not an argument of a matrix verb, unlike postverbal NPs in transitive-based resultatives. The contrast in the status of postverbal NPs in these two resultative constructions can be brought out when the resultative predicate is deleted (Levin and Rappaport 1995: 42). The postverbal NP in a transitive-based resultative construction can occur alone without the resultative predicate, as (18) below shows. In contrast, this is not possible with the postverbal NP in an unergative-based resultative construction, as shown in (19).

(18) **Resultative construction based on a transitive verb**
   a. He hammered the metal [flat].
   b. He hammered the metal.

(19) **Resultative construction based on an unergative verb**
   a. He sang himself [hoarse].
   b. *He sang himself.

Given that the postverbal NP in an unergative-based construction is not an argument of a matrix verb, the only source from which it can get a thematic role is the resultative predicate. This may motivate ideas such as Hoekstra’s Small Clause analysis. However, as pointed out by Levin and Rappaport (1995: 65-6), Hoekstra’s account has a serious drawback, due to the fact that his account is formulated mainly based on resultative constructions built around unergative verbs and transitive verbs that permit unspecified objects (e.g., drink as in They drank the teapot dry; Levin and Rappaport 1995: 37). Hoekstra’s (1988) analysis, which assumes a small clause for all resultative constructions, fails to account for the fact that postverbal NPs in resultative constructions
built around transitive verbs occurring with specified objects are an argument of a matrix verb.

2.2.3.2 Levin and Rappaport’s (1995) account

In contrast to Hoekstra’s Small Clause analysis, an account proposed by Levin and Rappaport (1995) assumes that the argument structure of a verb in a resultative construction is the same as that of the verb in isolation and it correctly captures the fact that the postverbal NP in a transitive-based resultative construction is an argument of a matrix verb. Evidence comes from middle formation, adjectival passive formation, and nominalization (Carrier and Randall 1992). Resultatives based on transitive verbs behave differently than resultatives based on unergative verbs with respect to these processes, which are possible only with verbs that have a direct internal argument (Carrier and Randall 1992: 182, 188). Resultatives based on transitive verbs can form middles and adjectival passives and can undergo nominalization, whereas this is not possible with resultatives built around unergative verbs.

It is assumed that middle formation involves suppression of the verb’s external argument and its ability to assign accusative Case, just as passivization does (Keyser and Roeper 1984). However, the difference between middles and verbal passives is that the unexpressed argument is agentive and volitional in the former whereas this is not required for verbal passives. The passive sentence *Thousands of houses were destroyed (by the hurricane)* is grammatical although the unexpressed NP *the hurricane* is non-agentive and non-volitional. In addition, only verbs whose postverbal NP is a direct
internal argument can form middles (Carrier and Randall 1992: 189). Sentences (20) and (21) illustrate the contrast.

(20) Verb with a direct internal argument
a. She reads *Linguistic Inquiry*.
   (Carrier and Randall 1992: 188)

b. *Linguistic Inquiry* is read by her.
   (verbal passive)

   (middle)

(21) Verb without a direct internal argument
a. The audience laughed at the politician.
   (verbal passive)

b. The politician was laughed at.
   (middle)

c. *Politicians laugh at* easily.
   (Carrier and Randall 1992: 189)

The verb *read*, which has a direct internal argument, can form a middle as well as a passive, as (20b) and (20c) illustrate. On the other hand, the verb *laugh*, which does not involve a direct internal argument, cannot form a middle even though it can be passivized, as (21b) shows. This contrast implies that middle formation is sensitive to a different condition than is passivization. Middle formation picks out a smaller set of verbs in that verbs have to meet the direct internal argument condition.

Given the assumption that middle formation applies only to verbs that have a direct internal argument, the grammaticality of the sentences in (22) suggests that postverbal NPs (e.g., *the new seedlings* and *my socks*) in transitive-based resultative constructions are a direct internal argument of a matrix verb. On the other hand, the fact that the middles in (23) are ungrammatical suggests that postverbal NPs (e.g., *competition Nikes* and *Phys Ed majors*) in unergative-based resultative constructions are
not a direct internal argument of a matrix verb.\textsuperscript{6} Examples are taken from Carrier and Randall (1992: 191).

(22) \textbf{Middles from transitive-based resultatives}

\begin{itemize}
  \item a. The farmers water the new seedlings flat. \\
      \hspace{1cm} \rightarrow \text{New seedlings water flat (easily)}.
  \item b. Mary won’t scrub my socks clean. \\
      \hspace{1cm} \rightarrow \text{My socks won’t scrub clean (easily)}.
\end{itemize}

(23) \textbf{Middles from unergative-based resultatives}

\begin{itemize}
  \item a. Marathoners run competition Nikes threadbare. \\
      \hspace{1cm} \rightarrow \text{*Competition Nikes run threadbare (easily)}.
  \item b. They talk Phys Ed majors into a stupor. \\
      \hspace{1cm} \rightarrow \text{*Phys Ed majors talk into a stupor (easily)}.
\end{itemize}

\textsuperscript{6} Goldberg (1995: 183-85) gives a different account for the ungrammaticality of middles derived from unergative-based resultatives. One of the constraints on middle formation is that an unexpressed agent argument must be indefinite or non-specific. The unexpressed agent argument in a middle is interpreted as people in general. However, this condition is not met in middles derived from unergative-based resultatives, in that non-subcategorized postverbal NPs (reflexives and NPs denoting body parts, in particular) are coreferential with the subject of a verb, as (i) shows. That is, middles derived from unergative-based resultatives involve a definite agent argument, as (ii) illustrates.

(i) He cried \textit{himself} asleep.
(ii) He cries asleep easily. (middle)

However, the indefinite condition on middle formation does not account for why unergative-based resultatives involving non-subcategorized NPs such as \textit{competition Nikes} in \textit{Marathoners run competition Nikes threadbare} do not form grammatical middles even though they are not coreferential with the subject and may be non-specific. Given that these postverbal NPs are not an argument of the verb, the direct internal argument condition on middle formation seems to provide a better explanation for the unacceptability of middles derived from resultatives based on unergative verbs.
If the postverbal NP in a transitive-based resultative construction was not an argument of the matrix verb, as Hoekstra claims, the contrast between transitive-based and unergative-based resultatives in middle formation would not be expected. The contrasting behavior of these two types of resultative constructions with respect to middle formation strongly suggests that Hoekstra's (1988) claim about the non-argument status of postverbal NPs in transitive-based resultatives may not be correct. In addition, the fact that resultatives based on transitive verbs form middles adds support to the claim that the argument structure of a verb in a resultative construction does not differ from that of the verb when it appears in isolation (Levin and Rappaport 1995).

Further support for the claim that the postverbal NP in a transitive-based resultative construction is an argument of the matrix verb comes from adjectival passive formation, which makes a passive verb into an adjective. Adjectival passive forms are verbal passive participle forms that occur prenominally (e.g., the [A broken] window) or as a complement of verbs such as seem and look (e.g., The window seemed/looked [A broken]). The effect of adjectival passive formation is to externalize a direct internal argument of a passive verb (Carrier and Randall 1992, Levin and Rappaport 1986). The examples in (24) help illustrate the point.

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7 Several studies (Williams 1981, Bresnan 1982) argue that adjectival passive formation externalizes only theme arguments. If adjectival passive formation is possible only with theme arguments, the expression the fed peas in (24c(ii)) should be acceptable since the NP peas bears the theme role. However, the expression is ill-formed, which suggests that adjectival passive formation is affected by something other than the theme argument condition, as pointed out by Carrier and Randall (1992).
(24)  a. They [v fed] the baby (peas).
       \[ \downarrow \quad \downarrow \]
       Goal  Theme

b. **Verbal passive**
The baby was [v fed] (peas)

c. **Adjectival passive**
   (i) the [A fed] baby
   (ii) *the [A fed] peas

The verb *feed* in (24) has two internal arguments, the direct internal goal argument, which is obligatory, and the theme argument, which is optional (Levin and Rappaport 1986). The claim that only a direct internal argument of a passive verb is externalized by adjectival passive formation is supported by the fact that the direct internal argument *the baby*, not the theme argument *peas*, can appear in a grammatical adjectival passive.

In addition, the contrast in grammaticality of expressions involving a direct internal argument such as *the recently read books* in (25b) and those without a direct internal argument such as *the recently read kids* in (25c) leads to the conclusion that adjectival passive formation applies only to verbs which have a direct internal argument (Levin and Rappaport 1986).

(25)  a. [v read] (books) (to the kids)
       \[ \downarrow \quad \downarrow \]
       Theme  Goal

b. the recently [A read] books

c. *the recently [A read] kids
   (Carrier and Randall 1992: 194)
In (25a), the NP *books* bears the theme role and the NP *the kids* is a goal argument of the verb, which is headed by a preposition. The fact that the NP *the kids* cannot appear in an adjectival passive, as (25c) shows, strongly suggests that only direct internal arguments are compatible with adjectival passives.

Turning to resultative constructions, transitive-based resultatives differ from resultative patterns based on unergative verbs with respect to adjectival passive formation. The former can form adjectival passives while the latter cannot, as (26) and (27) illustrate.

(26) **Adjectival passives from transitive-based resultatives**
   a. the spun-dry sheets
   b. the scrubbed-clean socks
   (Carrier and Randall 1992: 195)

(27) **Adjectival passives from unergative-based resultatives**
   a. *the danced-thin soles
   b. *the run-threadbare Nikes
   (Carrier and Randall 1992: 195)

This contrast should not be expected if the postverbal NP in a transitive-based resultative construction is not an argument of a matrix verb, as argued by Hoekstra (1988). However, the fact that adjectival passives derived from transitive-based resultatives are well-formed, as (26) shows, suggests that the postverbal NP in a transitive-based resultative construction is an argument of a matrix verb. This in turn lends support to the claim that a verb in a resultative construction projects the same argument structure as it does in isolation (Levin and Rappaport 1995).
Nominalization also provides evidence for the argument status of the postverbal NP in a transitive-based resultative construction. The effect of \textit{-ing} nominalization is to suppress the external argument of a verb that is an input to a nominal (Grimshaw 1990).\footnote{An \textit{-ing} nominal can yield either a process or a result reading. A process nominal (e.g., \textit{The rejoicing went on for hours}) describes an event whereas a result nominal denotes the result of the activity described by an input verb (e.g., \textit{The rejoicing was loud}). Only process nominals retain the argument structure of their input verb (Carrier and Randall 1992, Grimshaw 1990).} Another characteristic of nominalization is that only the direct internal argument of a transitive verb can occur in an \textit{of}-NP in the corresponding nominal (Carrier and Randall 1992).\footnote{Intransitive verbs can also be nominalized. However, the status of \textit{of}-NPs in intransitive nominals, which can be optional, is different from that of \textit{of}-NPs in transitive nominals in that they may bear the thematic role of the suppressed external argument. According to Carrier and Randall (1992: 199), \textit{of}-NPs in intransitive nominals such as those in (i) and (ii) are not arguments, but adjunct phrases.} The point is illustrated in the examples (28), taken from Carrier and Randall (1992: 198-200). When the transitive verb \textit{devour} is nominalized, its external argument is not expressed, while its direct internal argument is retained in the form of an \textit{of}-NP, as (28b) illustrates.

\begin{enumerate}
\item[(i)] The rejoicing (of the villagers) lasted for days.
\item[(ii)] The babbling (of the babies) lasted three hours.
\end{enumerate}

In addition, an \textit{of}-NP can be interpreted as an adverbial adjunct, as illustrated in (iii).

\begin{enumerate}
\item[(iii)] The constant rejoicing of the holiday season makes Fred nervous. \\
\textit{(Carrier and Randall 1992: 199)}
\end{enumerate}

To sum up, an \textit{of}-NP in nominals can be interpreted in three different ways: a direct internal argument, as in (28b), an adjunct corresponding to the suppressed external argument, as in (i) and (ii), or an adverbial adjunct, as in (iii) (Carrier and Randall 1992: 199).
Nominals from a transitive verb

a. Hungry students \( [v \text{ devour}] \) vast quantities of junk food.
   \[ \downarrow \text{external argument} \quad \downarrow \text{direct internal argument} \]

b. The \( [N \text{ devouring}] \) of vast quantities of junk food takes no time at all.
   \[ \downarrow \text{direct internal argument} \]

c. *The \( [N \text{ devouring}] \) of hungry students takes no time at all.
   \[ \downarrow \text{external argument} \]

d. *The \( [N \text{ devouring}] \) of the holiday season makes everyone sick.
   \[ \downarrow \text{adverbial adjunct} \]

If the external argument appears in the \( \text{of-NP} \), the sentence becomes unacceptable, as (28c) shows. The \( \text{of-NP} \) also cannot be interpreted as an adverbial adjunct, as the unacceptability of (28d) suggests.

The fact that nominals cannot be formed from verbs whose postverbal NP is not an argument also supports the claim that only a direct internal argument of a matrix verb can appear in the \( \text{of-NP} \) in a transitive nominal. For instance, the postverbal NP \textit{cats and dogs} in (29a), which is not an argument of the verb, but a degree expression, cannot occur in as an \( \text{of-NP} \) in the nominal, as (29b) illustrates. Similarly, the postverbal NP \textit{there} in (30a), which is not an argument of the raising verb \textit{believe}, cannot occur in an \( \text{of-NP} \) in the nominal, as (30b) shows.

Nominal from a verb whose postverbal is a degree expression

a. It rained \textit{cats and dogs}.

b. *the raining of \textit{cats and dogs}
   (Carrier and Randall 1992: 200-201)
(30) **Nominal from a raising verb**
   a. The detective believes **there** to be a spy among us.
   b. *The believing of **there** to be a spy among us is spooky.
      (Carrier and Randall 1992: 201)

Let us now turn to resultative constructions, the postverbal NP in a transitive-based resultative construction can appear in an *of*-NP in the nominal while the postverbal NP in an unergative-based resultative construction cannot. The contrast in grammaticality of the corresponding nominals of each pattern is illustrated in (31) and (32).

(31) **Nominals from transitive-based resultatives**
   a. The watering of **tulips** flat is a criminal offense in Holland.
   b. The Surgeon General warns against the cooking of **food** black.
      (Carrier and Randall 1992: 201)

(32) **Nominals from unergative-based resultatives**
   a. *The drinking of **oneself** sick is commonplace in one’s freshman year.
   b. *The talking of **your confidant** silly is a bad idea.
      (Carrier and Randall 1992: 201)

The *of*-NPs in (31) can be interpreted as a direct internal argument of the nominal whereas this is not possible with the *of*-NPs in (32).\(^\text{10}\) The fact that the postverbal NP in a transitive-based resultative construction is interpreted as a direct internal argument in the corresponding nominal implies that the verb in the resultative construction has a direct internal argument. On the other hand, the fact that nominals derived from unergative-based resultatives are ungrammatical suggests that an (unergative) verb that serves as an

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\(^{10}\) As a matter of fact, the *of*-NPs in (32) can be interpreted neither as an adjunct corresponding to the suppressed external argument nor as an adverbial adjunct (Carrier and Randall 1992: 202).
input verb to the corresponding nominal, as in (32), does not have a direct internal argument.

To sum up, middle formation, adjectival passive formation, and nominalization help illuminate the argument status of postverbal NPs in resultative constructions since they apply only to verbs involving a direct internal argument. The fact that resultatives built around unergative verbs are not compatible with these three processes strongly suggests that the postverbal NP in a unergative-based resultative construction is not an argument of a matrix verb. In contrast, the fact that resultatives based on transitive verbs can form middles, adjectival passives and nominals suggests that the postverbal NP in a transitive-based resultative construction is an argument of a verb. This in turn supports the claim that the verb in a resultative construction projects the same argument structure as it does when it appears in isolation.

2.2.4 The interpretation of the resultative construction

The interpretation of the resultative construction depends on the meaning of the resultative phrase as well as on that of the matrix verb. That is, the meaning of the resultative construction is compositionally derived. However, the causal relation between the activity described by the matrix verb and the state expressed by the resultative phrase is not explicitly represented in the resultative construction. For example, the sentence *Mary boiled the meat soft* does not specifically describe how Mary’s boiling the meat brings about its soft state.
According to Levin and Rappaport (1995: 54), the causal relation between the action denoted by the verb and the state expressed by the resultative phrase can be explained by the fact that eventualities involved in the resultative construction are accomplishments. Levin and Rappaport (1995: 50) point out that accomplishments describe eventualities that consist of an activity and a state, and the activity brings about a change of state. In other words, accomplishments denote causative changes of state. An expression describing “a state that follows an activity verb can only be interpreted as denoting the result state of an accomplishment” (Levin and Rappaport 1995: 55). Given that resultative constructions describe eventualities that are accomplishments, the causal relation between the activity and the result state in the resultative construction follows from “the interpretation of the eventuality as an accomplishment” (Levin and Rappaport 1995: 55).

### 2.3 An aspectual constraint on direct internal arguments

This section reviews the Measuring-Out Constraint on direct internal arguments (Tenny 1994), which is subsumed under a more general constraint (the Single Delimiting Constraint,) discussed in chapters 4 and 5.¹¹ In particular, a review of the Measuring-Out Constraint is to illustrate what is meant by *measuring out*, which entails delimitedness, and why direct internal arguments play an important role in delimiting the event described by a matrix verb.

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¹¹ The Single Delimiting Constraint states that a verb phrase may involve only one measuring out and may be delimited only once (Tenny 1994: 49).
2.3.1 The measuring-Out Constraint

There is a difference between direct internal arguments and other arguments (i.e., external and indirect internal arguments) in delimiting the event described by a matrix verb. Tenny (1994) argues that only the direct internal argument can measure out the event to which a verb refers, in contrast to external and indirect internal arguments. This is formulated as the Measuring-Out Constraint on direct internal arguments (Tenny 1994: 11).

(33) The Measuring-Out Constraint¹²

a. The direct internal argument of a simple verb is constrained so that it undergoes no necessary internal motion or change, unless it is motion or change which 'measures out the event' over time (where 'measuring out' entails that the direct argument plays a particular role in delimiting the event).

b. There can be no more than one measuring-out for any event described by a verb.

The first part of the constraint states that a change or motion in the direct object is required by the meaning of a verb. For example, the sentence *John ate the apple up* necessarily entails that the apple is consumed. The change the apple undergoes is inherently entailed by the meaning of the verb *eat*. However, this is not true for the external argument, in that a change in the external argument is not necessarily entailed by the meaning of the sentence (Tenny 1994: 11). The external argument *John* may or may

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¹² Another corollary of the Measuring-Out Constraint is that the measuring out role is only found with direct internal arguments. This is based on the observation that external arguments and indirect internal arguments (i.e., goal phrases), as in *John pushed the car to a gas station*, do not undergo a change of state inherent in the meaning of a verb (Tenny 1994: 77).
not become full due to an eating action, in contrast to the direct internal argument the apple, which must be consumed.

The second part of the constraint, which states that the event described by a verb may involve only one measuring out, naturally follows from the fact that a simple transitive verb normally involves one direct internal argument. A verb phrase cannot describe an event that may be measured out by two direct internal arguments, as exemplified in (34).

(34) **Sentence involving two direct internal arguments**

*John froze [the milk] [the apple juice].

(Tenny 1994: 80)

Sentence (34) involves two noun phrases and the referents of those two NPs undergo the same change of state (i.e., being frozen). In other words, the verb phrase involves more than one measuring out, in that both noun phrases take part in marking a temporal end of the freezing event. This explains why the sentence is ungrammatical.

According to Tenny (1994: 15), measuring out involves two things. One is a measuring scale associated with a direct internal argument. The change in the direct argument may be measurable on a single scale entailed by the meaning of a verb, as will be discussed in more detail in the next section. In other words, the direct internal argument serves to provide a measure of the progress for the event described by a verb, in contrast to the external argument.

The other characteristic of measuring out is a temporal bound. Measuring out is closely related to direct internal arguments, in that measuring out refers to the function of
a (direct) argument in marking a temporal endpoint of the event described by a matrix verb.\textsuperscript{13} Given that a direct internal argument participates in delimiting the event described by a verb, delimitedness of an event is not only a property of a verb. Rather, it depends on elements (i.e., a direct internal argument or a goal phrase) of a verb phrase (Tenny 1994: 4).

It has been observed that specific or count nouns, as in (35a), lead to delimited interpretations whereas mass nouns, as in (35b), and bare plurals, as in (35c), yield non-delimited interpretations (Dowty 1979).

(35)  
\begin{itemize}
  \item a. John ate \textsl{an apple} (*for an hour/in an hour).
  \item b. John ate \textsl{ice cream} (for an hour/*in an hour).
  \item c. John ate \textsl{apples} (for an hour/*in an hour).
\end{itemize}

Sentences involving mass nouns or bare plurals describe an event that continues for an indefinite period of time, in contrast to those involving count nouns. This is because mass nouns and bare plural NPs do not indicate a specific quantity while count nouns describe some fixed quantity.

\textsuperscript{13} The tests involving adverbial phrases such as \textit{for an hour} and \textit{in an hour} are used for delimitedness. Each adverbial phrase is associated with a particular interpretation (Tenny 1994: 6). The interpretation of frame adverbial phrases such as \textit{in an hour} is that it takes an hour for the event described by a verb to take place. That is, the event is perceived to continue for an hour and stop since an endpoint inherent in the meaning of the verb has been reached.

In contrast, such an interpretation is not available with durational adverbial phrases such as \textit{for an hour}. These phrases yield an interpretation in which the event continues over an hour, but it may not stop after an hour. When a delimited event occurs with a phrase such as \textit{for an hour}, the sentence yields an iterative interpretation. That is, the event described by a verb takes place several times during the period of time indicated by a \textit{for} durational adverbial phrase.
2.3.2 Three types of measuring out

The way in which a direct internal argument measures out the event described by a verb varies depending on the nature of the verb (an incremental-theme verb, a change-of-state verb or a path object verb). Incremental-theme verbs, such as verbs of consumption and creation (Jackendoff 1991, 1996), differ from change-of-state verbs, in that an endpoint (a temporal terminus) of the event described by the former is reached by progressing incrementally through the direct internal argument. With incremental-theme verbs, a final increment marks a temporal end of the event described by a verb (Tenny 1994: 15).

Let us consider the sentences in (36).

(36) Incremental-theme verbs
a. Tom ate an apple.
b. Eric built a house.

In (36a), a temporal terminus for the event of eating is provided by the direct internal argument *an apple* when the apple is completely consumed. Similarly, in (36b) the completion of the house marks a temporal end of the building event. A distinct change in the apple and the house marks an end of the event of eating and building, respectively. In this sense, the direct arguments in (36) serve to measure out the event described by the verb, which leads to a delimiting interpretation of the sentence.

As is the case of incremental-theme verbs, the direct internal argument of a change-of-state verb also provides a temporal endpoint for the event denoted by the verb. However, the difference is that direct arguments of change-of-state verbs have some
property that is measurable on a scale inherently entailed by the meaning of a verb. The event described by a change-of-state verb is understood to progress through the direct internal argument. That is, the event is perceived to progress “along measurable degrees of change in some property” of the direct internal argument that is inherent in the verb’s meaning (Tenny 1994: 17). Sentence (37) helps illustrate the point.

(37) Change-of-state verb
The gardener ripened the fruit.

In (37), the change in the direct argument can be measurable in terms of degrees of ripeness since this change is inherently entailed by the meaning of the verb *ripen*. The event of ripening comes to an end when the entity denoted by the direct argument reaches the final state of ripening. The final state of the direct internal argument *the fruit* being ripe marks a temporal end of the ripening event, which makes the direct internal argument serve to measure out the event of ripening.

As for incremental-theme verbs and change-of-state verbs, the term *measuring out* refers to “a change along a single gradable parameter to a definite endpoint” (Tenny 1994: 20), although events described by change-of-state verbs may not progress incrementally. Incremental-theme verbs and change-of-state verbs are different from path object verbs, in that the direct argument of the latter does not necessarily undergo a change of state during the progress of the event described by a verb. This is because the referent of the direct argument of a path object verb is not affected by the event to which the verb refers, in contrast to direct arguments of incremental-theme verbs and change-of-state verbs. Nonetheless, direct internal arguments of verbs with path objects serve to
measure out the event described by a verb, in that they provide some sort of scale (i.e., a path and a distance traveled in the event) on which the progress of the event may be measurable (Tenny 1994: 18).

Consider the sentences in (38).

(38) Path object verbs
a. Sue walked the Appalachian Trail.
b. Bill climbed the ladder.

In (38a), the event of walking is measured out by the length of the Appalachian Trail. The progress of the walking event is marked by the distance traveled in each stage of the completion of the event. The same is true for (38b) in that the direct argument provides a measure for the event described by the verb climb. The length of the ladder measures out the event of climbing, and the climbing event comes to an end when Bill reaches the end of the ladder. In both (38a) and (38b), the direct internal argument does not undergo a change of state that is found with a direct internal argument of an incremental-theme verb or a change-of-state verb. However, the entity denoted by the direct internal argument of a path object verb is traversed during the progress of the event described the verb, and this serves as a scale along which the progress of the event can be measured.

The fact that these three types of verbs (incremental-theme verbs, change-of-state verbs and path object verbs) involve measuring out can be illuminated by adverbial modification. These verbs can be modified by adverbs such as halfway, a little bit and slowly, which refer to "some measurable property or element of the direct argument which is measuring out the event" (Tenny 1994: 21). That is, modification of these
adverbs picks out the measuring-out aspect of incremental theme verbs, change-of-state verbs and path object verbs.

When incremental-theme verbs and path object verbs are modified by the adverb *halfway*, a sentence yields an interpretation in which half of the event may be equated with half of the measuring argument (i.e., the direct internal argument), as illustrated in (39) and (40). The fact that the (a) sentences can be paraphrased as the (b) sentences suggests that incremental-theme verbs and path object verbs involve measuring out and the measure is provided by the direct internal argument (Tenny 1994: 19).

(39) **Incremental-theme verb**

a. Mary ate an apple *halfway*.

b. Mary ate *half the apple*.

(40) **Path object verb**

a. Susan walked the Appalachian Trail *halfway*.

b. Susan walked *half the Appalachian Trail*.

Unlike incremental-theme verbs and path object verbs, change-of-state verbs may not be modified by the adverb *halfway* (e.g., *The gardener ripened the fruit halfway*) (Tenny 1994: 19). However, modification of adverbs such as *a little bit*, as in (41a), and comparative adverbs, as in (41b), may help bring out the measuring out associated with change-of-state verbs.
(41) Change-of-state verbs\textsuperscript{14}

\begin{itemize}
  \item[a.] The gardener ripened the fruit \textbf{a little bit}, using artificial light, even though it was early in the season.
  \item[b.] Open the door \textbf{a little more}.
  \end{itemize}

(Tenny 1994: 20)

The sentences in (41) would not be compatible with adverbs such as \textit{a little bit} and \textit{a little more} if the change the entity denoted by the direct argument undergoes was not measurable. The fact that change-of-state verbs can be modified by these adverbs suggests that events described by change-of-state verbs involve measuring out, which is done through the direct internal argument of a verb.

Before ending this section, a remark on external arguments is in order. Recall that external arguments cannot measure out the event expressed by a verb, in contrast to direct internal arguments. This contrast is highlighted by the modification of adverbs such as \textit{halfway}. Recall that a paraphrase is possible in which half of the event is equated with half of the measuring argument, when a sentence involving a measuring argument is modified by the adverb \textit{halfway}. However, this is not possible with external arguments, as illustrated in (42) involving a verb with an incremental theme.

(42) \begin{itemize}
  \item[a.] Mary ate an apple \textbf{halfway}.
  \item[b.] Mary ate \textbf{half the apple}.
  \item[c.] *Half of Mary ate the apple.
\end{itemize}

\textsuperscript{14} Verbs with incremental themes (e.g., ??build the house a \textbf{little more}) may not be compatible with comparative adverbs (Tenny 1994: 21).
As mentioned earlier, the fact that sentence (42b), in which the direct internal argument is modified by *halfway*, is grammatical suggests that the direct internal argument *the apple* serves as a measure of the progress of the eating event. In contrast, the ungrammaticality of (42c), in which half of the event cannot correspond to half of the entity denoted by the external argument *Mary*, strongly suggests that the external argument does not measure out the event described by the verb *eat*.

### 2.3.3 The addition of resultative phrases

There are several ways in which a verb phrase may be delimited (Tenny 1994: 36-44). One way is to add a direct internal argument, which functions as a measuring argument, in that a delimited reading becomes available due to the addition of the direct internal argument. This option is available for unergative verbs. NPs such as cognate objects, reflexive pronouns and non-subcategorized NPs denoting body parts function as measuring arguments when they occur with unergative verbs. The sentences in (43) and (44) illustrate the point.

(43)  
  a. John sang (for five minutes/*in five minutes).
  b. John sang a joyful song (for five minutes/in five minutes).
  (Tenny 1994: 39)

(44)  
  a. Mary danced (for an hour/*in an hour).
  b. Mary danced a silly dance (for an hour/in an hour).
  (Tenny 1994: 39)

Although the (b) sentences may be ambiguous between a non-delimited and a delimited reading, the cognate object in (43b) and (44b) has the function of measuring out the event
described by the verb in the delimited interpretation. This is due to the fact that events described in the (b) sentences may be understood to progress through cognate objects (Tenny 1994: 39). The end of the dance marks the end of dancing, and the end of the song marks the end of the singing event.

Another way in which a verb phrase may be delimited is to add expressions such as resultative phrases (and verbal particles), which creates a measuring argument out of a non-measuring argument. This is because resultative phrases have the property of enforcing a delimited reading of a verb phrase (Tenny 1994: 36). The addition of a resultative predicate forces the direct internal argument to “take on the function of measuring out the event” (Tenny 1994: 37). Resultative phrases convert a non-measuring argument into a measuring argument when a non-delimited reading would otherwise be the only available reading for a sentence, as (45b) illustrates.

(45)  a. John hammered the metal (for an hour/*in an hour).
      b. John hammered the metal flat (*for an hour/in an hour).

The addition of a resultative phrase also disambiguates the interpretation of a sentence when it may be ambiguous between non-delimited and delimited readings (Tenny 1994: 38). Observe that (46a) can occur with a frame adverbial phrase, but not with a durational adverbial phrase, as (46b) shows.

(46) a. Tom wiped the table (for an hour/in an hour).
      b. Tom wiped the table clean (*for an hour/in an hour).
The table in (46b) is interpreted as a measure of the wiping event since the addition of a resultative phrase makes the direct argument participate in measuring out the event described by a matrix verb. The wiping event comes to an end when the direct argument the table reaches the state of being clean. In other words, the resultative phrase clean provides an endpoint for the wiping event, and the sentence only yields a delimited interpretation.

2.4 Conclusion

This chapter has discussed several issues regarding the resultative construction, such as types of resultative phrase, requirements for resultative formation, the argument structure of verbs in this construction, and the interpretation of the resultative pattern. Putting aside the first issue, which involves cross-linguistic variation, insights drawn from the other issues may also hold true for other languages. The non-existence of resultatives based on stative verbs is explained by a general typological fact that a delimited eventuality cannot be created from stative verbs. In addition, the causal relation involving in the resultative construction is inferred from an interpretation of the eventuality as an accomplishment which denotes a causative change of state, given that resultatives are accomplishments.
Chapter 3

Resultative constructions based on unergative verbs

3.1 Introduction

This chapter discusses the differences between English and Korean resultative constrictions based on unergative verbs. The aim is to show that unlike English unergative verbs, Korean unergative verbs do not form (predicative) resultative patterns (i.e., those involving a secondary predicate). Two points are particularly relevant. First, Korean does not allow patterns in which a resultative predicate is predicated of the subject of a matrix verb (i.e., subject-oriented patterns in Rappaport and Levin’s (2001) terms). Second, grammatical unergative-based resultative patterns such as those involving nominative-marked non-subcategorized NPs are clausal, not predicative. Based on these facts, it is concluded that the Direct Object Restriction can be maintained for Korean.

Section 3.2 examines several unergative-based resultative patterns in Korean, including subject-oriented patterns, incorporated-theme patterns, and patterns involving non-subcategorized NPs (i.e., fake objects in Simpson’s (1983) terminology) to show that Korean unergative verbs do not form resultatives. First, it is argued that Korean does not permit subject-oriented resultative patterns, which are normally built around agentive
manner of motion verbs, in that a serial verb form is used instead of a simple verb. Second, it is shown that incorporated-theme patterns and patterns occurring with non-subcategorized NPs are not predicative in the technical sense since predication is satisfied within a resultative phrase (or clause) in both types.

Section 3.3 focuses on patterns involving non-subcategorized NPs in Korean, which occur in the nominative, unlike English non-subcategorized NPs, which are accusative-marked. Given the case marking, their status as a direct object is closely examined with respect to several objecthood tests such as adverbial placement, passivization and scrambling. It is shown that non-subcategorized NPs in Korean are not a direct object of a matrix verb, but rather function as the subject of a resultative predicate. Lastly, section 3.4 provides a brief discussion of degree interpretations, which are normally associated with unergative-based resultatives occurring with non-subcategorized NPs.

3.2 Resultative constructions based on unergative verbs in English and Korean

3.2.1 The DOR and subject-oriented patterns

Resultative patterns based on unergative verbs in Korean differ from English unergative-based resultative patterns in several respects. Before turning to Korean resultative patterns, let us first look at English resultative patterns. It has been observed that English does not normally allow resultative patterns involving unergative verbs when they do not involve non-subcategorized NPs (i.e., fake objects in Simpson's (1983) terms), as illustrated in (1).
(1) Patterns without a non-subcategorized NP
   a. *John laughed silly.
   b. *Mary yelled hoarse.

Sentence (1a) cannot mean that John became silly due to a laughing action. Similarly, (1b) does not mean that Mary became hoarse as a result of a yelling action. In other words, the resultative phrase in these sentences cannot be predicated of the subject of the matrix verb.

However, these sentences become grammatical when non-subcategorized NPs such as reflexive pronouns, NPs denoting body parts, and non-reflexive NPs are added, as shown in (2).

(2) Patterns with a non-subcategorized NP
   a. John laughed himself silly.
   b. We yelled ourselves hoarse.

Given that the resultative phrases silly and hoarse in (2) are predicated of the direct object, patterns such as (2) have been taken as evidence for the Direct Object Restriction (the DOR, hereafter), which states that a resultative phrase is predicated only of a direct object (Levin and Rappaport 1995).¹ That is, the contrast observed between patterns

¹ The DOR predicts that a resultative phrase may not be predicated of a subject or an oblique complement. The contrast between (i) and (ii) helps illustrate the point. The metal in sentence (i) is a direct object whereas the metal in sentence (ii) is a complement of the preposition on. The resultative phrase in (ii) cannot be predicated of the metal, in contrast to the resultative phrase in (i).

(i) The silversmith pounded the metal flat
(ii) *The silversmith pounded on the metal flat.
    (Levin and Rappaport 1995: 41)
occurring without a non-subcategorized NP such as (1) and those involving a non-subcategorized NP such as (2) is reduced to a restriction on the syntactic position of an NP of which the resultative phrase is predicated.

However, several researchers including Rappaport and Levin (2001), Wechsler (1997) and Wechsler and Noh (2001) observe that a subset of unergative verbs in English can form resultatives. Agentive manner of motion verbs such as *dance*, *swim*, *walk*, *run* and *jump* can occur with resultative phrases headed by expressions such as *out of*, *clear of* and *free* (in the sense of being away from a location), and directional elements such as *apart* and *together* (Levin and Rappaport 1995: 186). The examples in (3) illustrate the point.

(3)  
   a. Robert ran **clear of the fire**.  
   b. However, if fire is an immediate danger, you must jump **clear of the vehicle**.  
   (Levin and Rappaport 1995: 186)

According to Wechsler and Noh (2001), the fact that agentive manner of motion verbs can form resultatives is attributed to their meaning, which optionally denotes an intrinsic endpoint that entails a change in location. States described by expressions such as *out of*, *clear of* and *free* (meaning being away from a location), and directional elements such as *apart* and *together* are implied by the meaning of agentive manner of motion verbs, in the sense that their meaning is directly related to some sort of change in location. That is, states described by these expressions are natural results associated with the meaning of agentive manner of motion verbs. In contrast, no such natural result is associated with the meaning of non-agentive manner of motion verbs such as *laugh* and
yell (Wechsler and Noh 2001: 395). Hence, these verbs cannot form resultatives at least when non-subcategorized NPs are not involved, as shown in (1) above.

What is interesting about patterns involving agentive manner of motion verbs such as (3) is that resultative phrases occurring with them describe a change in the location and direction of the entity denoted by the subject NP. That is, resultative phrases in these patterns are predicated of the subject of a matrix verb. Given the existence of resultative patterns in which the resultative phrase is predicated of the matrix subject (i.e., subject-oriented patterns in Rappaport and Levin’s (2001) terminology), the distribution of NPs of which a resultative phrase is predicated cannot be reduced to the position they occupy in a sentence. Subject-oriented patterns such as (3) constitute counterexamples to the DOR, which makes crucial reference to the syntactic position (i.e., the direct object) of the NP of which a resultative phrase is predicated. Therefore, the DOR does not hold for English resultative constructions, as pointed out by several researchers (Wechsler 1997, Wechsler and Noh 2001).

In contrast to the situation in English, the DOR seems to hold for Korean resultative constructions, in that Korean does not permit subject-oriented resultative patterns involving agentive manner of motion verbs. The reason is that a serial verb complex is used in place of a simple verb. Korean agentive manner of motion verbs (e.g.,

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2 Resultative patterns based on transitive verbs such as (i) and (ii) are also counterexamples to the DOR for the same reason. The resultative phrases in (i) and (ii) are predicated of the matrix subject, the wise men and the sailors, respectively.

(i) The wise men followed the star out of Bethlehem.
(ii) The sailors managed to catch a breeze and ride it clear of the rocks.
(Wechsler 1997: 313)
*falli*-

ket-*ta* ‘walk’) occur with other verbs such as *ka-*

*ta* ‘go’, *naka-*

*ta* ‘go out’, *o-*

*ta* ‘come’ and *nao-*

*ta* ‘come out’ to indicate direction, as exemplified in (4b).

(4)  

a. A simple verb

*/??John-i cha pakk-ulo talli-ess-ta.3*

John-NOM car outside-POST run-PAST-DECL

Intended meaning: ‘John ran clear of the car.’

Literal meaning: ‘John ran towards the outside of the car.’

b. A serial verb complex


John-NOM car outside-POST run-AFFIX-come.out-PAST-DECL

‘John ran clear of the car.’

The verb complex in (4b) exhibits characteristics of serial verb constructions.4

First, the verbs *talli-*

*ta* ‘walk’ and *nao-*

*ta* ‘come out’ are not connected by a conjunction or complementizer. Only a linking vowel (or an affix) is added, as shown in (4b). The second characteristic is that the verbs in a serial verb construction share the same tense

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3 When verbs indicating direction are not present, the word *ccok* whose meaning denotes direction can be added into a postpositional phrase, as (i) illustrates. But, the sentence does not mean that John necessarily reached the park.

(i) John-i kongwon-*ccok*-ulo talli-ess-ta.

John-NOM park-towards-POST run-PAST-DECL

‘John ran towards the park.’

4 O’Grady (2003: 201-2) discusses several defining features of serial verb constructions, citing examples from Foley and Van Valin (1984), Jo (1990), Seuren (1990) and Zwicky (1990), among others.

(i) There is no conjunction or complementizer that connects the verbs

(ii) At least one argument is shared by the verbs.

(iii) The same tense and aspect are shared by the verbs.

(iv) A variety of semantic relations such as instrument, direction, beneficiary/goal, and result are expressed by the verbs in the construction.
and aspect, which is normally expressed on only one of the verbs. In Korean, tense is expressed only on the second verb (O’Grady 2003: 201, Sohn 1999: 382), as illustrated in (5).  

John-NOM car outside-POST run-PAST-AFFIX-come.out-PAST-DECL
'John ran clear of the car.'

As for semantic relations expressed by serial verb constructions, the second verb in (4b) denotes direction, as noted earlier. Based on this, one might argue that the literal meaning of the second verb has been lost. That is, the second verb nao-ta ‘come out’ functions as a grammatical marker, which signals relative closeness to the point of reference. However, this may not be correct since the second verb semantically functions as the main verb (Sohn 1999: 381), and the first verb only describes the manner of action expressed by the second verb. This point can be illuminated if the first verb talli-ta ‘run’ is replaced with the verb ket-ta ‘walk.’ Sentence (6) is still about John’s coming out of the car and being away from it as a result, as is the case of (4b).

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5 The honorific marker –si- also shows up only on the second verb (You 1996).

(i) sensayngnim-i kongwon-ulo talli-(si)-e-ka-si-ta.
teacher-NOM park-POST run-HON-AFFIX-go-HON-DECL
'The teacher ran to the park.'

6 Chinese also has serial verb constructions in which the second verb functions as a directional grammatical marker. In Chinese, a verb denoting direction occurs either immediately after the first verb or at the end of a sentence (Chang 2001: 161). But, Korean only allows the first option.
The only difference between (4b) and (6) is in the manner of action described by the first verb. In (4b), the action of coming out of the car is accomplished by running. On the other hand, in (6) it is done by walking. In other words, the second verb in serial verb constructions such as (4b) and (6) retains its literal meaning.\(^7\)

At first glance, given that the second verb retains its literal meaning, serial verb resultative patterns such as (4b) and (6) do not seem to conform to the DOR since the resultative predicate is predicated of the matrix subject. However, it should be pointed out that verbs such as ka-ta ‘go’, naka-ta ‘go out’, o-ta ‘come’ and nao-ta ‘come out’, which describe a change in the location and direction of the entity denoted by the subject NP in serial verb constructions, are unaccusative. As Y-J Kim (1990: 91) correctly observes, these verbs can occur with the perfective aspectual marker \(-a/e \text{ iss}-\), which is normally compatible with unaccusative verbs.

Let us first look at verbs that can appear with the perfective aspectual marker \(-a/e \text{ iss}-\). It is observed that \(-a/e \text{ iss}-\) is only compatible with some intransitive verbs and passive forms of transitive verbs (K-D Lee 1978). A list of verbs that can occur with \(-a/e \text{ iss}-\) is provided in (7).

\(^7\) Verbs such as ka-ta ‘go’ and o-ta ‘come’ also occur in an auxiliary construction (e.g., mek-e ka-ta ‘has been eating’). They indicate continuous performance of an action over time, functioning as a progressive marker (Ihm et al. 2001: 340). In auxiliary constructions, the verb ka-ta ‘go’ does not describe motion away from the speaker, and the verb o-ta ‘come’ does not describe motion towards the speaker. The first verb semantically functions as the main verb in auxiliary constructions.
Verbs that can occur with the perfective aspectual marker \(-a/e\) iss-\(^8\):

a. tochakha-ta 'arrive'

b. nok-ta 'melt'

c. ssek-ta 'rot'

d. el-ta 'freeze'

e. tteleci-ta 'fall'

f. cwuk-ta 'die'

g. nam-ta 'remain'

h. theci-ta 'explode'

i. nathana-ta 'appear'

ej. thayena-ta 'be born'

k. kicelha-ta 'faint'

l. cwul-ta 'decrease'

m. kalaanc-ta 'sink'

n. na-ta 'occur'

o. sos-ta 'rise up'

p. ttena-ta 'leave'

q. michi-ta 'go crazy'

r. phi-ta 'bloom'

s. nulena-ta 'increase'

t. concayha-ta 'exist'

The verbs listed in (7) are those which exhibit striking similarities in meaning to verbs selected by the auxiliary \(essere\) \((è)\) 'be' in Italian, which is compatible only with unaccusative verbs and passive verbs (Rosen 1984: 44),\(^9\) as noted by Y-J Kim (1990). That is, the perfective aspectual marker \(-a/e\) iss-\) selection in Korean also picks out unaccusative verbs, in that unergative verbs cannot occur with \(-a/e\) iss-, as (8) illustrates.\(^{10}\)

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\(^8\) See Y-J Kim (1990: 91) for a more extensive list of verbs that are compatible with \(-a/e\) iss-.

\(^9\) The auxiliary \(avere\) \((ha)\) 'have' is associated with transitive and unergative verbs. A contrast between unergative and unaccusative verbs is illustrated in (i) and (ii).

(i) Giovanni ha telefonato.
   Giovanni has telephoned
   ‘Giovanni has telephoned.’ (unergative)

(ii) Maria è arrivata.
    Maria is arrived (fem.)
    ‘Maria has arrived.’ (unaccusative)

\(^{10}\) Y-J Kim (1990) argues that the perfective aspectual marker \(-a/e\) iss-\) selection is sensitive to telicity, as is the case of the auxiliary selection in Dutch (Zaenen 1988). However, several counterexamples are found, as Kim (1990: 94) herself notes.
(8) **Unergative verbs and the perfective aspectual marker \(-ale \text{iss-}\)**

a. *Mary-ka* talli-\text{e iss-}ta.
   Mary-NOM run-PERF-DECL
   ‘Mary has run.’

b. *Tom-i* kel-\text{e iss-}ta
   Tom-NOM walk-PERF-DECL
   ‘Tom has walked.’

Let us now turn to serial verb constructions involving *ka-ta ‘go’, naka-ta ‘go out’, o-ta ‘come’ and nao-ta ‘come out.’ As the examples in (9) help illustrate, these verbs can occur with the perfective aspectual marker \(-ale \text{iss-}\), which suggests that they are unaccusative.

(9) **Patterns involving a serial verb complex and \(-ale \text{iss-}\)**

a. John-i cha pakk-ulo talli-\text{c-nao-a iss-ess-ta}.
   John-NOM car outside-POST run-AFFIX-come.out-PERF-PAST-DECL
   ‘John had run clear of the car.’

b. John-i chip pakk-ulo kel-\text{e naka-iss-ess-ta}.
   John-NOM house outside-POST walk-AFFIX-go.out-PERF-PAST-DECL
   ‘John had walked clear of the house.’

Recall that in serial verb constructions such as (9) the second verb semantically functions as the main verb. In addition, the fact that grammatical markers including tense and honorific markers are attached to the second verb suggests that the second verb may syntactically function as the main verb as well.\(^\text{11}\) Therefore, resultative patterns involving a serial verb complex, in which a resultative predicate is predicated of the matrix subject

\(^{11}\text{Sohn (1999: 381) notes that the second verb in an auxiliary construction also syntactically functions as the main verb for the same reason.}\)
do not constitute counterevidence to the DOR. As a matter of fact, these patterns are object-oriented patterns in which a resultative predicate is predicated of the direct object, conforming to the DOR, given the assumption that the sole argument of unaccusative verbs is an underlying direct object. In other words, subject-oriented resultative patterns do not exist in Korean, in contrast to the situation in English.

3.2.2 Incorporated-theme patterns

As in English, Korean does not allow patterns such as (10), in which a key-marked phrase is to be predicated of the subject of the matrix verb.

(10) Patterns without an incorporated theme

   Tom-NOM tired-KEY run-PAST-DECL
   ‘*Tom ran tired.’

   Mary-NOM crazy-KEY shout-PAST-DECL
   ‘*Mary shouted crazy.’

Sentence (10a) cannot mean that Tom became tired as a result of walking. Nor did Mary in (10b) become crazy as a result of a shouting action. In particular, the key-marked phrase *phikonha-key ‘tired’ in (10a) functions as a depictive phrase, yielding the interpretation that Tom walked with a tired look or in a tired manner. Sentence (10b) is just ill-formed since it does not also seem to yield a depictive interpretation. Along with the non-existence of subject-oriented patterns involving agentive manner of motion verbs, the fact that patterns such as (10) are ungrammatical leads to the speculation that
unergative verbs in Korean do not form (predicative) resultative patterns (i.e., those involving a secondary predicate).

However, one might argue otherwise, based on the existence of grammatical resultatives built around unergative verbs such as (11), in which resultative phrases normally denote bodily functions such as sweating and bleeding or body parts.

(11) Resultatives with an incorporated theme

   Tom-NOM breath-full-KEY run-PAST-DECL
   ‘*Tom ran breathless.’
   Intended meaning: ‘Tom ran to the point where he became breathless.’

   Mary-NOM throat-sick-KEY sing-PAST-DECL
   ‘*Mary sang her throat sore.
   Intended meaning: ‘Mary sang to the point where her throat was sore.’

   child-PL-TOP sweat-come.out-KEY run-PAST-DECL
   ‘*Children ran sweaty.’
   Intended meaning: ‘Children ran to the point where they became sweaty.’

A defining characteristic of these patterns is that they involve resultative phrases containing an incorporated-theme argument (in bold face in the above examples). In addition, the resultative phrase can be separated into a noun and a predicate, as illustrated in (12) below. The noun bears a THEME role and the resultative predicate is predicated of that theme argument.
Although resultative phrases such as mok-aphu-key ‘throat-sore’ and ttam-na-key ‘sweat-come.out’ include a theme argument in them, they behave like a single word, as noted by Wechsler and Noh (2001: 419). Incorporated-theme patterns behave differently with respect to an intervening adverb than their clausal counterparts (e.g., mok-i aphu-key ‘the throat is sore’) in which the theme argument occurs with the nominative marker.

An incorporated form (e.g., mok-aphu-key ‘throat-sore’) does not allow an intervening adverb such as mopsi ‘very’ (Wechsler and Noh 2001: 420), as (13a) illustrates. In contrast, in an unincorporated form (e.g., mok-i aphu-key ‘the throat is sore’) an adverb can intervene between the resultative predicate and the NP of which it is predicated, as shown in (13b).

Even though resultative phrases involving an incorporated theme behave like a single word and contain no internal case marking, incorporated-theme patterns do not constitute counterexamples to the claim that Korean unergative verbs cannot form (predicative) resultative constructions. The reason is that resultative phrases such as mok-
aphu-key 'throat-sore' are semantically fully saturated (Wechsler and Noh 2001: 420). Predication is satisfied within the resultative phrase in the sense that the resultative predicate is predicated of the incorporated theme argument occurring in the resultative phrase. In other words, resultative phrases of this type are clausal, not secondary predicates.

3.2.3 Patterns involving non-subcategorized NPs

In section 3.2.1, it was mentioned that English sentences such as (10) become grammatical if non-subcategorized NPs (i.e., fake objects in Simpson’s (1983) terminology) such as reflexive pronouns, NPs denoting body parts, and non-reflexive NPs are added, as (15) illustrates.

(14) Patterns without a non-subcategorized NP
   a. *John ran tired.
   b. *We shouted hoarse.

(15) Patterns with a non-subcategorized NP
   a. John ran himself tired.
   b. We shouted ourselves hoarse.

Korean also allows patterns occurring with non-subcategorized NPs. However, as noted by J-B Kim (1993, 1999) and Kim and Maling (1997), several differences are found between Korean and English unergative-based resultative patterns. First, it has been observed that Korean does not allow patterns involving reflexive pronouns (J-B Kim 1993: 472). That is, the addition of a reflexive pronoun does not change the
acceptability of Korean sentences, in contrast to the English counterparts. The examples in (17) help illustrate the point.

(16) **Patterns without a non-subcategorized NP**

   Tom-NOM tired-KEY run-PAST-DECL
   ‘*Tom ran tired.’

   Mary-NOM crazy-KEY shout-PAST-DECL
   ‘*Mary shouted crazy.’

(17) **Patterns involving a reflexive pronoun**\(^\text{12}\)

   Tom-NOM oneself-NOM tired-KEY run-PAST-DECL
   ‘Tom ran himself tired.’

   Mary-NOM oneself-NOM crazy-KEY shout-PAST-DECL
   ‘Mary shouted herself crazy.’

Another difference between Korean and English unergative-based resultative patterns is found in case marking on the NP of which a resultative predicate is predicated. Although patterns involving reflexive pronouns are ill-formed, Korean permits other types of non-subcategorized NPs (i.e., NPs denoting body parts and non-reflexive NPs).

\(^{12}\) Kim and Maling (1997:193-4) argue that unergative-based resultatives are compatible with reflexives and provide an example involving a reflexive pronoun *susulo*. However, the native speakers I have consulted do not agree with their judgment.

(i) ??/*Mary-ka [susulo-ka kkamwulechi-key] solichi-ess-ta.
   Mary-NOM oneself-NOM faint-KEY shout-PAST-DECL
   ‘Mary shouted herself faint.’
In Korean, non-subcategorized NPs occur with the nominative case marker, as (18) illustrates.

(18)  
a. **Pattern involving an NP denoting a body part**

   tongsayng-i [mok-i swui-key]  wul-ess-ta.
   brother-NOM throat(voice)-NOM hoarse-KEY cry-PAST-DECL
   ‘My brother cried his voice hoarse.’

   ku-nun [ku sonswuken-i ces-key]  wul-ess-ta.
   he-TOP that handkerchief-NOM soggy-KEY cry-PASS-DECL
   ‘He cried that handkerchief soggy.’

   (J-B Kim 1993: 472)

b. **Pattern involving a non-reflexive NP**

An accusative-marked NP is not permitted in these patterns, as the examples in (19) illustrate, in contrast to English in which non-subcategorized NPs are accusative-marked (e.g., Tom ran himself tired).

(19)  
a. tongsayng-i [mok-i/*ul swui-key]  wul-ess-ta.
   brother-NOM throat-NOM/ACC hoarse-KEY cry-PAST-DECL
   ‘My brother cried his voice (himself) hoarse.’

   ku-nun [ku sonswuken-i/*ul ces-key]  wul-ess-ta.
   he-TOP that handkerchief-NOM/ACC soggy-KEY cry-PASS-DECL
   ‘He cried that handkerchief soggy.’

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13 The difference between patterns involving body parts such as (18a) and those involving non-reflexive NPs such as (18b) is that in the former the resultative phrase is indirectly predicated of the subject of the matrix verb. The NP denoting a body part in (18a) is partially coreferential with the matrix subject through the metonymic relation established between them (Wechsler and Noh 2001). However, such a relation between the NP of which the resultative predicate is predicated and the matrix subject is not found in (18b).
Several researchers (Simpson 1983, Levin and Rappaport 1995) have pointed out that non-subcategorized NPs in English are not thematically related to a matrix verb—that is, they do not receive their thematic role from it. Rather, they get their thematic role from the resultative predicate. This is why resultatives built around unergative verbs are ungrammatical when the resultative phrase is deleted, as shown in (20).14

(20) Resultative patterns based on unergative verbs
   a. Bill danced himself *(tired).
   b. Marathoners ran the pavement *(thin).

The same seems to hold for resultatives based on unergative verbs in Korean. As (21) and (22) illustrate, a sentence is ungrammatical if the resultative predicate is deleted, which suggests that the NP of which the resultative predicate is predicated is not an argument of the matrix verb.

(21) Pattern involving an NP denoting a body part
       ‘My brother cried his voice hoarse.’
       ‘*My brother cried hoarse.’

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14 This behavior contrasts with that of resultatives based on transitive verbs in which the NP of which the resultative phrase is predicated is an argument of the matrix verb. Resultatives built around transitive verbs are grammatical without the resultative predicate, as (i) and (ii) illustrate.

(i) Mary burned the cake (black).
(ii) Tom hammered the metal (flat).
(22) **Pattern involving a non-reflexive NP**

a. **ku-nun**  
   **he-TOP**  
   [ku sonswuken-i]  
   that handkerchief-NOM  
   ces-key]  
   soggy-KEY  
   'He cried that handkerchief soggy.'

b. *kip-nun*  
   **he-TOP**  
   [ku sonswuken-i]  
   that handkerchief-NOM  
   Ø]  
   wul-ess-ta.  
   cry-PAST-DECL  
   '*He cried soggy.'

In addition, the fact that non-subcategorized NPs are nominative-marked in Korean raises the suspicion that they may not be a direct object of the matrix verb, unlike non-subcategorized NPs in the English equivalents. In English, non-subcategorized NPs can be passivized, as (23) and (24) illustrate, which suggests that they are a direct object of the matrix verb, given that only a direct object of a verb typically gets promoted to the subject position through passivization.15, 16

(23) a. Marathoners ran the pavement thin.
    b. The pavement was run thin by the marathoners. (passive)

15 It is assumed that semantic subjects of the resultative predicate in resultatives based on transitive verbs are an argument as well as a direct object of the matrix verb. They can undergo passivization, as shown in (i). In addition, they can occur with transitive verbs without a resultative predicate, as shown in footnote 14.

(i) Mary wiped the table clean.
    \[ \Rightarrow \text{The table was wiped clean.} \] (passive)

16 In English, a non-subcategorized NP receives Case from the matrix verb (Burzio 1986), although they may not be an argument. According to Burzio's generalization, a verb assigns accusative Case if and only if it assigns an external theta role (p.178). Since unergative verbs assign a thematic (i.e., AGENT) role to its external argument, they can assign accusative Case to non-subcategorized NPs in resultative patterns.
(24)  a. Mary ran her Nikes threadbare.
b. Her Nikes have been run threadbare. (passive)

If non-subcategorized NPs in Korean are a direct object of the matrix verb, they should be able to undergo passivization. However, as will be shown in the next section, they do not pass direct objecthood tests including passivization, which suggests that they are not a direct object of the matrix verb.

3.3 The status of nominative-marked non-subcategorized NPs in Korean

There are several tests for direct objecthood in Korean: adverbial placement, passivization, transitivization, and disjoint reference of pronouns (J-B Kim 1993). However, the last two tests will not be discussed since they do not give conclusive results.

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17 J-B Kim (1993: 472-3) mainly uses these tests to verify the status of the NP of which a resultative predicate is predicated in resultative patterns built around transitive verbs. They were originally used in K-S Hong’s (1990) work on Korean raising constructions.

18 The ‘disjoint reference of pronouns’ test is not valid in that resultatives based on unergative verbs do not seem to allow pronouns. This is illustrated by the fact that both (i) and (ii) are ungrammatical.

(i) *Tom-i [kṵ-ka phikonha-key] talli-ess-ta.
   Tom-NOM he-NOM tired-KEY run-PAST-DECL
   ‘Tom ran himself tired.’

(ii) *Tom-i [kṵ-ka phikonha-key] talli-ess-ta.
    Tom-NOM he-NOM tired-KEY run-PAST-DECL
    ‘Tom ran to the point where he (e.g., Jack) was tired.’
3.3.1 Adverbial placement

The assumption behind the adverbial placement test is that an adverb cannot take scope over the matrix verb while occurring inside the embedded clause (J-B Kim 1993: 472). That is, the main clause adverb should occur outside the embedded clause to have scope over the matrix verb. This point is illustrated in (25), which involves an uncontroversial embedded clause.

(25) Sentence involving an uncontroversial embedded clause
      Tom-NOM Mary-NOM yesterday went-COMP say-PAST-DECL
      Intended meaning: ‘Tom said yesterday that Mary went.’
      Literal meaning: ‘Tom said that Mary went yesterday.’

   b. Tom-i [CP Mary-ka kassta]-ko ecey malhay-ss-ta.  
      Tom-NOM Mary-NOM went-COMP yesterday say-PAST-DECL
      ‘Tom said yesterday that Mary went.’

   c. ecey Tom-i [CP Mary-ka kassta]-ko malhay-ss-ta.  
      yesterday Tom-NOM Mary-NOM went-COMP say-PAST-DECL
      ‘Yesterday, Tom said that Mary went.’

The adverb ecey ‘yesterday’ in (25a) cannot modify the matrix verb since it occurs inside the embedded clause. The adverb only has scope over the embedded verb. This is expected since the NP Mary is the subject of the embedded clause, not the direct object of the matrix verb, and it forms an independent clause with the embedded verb. In contrast to (25a), the adverb ecey ‘yesterday’ can modify the matrix verb if it occurs outside the embedded clause, as shown in (25b) and (25c).
The behavior of sentences involving an uncontroversial embedded clause contrasts with that of resultatives based on transitive verbs in which the NP of which the resultative predicate is predicated is a direct object of the matrix verb. As illustrated in (26), the adverb *ecey* 'yesterday' in resultatives built around transitive verbs modifies the matrix verb regardless of its position in a sentence.

(26) Resultative based on a transitive verb

a. Tom-i Mary-lul *ecey* [mengtul-key] tayli-ess-ta.\(^\text{19}\)
   Tom-NOM Mary-ACC yesterday bruised-COMP beat-PAST-DECL
   'Tom beat Mary black and blue yesterday.'

   yesterday Tom-NOM Mary-ACC bruised-COMP beat-PAST-DECL
   'Yesterday Tom beat Mary black and blue.'

   Tom-NOM yesterday Mary-ACC bruised-COMP beat-PAST-DECL
   'Tom beat Mary black and blue yesterday.'

In particular, in contrast to (25a), which involves an uncontroversial embedded clause, the adverb *ecey* 'yesterday' in (26a) modifies the matrix verb, occurring between the resultative predicate and the NP of which it is predicated. The fact that sentences such as (26a) are grammatical suggests that an accusative-marked NP in a transitive-based resultative occurs in the matrix clause.

In contrast to transitive-based resultatives, resultative constructions based on unergative verbs behave the same as sentences involving an embedded clause with

\(^{19}\) The NP of which the resultative predicate is predicated in resultatives based on transitive verbs also passes other direct objecthood tests, as will be shown in the following subsections.
respect to adverbial modification. Recall that non-subcategorized NPs in Korean are nominative-marked. An adverb can appear at the beginning of a sentence, as in (27a), before a non-subcategorized NP, as in (27b), and after the resultative predicate, as in (27c), modifying the matrix verb.

(27) Resultative based on an unergative verb

yesterday sister-NOM throat-NOM hoarse-KEY cry-PAST-DECL
‘Yesterday my sister cried herself (her throat) hoarse.’

sister-NOM yesterday throat-NOM hoarse-KEY cry-PAST-DECL
‘My sister cried herself (her throat) hoarse yesterday.’

c. yetongsayng-i [mok-i swui-key] ecey wul-ess-ta.
sister-NOM throat-NOM hoarse-KEY yesterday cry-PAST-DECL
‘My sister cried herself (her throat) hoarse yesterday.’

sister-NOM throat-NOM yesterday hoarse-KEY cry-PAST-DECL

Intended meaning: ‘My sister cried yesterday.’
Literal meaning: ‘Her voice was hoarse yesterday due to a crying action.’

However, as (27d) illustrates, the adverb cannot occur immediately before the resultative predicate if it is to modify the matrix verb. Recall that this is also impossible with sentences involving an uncontroversial embedded clause, as shown in (25a). Therefore, the ungrammaticality of sentences such as (27d) suggests that a non-subcategorized NP in a resultative based on unergative verbs does not occur in the same clause as the matrix verb. In other words, the non-subcategorized NP is not a direct object of the matrix verb. This in turn suggests that the non-subcategorized NP may form an
independent clause with the resultative predicate, given the nominative case marking on it.

3.3.2 Passivization

In Korean, there are two types of passives, one of which is morphological passives, which are restricted to a group of verbs (K-S Hong 1991, Sohn 1999). The other involves the morpheme –ci, which forms CI passives. Given that a direct object of a verb gets promoted to the subject position through passivization, an NP is a direct object of the matrix verb if it can undergo CI passivization. Let us first consider transitive-based resultatives in which the NP of which a resultative predicate is predicated is a direct object of the matrix verb. They can undergo passivization, as (28) shows.

(28) Resultative based on a transitive verb

   Mary-NOM meat-ACC soft-KEY boil-PAST-DECL
   ‘Mary boiled the meat soft.’

b. Passive
   meat-NOM soft-KEY boil-PASS-PAST-DECL
   ‘The meat was boiled soft.’

However, it should be reminded that participation in passive formation does not necessarily require that the NP be an argument of a matrix verb. Recall that non-subcategorized NPs occurring in resultatives built around unergative verbs in English can undergo passivization, as shown in (29), repeated from (24), although they are not an argument of the matrix verb.
(29)  
   a. Mary ran her Nikes threadbare.  
   b. Her Nikes have been run threadbare. (passive)

Hence, it may be possible for a nominative-marked non-subcategorized NP to undergo passivization in Korean. However, as (30) and (31) help illustrate, non-subcategorized NPs in Korean cannot get promoted to the subject position.

(30) Resultative which involves an NP denoting a body part
   
   a. tongsayng-i [pay-ka aphyu-key] wus-ess-ta.  
      brother-NOM belly-NOM sore-KEY laugh-PAST-DECL  
      ‘My brother laughed his belly sore.’

   b. Passive  
      belly-NOM sore-KEY laugh-PASS-PAST-DECL  
      ‘*My brother’s belly was laughed sore.’

(31) Resultative involving a non-reflexive NP
   
      he-TOP that handkerchief-NOM soggy-KEY cry-PAST-DECL  
      ‘He cried that handkerchief soggy.’

   b. Passive  
      *ku sonswuken-i [ces-key] wule ci-ess-ta.  
      that handkerchief-NOM soggy-KEY cry-PASS-PAST-DECL  
      ‘* That handkerchief was cried soggy.’

The fact that the (b) sentences are ungrammatical suggests that non-subcategorized NPs are not a direct object of the matrix verb. Along with the case marking, its inability to undergo passivization adds support to the speculation that a nominative-marked non-subcategorized NP is not syntactically tied to the matrix verb. Rather, it is tied to the resultative predicate, being its subject.
The results of tests involving adverbial placement and passivization strongly suggest that a nominative-marked non-subcategorized NP in Korean is not a direct object of the matrix verb. This in turn suggests that it may belong in the same clause with the resultative predicate, forming an independent clause.

3.3.3 Scrambling

The facts about scrambling also add support to the speculation that a nominative-marked non-subcategorized NP is not a direct object of the matrix verb. Let us first look at resultatives based on transitive verbs, in which an accusative-marked NP is a direct object of the matrix verb. As (32b) illustrates, the accusative-marked NP of which the resultative predicate is predicated can be scrambled freely.

\[(32) \quad \text{Resultative based on a transitive verb}\]

\[
a. \quad \text{John-i pyek-ul}\]
\[
\begin{array}{ll}
\text{John-NOM} & \text{wall-ACC} \\
\text{‘John painted the wall red.’} & \text{[ppalkah-key]} \\
\text{red-KEY} & \text{chilhay-ss-ta. paint-PAST-DECL}
\end{array}
\]

\[
b. \quad \text{pyek-ul John-i}\]
\[
\begin{array}{ll}
\text{wall-ACC} & \text{John-NOM} \\
\text{‘John painted the wall red.’} & \text{[ppalkah-key]} \\
\text{red-KEY} & \text{chilhay-ss-ta. paint-PAST-DECL}
\end{array}
\]

However, this is not true for non-subcategorized NPs occurring in resultatives built around unergative verbs (J-B Kim 1993: 477). A nominative-marked non-subcategorized NP cannot be scrambled away from the resultative predicate. A sentence becomes ungrammatical if it occurs before the subject of the matrix verb, as shown in (33b).
(33) **Resultative based on an unergative verb**

   he-TOP that handkerchief-NOM soggy-KEY cry-PAST-DECL  
   ‘He cried that handkerchief soggy.’

   that handkerchief-NOM he-TOP soggy-KEY cry-PAST-DECL  
   ‘He cried that handkerchief soggy.’

In addition, a nominative-marked non-subcategorized NP cannot be left behind when the resultative predicate is scrambled away, as illustrated in (34b). This behavior contrasts with that of an accusative-marked NP occurring in a transitive-based resultative. A resultative predicate can occur at the beginning of a sentence, not adjacent to the accusative-marked NP, as (35b) shows.

(34) **Resultative based on an unergative verb**

   he-TOP that handkerchief-NOM soggy-KEY cry-PAST-DECL  
   ‘He cried that handkerchief soggy.’

b. * ces-key ku-nun ku sonswuken-i wul-ess-ta.  
   soggy-KEY he-TOP that handkerchief-NOM cry-PAST-DECL  
   ‘He cried that handkerchief soggy.’

(35) **Resultative based on a transitive verb**

   John-NOM wall-ACC red-KEY paint-PAST-DECL  
   ‘John painted the wall red.’

b. ppalkah-key John-i pyek-ul chilhay-ss-ta.  
   red-KEY John-NOM wall-ACC paint-PAST-DECL  
   ‘John painted the wall red.’
A nominative-marked non-subcategorized NP can be scrambled only when the resultative predicate is scrambled along with it, as (36b) shows.

(36) Resultative based on an unergative verb

   He-TOP that handkerchief-NOM soggy-KEY cry-PAST-DECL
   ‘He cried that handkerchief soggy.’

b. [ku sonswuken-i ces-key] ku-nun wul-ess-ta.
   that handkerchief-NOM soggy-KEY he-TOP cry-PAST-DECL
   ‘He cried that handkerchief soggy.’

If a nominative-marked non-subcategorized NP is a direct object of the matrix verb, the contrast between transitive-based and unergative-based resultative patterns is not expected. However, as observed in (32) through (35), nominative-marked non-subcategorized NPs do not behave the same as accusative-marked NPs in transitive-based resultative patterns with respect to scrambling, which suggests that non-subcategorized NPs in resultatives built around unergative verbs are not a direct object of the matrix verb.

The facts about adverbial placement, passive formation, and scrambling strongly suggest that non-subcategorized NPs occurring in resultative patterns built around unergative verbs in Korean, which are nominative-marked, is not a direct object of the matrix verb. Rather, it is syntactically (and thematically) tied to the resultative predicate of which it is the subject. In other words, unergative-based resultatives involving nominative-marked non-subcategorized NPs are clausal, not predicative. Based on this, it may be safe to say that Korean unergative verbs do not form (predicative) resultative
constructions since Korean does not also allow subjected-oriented resultatives involving
agentive manner of motion verbs.

3.4 The interpretation of resultative constructions based on unergative verbs

This section considers degree interpretations yielded by resultative constructions
built around unergative verbs (Napoli 1992, Simpson 1983). Even though degree
interpretations are normally associated with unergative-based resultatives, resultative
patterns based on transitive and unaccusative verbs are also discussed in examining the
distribution of the morpheme -tolok, which signifies a degree interpretation.

3.4.1 Resultatives based on unergative verbs in English

It has been observed that unergative-based resultatives in English yield a degree
interpretation when they involve non-subcategorized NPs (i.e., fake objects) (Napoli
1992, Simpson 1983). The meaning of these patterns implies that the action described by
the matrix verb was done to such a degree. That is, resultative phrases in these patterns
are interpreted as if they function as “degree modifiers” of the matrix verb (Napoli 1992:
55). They can be paraphrased with sentences headed by to the point where.

Let us consider the sentences in (37).

(37) a. The marathoners ran the pavement thin.
    b. Mary ran her Nikes threadbare.

---

20 On her account, both the resultative predicate and the NP of which it is
predicated are a modifier of the verb.
(37a) does not literally mean that the pavement became thin as a result of a running event. Similarly, (37b) does not imply that the Nikes were literally threadbare due to a running action. That is, the referent of the direct object in these sentences is not literally in the state described by the resultative predicate (i.e., thin and threadbare, respectively), although this is not implausible. Rather, the meaning of the sentences in (37) implies that a running activity was carried out to the point where it lasted too long (Napoli 1992: 58). The sentences in (37) are easily paraphrased with sentences involving the to the point where expression, as shown in (38).

(38) a. The marathoners ran to the point where the pavement was thin.
    b. Mary ran to the point where her Nikes were threadbare.

A degree interpretation is also available with sentences involving reflexive pronouns such as (39) (Napoli 1992: 70), although the referent of the direct object in (39) is literally in the state expressed by the resultative predicate, in contrast to the sentences in (37) and (38).

(39) a. Mary shouted herself hoarse.
    b. Mary shouted to the point where her voice was hoarse.

In (39a), the resultative predicate emphasizes the fact that the action described by a matrix verb was done to such a degree that Mary became hoarse. That is, it denotes the intensity of the activity described by the matrix verb. (39a) can be paraphrased with a sentence involving the to the point where expression, as (39b) shows.
3.4.2 Resultatives based on unergative verbs in Korean

The same also holds true for resultatives based on unergative verbs in Korean. As in English, key-marked phrases in Korean unergative-based resultatives are interpreted as if the action denoted by the matrix verb is done to that particular degree. For example, sentence (40a) involving an NP denoting a body part implies that a singing action was done to such a degree that Mary’s throat was sore. Similarly, the resultative clause mok-i swui-key ‘(her) throat is sore’ in (41a) indicates that a shouting action was done with such intensity that it caused a sore throat.

     Mary-NOM throat-sick-KEY sing-PAST-DECL
     ‘Mary shouted her throat sore.’

     Mary-NOM throat-sick-TOLOK sing-PAST-DECL
     ‘Mary shouted to the point where her throat was sore.’

     Tom-TOP voice-NOM hoarse-KEY shout-PAST-DECL
     ‘Tom shouted himself hoarse.’

     Tom-TOP voice-NOM hoarse-TOLOK shout-PAST-DECL
     ‘Tom shouted to the point where his voice was hoarse.’

As (40b) and (41b) illustrate, the (a) sentences can be paraphrased with phrases marked by the morpheme -tolok, which has the meaning of ‘to the point where’ or ‘to the

---

21 Recall that in Korean non-subcategorized NPs are either incorporated into a resultative phrase, as in (40), or case-marked, as in (41). In addition, they cannot be deleted.
extent that’ (Martin 1992: 819, Sohn 1999: 317).\textsuperscript{22} It should be noted that unergative-based resultatives sound better when they occur with \textit{tolok}-marked phrases. As a matter of fact, many native speakers tend to replace –\textit{key} with –\textit{tolok} when sentences are presented with \textit{key}-marked phrases, which may also suggest that resultatives built around unergative verbs are associated with a degree interpretation.\textsuperscript{23}

One thing to note here is that other types of resultative patterns are not easily replaced with \textit{tolok}-marked phrases, which seems to support the observation that degree interpretations are normally available with unergative-based resultatives (Napoli 1992, Simpson 1983). However, the matter is complicated since the distribution of the morpheme –\textit{tolok} is sensitive to the syntactic category of the resultative predicate as well as the type of the matrix verb, although the observation about unergative-based resultatives is correct, as will be shown shortly.

First, observe the ungrammaticality of the following resultative patterns based on unaccusative verbs.

\begin{itemize}
\item \textsuperscript{22} The morpheme –\textit{tolok} has several meanings. See D-H Chung (1993).
\item \textsuperscript{23} Key-marked resultative phrases can also be paraphrased with expressions marked by –\textit{ul cengtolo}, in which the word \textit{cengto} specifically means ‘degree’ or ‘extent.’ The meaning of these expressions also emphasizes the fact that the action denoted by the matrix verb was done to a particular degree.
\end{itemize}

\begin{tabular}{llll}
(i) & Tom-un & [mok-i swui-key] & solichi-ess-ta.
 & Tom-TOP & voice-NOM & hoarse-KEY & shout-PAST-DECL
 & ‘Tom shouted himself hoarse.’

(ii) & Tom-un & [mok-i \textbf{swui-I cengto-lo}] & solichi-ess-ta.
 & Tom-TOP & voice-NOM & hoarse-degree-POST & shout-PAST-DECL
 & ‘Tom shouted to the point where his voice was hoarse.’
\end{tabular}
Unaccusative-based resultatives involving an adjectival resultative predicate

a. hoswu-ka [tantanha-key/*tolok] el-ess-ta.
   lake-NOM solid-KEY/TOLOK freeze-PAST-DECL
   'The lake froze solid (to the point where it was solid).'

b. nampi-ka [kkamah-key/*tolok] tha-ss-ta.
   pot-NOM black-KEY/TOLOK burn-PAST-DECL
   'The pot burned black (to the point where it was black)'

Similarly, resultatives based on transitive verbs are not compatible with tolok-marked phrases, as illustrated in (43).

Transitive-based resultatives involving an adjectival resultative predicate

   Yumi-TOP hair-ACC short-KEY/TOLOK cut-PAST-DECL
   'Yumi cut her hair short (to the point where it was short).'

   John-NOM metal-ACC flat-KEY/TOLOK pound-PAST-DECL
   'John pounded the metal flat (to the point where it was flat).'

Based on the fact that the examples in (42) and (43) are predicative resultatives, in contrast to those in (40) and (41), Wechsler and Noh (2001: 407-8) argue that the unacceptability of the sentences involving a tolok-marked phrase in (42) and (43) stems from the fact that the morpheme -tolok is compatible only with clausal resultatives. That is, the (predicative or clausal) type of an expression occurring with -tolok is responsible for the contrast between unergative-based resultatives on the one hand and unaccusative-based and transitive-based resultatives on the other.
However, their claim cannot be right since the PREDICATIVE type of unergative-based resultatives exemplified by (44) is acceptable, despite the fact that the resultative phrase does not involve a theme argument.

(44) **Predicative resultative occurring with -tolok**

Mary-ka [michi-**tolok**] solichi-ess-ta. 
Mary-NOM crazy-TOLOK shout-PAST-DECL

'Mary shouted to the point where he was crazy.'

The fact that sentences such as (44) are grammatical suggests that compatibility with the morpheme -**tolok** is determined by something other than the (predicative or clausal) type of an expression with which it occurs. The syntactic category of a resultative predicate seems to play a role since the examples in (42) and (43) involve adjectival resultative predicates. The generalization appears to be that patterns involving adjectival resultative predicates are not compatible with **tolok**-marked phrases, in contrast to those involving verbal resultative predicates, as in (45).

(45) **Transitive-based resultatives involving a verbal resultative predicate**

a. Mary-ka Tom-ul [mengtul-key/**tolok**] tlayli-ess-ta.
   Mary-NOM Tom-ACC bruised-KEY/TOLOK beat-PAST-DECL
   'Mary beat Tom black and blue (to the point where he was black and blue).'</n
   John-NOM balloon-ACC explode-KEY/TOLOK inflate-PAST-DECL
   'John blew the balloon to the point where it exploded.'

---

24 As noted earlier, the sentence is ungrammatical if the resultative predicate occurs with -**key**.
However, matters are complicated since resultatives based on unaccusative verbs do not allow *tolok*-marked resultative phrases regardless of the syntactic category of the resultative predicate. As shown in (42), *-tolok* cannot occur with adjectival resultative predicates. Resultatives based on unaccusative verbs are also unacceptable when a verbal resultative predicate is involved, as (46) shows.²⁵

(46) Unaccusative-based resultatives involving a verbal resultative predicate

a. pyeng-i [yelli-*key/*tolok] kkayci-ess-ta.
   bottle-NOM open-KEY/TOLOK break-PAST-DECL
   ‘The bottle broke open (to the point where it was open).’

b. tungsankayk-tul-i [cwuk-*key/*tolok] el-ess-ta.
   climber-PL-NOM die-KEY/TOLOK freeze-PAST-DECL
   ‘The climbers froze to death (to the point where they were dead).’

Based on the distribution of the morpheme *-tolok*, which yields a degree interpretation in resultatives, it can be said that resultatives based on unaccusative verbs are not associated with degree interpretations at all. On the other hand, resultatives based on transitive verbs yield degree interpretations only when they occur with a verbal resultative predicate. Resultatives based on unergative verbs differ from unaccusative-based and transitive-based resultatives, in that *-tolok* seems to occur with the former irrespective of the syntactic category of the resultative predicate. The point is illustrated in (47), repeated from (40) and (41).

²⁵ As will be discussed in detail in the next chapter, unaccusative verbs do not occur with verbal resultative phrases marked by *-key*. Replacement with *tolok*-marked phrases does not improve the grammaticality of sentences, in contrast to resultatives based on unergative verbs. Recall that some predicative unergative-based resultatives become grammatical when *-key* is replaced by *-tolok*, as shown in (44).
(47) Unergative-based resultatives

a. With an adjectival resultative predicate
Mary-NOM throat-sick-KEY/TOLOK sing-PAST-DECL
'Mary shouted her throat sore (to the point where her throat was sore).'

b. With a verbal resultative predicate
Tom-Top voice-NOM hoarse-KEY/TOLOK shout-PAST-DECL
'Tom shouted himself hoarse (to the point where his voice was hoarse).'

(47a) involves an adjectival resultative predicate and (47b) occurs with a verbal resultative predicate. The fact that both patterns are grammatical suggests that degree interpretations are normally associated with resultatives based on unergative verbs. This thesis does not pursue the issue of why such contrasts are observed among different types of resultative patterns.

Table 1 summarizes the distribution of the morpheme –tolok in resultative patterns.

Table 1. The distribution of –tolok in resultative constructions.

<table>
<thead>
<tr>
<th>Type of resultative predicate</th>
<th>Adjectival</th>
<th>Verbal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transitive-based</td>
<td>Not possible</td>
<td>Possible</td>
</tr>
<tr>
<td>Unaccusative-based</td>
<td>Not possible</td>
<td>Not possible</td>
</tr>
<tr>
<td>Unergative-based</td>
<td>Possible</td>
<td>Possible</td>
</tr>
</tbody>
</table>
3.5 Conclusion

This chapter investigated the syntactic properties of resultative patterns built around unergative verbs in Korean. The goal was to show that Korean does not allow (predicative) resultatives based on unergative verbs. First, it was shown that subject-oriented patterns (i.e., patterns in which a resultative predicate is predicated of the matrix subject) are not found in Korean. In contrast to English, in Korean a serial verb complex is used in place of a simple verb when agentive manner of motion verbs such as talli-ta ‘run’ and ket-ta ‘walk’ are involved. Given that verbs such as ka-ta ‘go’, naka-ta ‘go out’, o-ta ‘come’ and nao-ta ‘come out’, which are used as the second verb in a serial verb complex, are unaccusative, patterns involving a serial verb complex do not count as counterexamples to the DOR. Rather, it was argued that they are object-oriented resultative patterns, conforming to the DOR.

Second, it was argued that incorporated-theme patterns (e.g., mok-aphu-key ‘throat-sore’), in which a theme argument is incorporated into the resultative phrase, are not predicative, although they do not involve the internal case marking, following Wechsler and Noh (2001). In incorporated-theme patterns, predication is satisfied within a resultative phrase, in that the resultative predicate is predicated of the incorporated theme argument.

In addition, the tests involving adverb modification, passivization and scrambling showed that non-subcategorized NPs occurring in Korean resultative patterns do not function as direct object of the matrix verb, in contrast to non-subcategorized NPs (i.e., fake objects in Simpson’s (1983) terms) in English. In Korean, non-subcategorized NPs
are nominative-marked and they are the subject of a resultative predicate, which means a non-subcategorized NP is syntactically tied to the resultative predicate, not to the matrix verb, forming an independent clause with the resultative predicate. In other words, Korean resultative patterns involving non-subcategorized NPs are not predicative, but clausal. Based on the facts about subject-oriented resultative patterns, incorporated-theme resultatives, and resultatives occurring with non-subcategorized NPs, it can be concluded that Korean unergative verbs do not form (predicative) resultatives. Given this, it may be said that the DOR holds for Korean.
Chapter 4

Resultative constructions based on unaccusative verbs

4.1 Introduction

This chapter considers the question of whether unaccusative verbs can form resultatives. The question arises from the status of *key*-marked phrases occurring in resultative constructions based on unaccusative verbs. Wechsler and Noh (2001) question their status as predicates and argue that *key*-marked phrases occurring in resultatives based on unaccusative verbs are not secondary predicates, but adverbs. However, this thesis takes a position that unaccusative verbs can participate in resultative formation, and attempts are made to show that some *key*-marked phrases occurring in resultatives built around unaccusative verbs are not adverbs, but predicates.

Section 4.2 critically reviews arguments Wechsler and Noh (2001) have presented to argue against the status of *key*-marked phrases occurring in resultatives based on unaccusative verbs as predicates. It is shown that the evidence they provide does not necessarily show that *key*-marked phrases occurring in unaccusative-based resultatives are adverbs. In addition, it is shown by examining a wide range of examples that their arguments, which are mainly based on one example, may not hold for other resultative patterns built around unaccusative verbs.
In section 4.3, resultative patterns based on unaccusative verbs are examined with respect to their transitive causative uses. It is argued that not all unaccusative-based resultatives have transitive causative counterparts in Korean, which may be attributed to the agentive causer restriction that limits a set of causers which can occur in the transitive causative uses.

Section 4.4 examines the differing behavior of adjectival and verbal resultative predicates with respect to their ability to occur in resultatives based on unaccusative verbs. The fact that verbal resultative predicates cannot occur with unaccusative verbs is explained by an aspectual constraint on delimiting eventualities (the Single Delimiting Constraint; Tenny 1994). Lastly, section 4.5 briefly discusses the relation between the non-agentivity of unaccusative verbs and their ability to occur in resultative constructions. It is argued that non-agentivity does not have a bearing on their ability to form resultatives.

4.2 The status of the key-marked phrase

Korean unaccusative verbs can form resultative constructions, as pointed out by J-B Kim (1993) and Kim and Maling (1997). Examples are given in (1).

(1) a. hoswu-ka [tantanha-key] el-ess-ta.
lake-NOM solid-KEY freeze-PAST-DECL
'The lake froze solid.'
(J-B Kim 1993: 471)

b. kwuk-i [kelccwukha-key] kkulh-ess-ta.
soup-NOM sticky-KEY boil-PAST-DECL
'The soup boiled sticky.'
c. nampi-ka [kkanmah-key] tha-ss-ta.
   pot-NOM   black-KEY   burn-PAST-DECL
   'The pot burned black.'

The meaning of the sentences in (1) implies that the referent of the subject is in the state described by the resultative predicate. Sentence (1a) entails that the lake became solid due to the event of freezing. Similarly, the soup in (1b) became sticky as a result of a boiling event, and the pot in (1c) became black due to the event described by the verb *tha-ta* 'burn (intr.).'

However, the status of the *key*-marked phrase as a resultative predicate is called into question by Wechsler and Noh (2001). They argue that *key*-marked phrases occurring in resultatives based on unaccusative verbs such as those in (1) are adverbs, not secondary predicates. Based on this assumption, they further argue that Korean does not permit (predicative) resultatives that are built around non-agentive verbs such as unaccusative verbs (Wechsler and Noh 2001: 412-3). In this section, the arguments presented by Wechsler and Noh (2001) are critically reviewed, and it is shown that their arguments do not provide convincing evidence for the status of *key*-marked phrases occurring with unaccusative verbs as adverbs.

#### 4.2.1 The interpretation of the *key*-marked phrase

It has been observed that the morpheme *-key* can mark either adverbs or secondary predicates (Y-J Jang 1997, E-Y Kang 2001, Sohn 1999, among others). An example of each use is provided in (2).
(2) Uses of the morpheme *-key*

a. **As an adverb**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Direct Object</th>
<th>Key-marked Word</th>
<th>Resultative Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary-NOM</td>
<td>Tom-ACC</td>
<td><strong>sey-key</strong></td>
<td>ttayli-ess-ta.</td>
</tr>
<tr>
<td>Mary-ka</td>
<td>Tom-ul</td>
<td>strong(hard)-KEY</td>
<td>beat-PAST-DECL</td>
</tr>
</tbody>
</table>

'Mary beat Tom hard.'

b. **As a predicate**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Direct Object</th>
<th>Key-marked Word</th>
<th>Resultative Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>na-nun</td>
<td>he-lul</td>
<td><strong>solcikha-key</strong></td>
<td>sayngkakha-n-ta.</td>
</tr>
<tr>
<td>I-TOP</td>
<td>he-ACC</td>
<td>honest-KEY</td>
<td>think-PRES-DECL</td>
</tr>
</tbody>
</table>

'I think him to be honest.'

(Y-J Jang 1997: 151)

The *key*-marked phrase in (2a) modifies the action described by the verb, yielding the interpretation that the beating action was carried out in a strong manner. The sentence cannot mean that Tom is (or became) strong due to a beating action, let alone that Mary did. In other words, the phrase *sey-key* ‘strong’ is predicated neither of the subject *Mary*, nor of the direct object *Tom*. In contrast to (2a), the *key*-marked phrase in (2b) does not describe the manner in which the action described by the matrix verb *sayngkakha-ta* ‘think’ takes place. Rather, *solcikha-key* ‘honest’ is predicated of the direct object, yielding the interpretation that the referent of the direct object is honest.

Wechsler and Noh (2001) argue that a *key*-marked phrase occurring in unaccusative-based resultatives bears an interpretation in which it modifies the event expressed by a verb, not an interpretation in which it describes the result state that the referent of the direct object is in. For example, sentence (3) below supposedly means that the event of freezing took place in a solid manner. According to Wechsler and Noh, the meaning of the sentence does not necessarily imply that the *key*-marked phrase *tantanha-*
key ‘solid’ is predicated of the river. Rather, it entails that the ice, not the river, became solid (Wechsler and Noh 2001: 409).

(3) kang-i [tantanha-key] el-ess-ta.
    river-NOM solid-KEY freeze-PAST-DECL

‘The river froze solid.’

Wechsler and Noh (2001) claim that the status of the key-marked phrase in (3) as an adverb is supported by the fact that it can be replaced with other adverbs. The assumption here is that predicates are not easily replaced with adverbs, given their categorical difference. Therefore, if a key-marked phrase occurring in an unaccusative-based resultative is a predicate, it may not be replaced by an adverb. According to Wechsler and Noh (2001), the fact that the key-marked phrase tantanha-key ‘solid’ in (3) can be replaced by an adverb, as illustrated in (4), suggests that it is not a true predicate. This is because the key-marked phrase twukkep-key ‘thick’ in (4) describes the manner in which the event of freezing took place, rather than denoting the result state caused by the event of freezing.

(4) kang-i [twukkep-key] el-ess-ta.
    river-NOM thick-KEY freeze-PAST-DECL

‘The river froze thickly (i.e., in a thick manner).’

However, although the key-marked phrase tantanha-key ‘solid’ in (3) may be replaced by other adverbs such as twukkep-key ‘thick’, this does not necessarily mean that

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1 Replacement with an adverb is discussed in more detail in the next section.
tantanha-key ‘solid’ in (3) is an adverb. A true predicate can also be replaced by an adverb, as the examples in (5) help illustrate.

(5) Resultative based on a transitive verb

a. As a predicate
   Mary-NOM metal-ACC flat-KEY pound-PAST-DECL
   ‘Mary pounded the metal flat.’

b. As an adverb
   Mary-ka kumsok-ul [sey-key] twutulki-ess-ta.
   Mary-NOM metal-ACC strong-KEY pound-PAST-DECL
   ‘Mary pounded the metal strongly(or hard).’

(5a) implies that the metal became flat as a result of a pounding action. The key-marked phrase napcakha-key ‘flat’ therefore does not modify the action described by the verb; rather, it is predicated of the direct object the metal. Nonetheless, the key-marked phrase napcakha-key ‘flat’ can be replaced by an adverb, as shown in (5b), in which the adverb sey-key ‘strongly’ describes the manner in which the pounding action took place, not a result state. (Needless to say, (5b) cannot mean that the metal became strong due to a pounding action.)

In addition, it should be pointed out that Wechsler and Noh (2001) discuss only one example, which involves the NP kang ‘river’ and the verb el-ta ‘freeze (intr.)’ in examining the status of key-marked phrases occurring in unaccusative-based resultatives as predicates. Caution is therefore called for, as Wechsler and Noh’s claim that key-marked phrases occurring in resultatives built around unaccusative verbs are not predicates may not extend to other examples. Indeed, an examination of more examples
calls into question the validity of Wechsler and Noh's claim. Contrary to what they propose, some key-marked phrases occurring in unaccusative-based resultatives are secondary predicates, as will be shown shortly.

Let us first consider the examples in (6).

(6) a. kwuk-i [kelccwukha-key] kkulh-ess-ta.
    soup-NOM thick(sticky)-KEY boil-PAST-DECL
    ‘The soup boiled sticky.’

    skirt-NOM short-KEY shrink-PAST-DECL
    ‘The skirt shrank short.’

    blouse-NOM blue-KEY dye-PAST-DECL
    ‘The blouse dyed blue.’

Sentence (6a) means that the soup became sticky (or thick) due to the boiling event. Similarly, the meaning of (6b) is that the shirt became short due to the event of shrinking, and (6c) implies that the blouse became blue due to the dyeing event. The key-marked phrases in (6) do not describe the manner in which the event described by the verb took place, which would be expected if they were adverbs. Rather, the key-marked phrases (i.e., kelccwukha-key ‘sticky’, ccalp-key ‘short’, and phalah-key ‘blue’) in (6) denote a specific change of state that was caused to the referent of the subject as a result of the event described by the matrix verb. They are predicated of the subject (i.e., kwuk ‘soup’, chima ‘skirt’, and blouse, respectively), which suggests that they are predicates, but not adverbs.
4.2.2 Replacement with the i-marked adverb

Another piece of evidence Wechsler and Noh (2001: 409) present to argue for the status of *key*-marked phrases occurring in unaccusative-based resultatives as adverbs involves the replacement with the *i*-marked adverb such as *tantan*-hi ‘solidly.’ The assumption is that if a *key*-marked phrase is a true predicate, the replacement with the corresponding *i*-marked adverb should not be possible. In other words, the *key*-marked phrase may be an adverb if it can be replaced by the corresponding uncontroversial *i*-marked adverb.

Turning to the example presented by Wechsler and Noh (2001), the *key*-marked phrase *tantanha*-key ‘solid’ in (7a) can be replaced by the corresponding *i*-marked adverb *tantanhi* ‘solidly’, as illustrated in (7b). Based on this, Wechsler and Noh argue that *key*-marked phrases occurring in resultative patterns based on unaccusative verbs are adverbs.

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A remark on the suffix *-i* is in order. It has been observed that the suffix *-i* only marks adverbs. On the other hand, the morpheme *-key* can mark either adverbs or predicates. The suffix *-key* can occur with (action) verbs such as *tallit*-ta ‘run’ as well as adjectives such as *alumtat*-ta ‘beautiful’ while the suffix *-i* cannot combine with (action) verbs (Y-J Jang 1997: 150). In addition, the adverbial suffix *-i* is combined with a limited set of adjectives, as the list below helps illustrate.

<table>
<thead>
<tr>
<th>key-marked form</th>
<th>i-marked form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ppalu-key</td>
<td>ppal-li</td>
<td>‘quick(ly)’</td>
</tr>
<tr>
<td>b. solcikha-key</td>
<td>solcik-hi</td>
<td>‘frank(ly)’</td>
</tr>
<tr>
<td>c. kupha-key</td>
<td>kup-hi</td>
<td>‘hurriedly’</td>
</tr>
<tr>
<td>d. napcakha-key</td>
<td>napcak-hi</td>
<td>‘flat(ly)’</td>
</tr>
<tr>
<td>e. ccalp-key</td>
<td>*ccalp-i</td>
<td>‘short’</td>
</tr>
<tr>
<td>f. phakah-key</td>
<td>*phakah-i</td>
<td>‘red’</td>
</tr>
<tr>
<td>g. chakap-key</td>
<td>*chakap-i</td>
<td>‘cold’</td>
</tr>
<tr>
<td>h. alumtap-key</td>
<td>*alumtap-i</td>
<td>‘beautiful(ly)’</td>
</tr>
<tr>
<td>i. pwutulep-key</td>
<td>*pwutulep-i</td>
<td>‘soft(ly)’</td>
</tr>
</tbody>
</table>
not predicates. If tantanha-key ‘solid’ were a true predicate, it would not be replaced by the corresponding i-marked adverb tantanhi ‘solidly.’

(7) a. kang-i tantanha-key el-ess-ta.
    river-NOM solid-KEY freeze-PAST-DECL
    ‘The river froze solid.’

b. kang-i tantanhi el-ess-ta.
    river-NOM solid-ADV freeze-PAST-DECL
    ‘The river froze solidly.’

(Wechsler and Noh 2001: 409)

However, as pointed out in the previous section, the generalization made about one example should be interpreted with caution. An examination of more examples reveals that some key-marked phrases occurring in resultative constructions based on unaccusative verbs are predicates, contrary to what Wechsler and Noh (2001) claim, as will be shown shortly.

Let us consider the sentences in (8) and (9).

(8) a. chima-ka ccalp-key cwul-ess-ta.
    skirt-NOM short-KEY shrink-PAST-DECL
    ‘The skirt shrank short.’

    skirt-NOM short-ADV shrink-PAST-DECL
    Literal meaning: ‘The skirt shrank shortly.’

(9) a. blouse-ka phalah-key mwultul-ess-ta.
    blouse-NOM blue-KEY dye-PAST-DECL
    ‘The blouse dyed blue.’

    blouse-NOM blue-ADV dye-PAST-DECL
    Literal meaning: ‘The blouse dyed bluely (i.e., in a blue manner).’
The *key*-marked phrases *ccalp-key* ‘short’ in (8a) and *phalah-key* ‘blue’ in (9a) cannot be replaced with the corresponding *i*-marked adverb forms *ccalp-*i ‘shortly’ and *phalah-*i ‘blue’, respectively. Given that a predicate is not easily replaced by the corresponding *i*-marked adverb form, the fact that (8b) and (9b) are ungrammatical suggests that the *key*-marked phrases in (8a) and (9a) are predicates, not adverbs. Therefore, sentences such as (8) and (9) serve as counterexamples to Wechsler and Noh’s (2001) claim that *key*-marked phrases occurring in resultatives based on unaccusative verbs are not predicates, but adverbs.

In sum, an examination of more examples suggests that Wechsler and Noh’s (2001) claim that *key*-marked phrases occurring in resultative patterns based on unaccusative verbs are adverbs may not be valid. Contrary to Wechsler and Noh’s (2001) claim, some *key*-marked phrases occurring in resultatives based on unaccusative verbs are predicates, as examples such as (8) and (9) help illustrate.

### 4.2.3 Coordination with an adverb

Another argument provided by Wechsler and Noh (2001) involves coordination with an adverb. The assumption is that the coordination of a predicate and an adverb would reduce the acceptability of a sentence, given that lexical or phrasal items of the same category are normally conjoined freely (Radford 1988: 75-8). Thus, a *key*-marked form may be an adverb if it can be coordinated with an adverb. Given this assumption, Wechsler and Noh argue that the *key*-marked phrase in (10) is an adverb since it can be conjoined with the adverb *ppalli* ‘quickly.’
However, the fact that the *key*-marked phrase in (10) can be coordinated with another adverb may not be indicative of the status of *key*-marked phrases occurring in unaccusative-based resultative patterns as adverbs. This is because the same *key*-marked form (i.e., *tantanha-key* ‘solid’) in (10) can be coordinated with an adverb even when it occurs in resultatives based on transitive verbs, as will be shown shortly. Wechsler and Noh (2001) assume that *key*-marked phrases occurring in transitive-based resultative constructions are secondary predicates, not adverbs, as others do (J-B Kim 1993, 1999, Kim and Maling 1997). This assumption is based on the fact that a *key*-marked phrase occurring in resultatives built around transitive verbs cannot be replaced with the corresponding *i*-marked adverb form (Y-J Jang 1997). The examples in (11) and (12) illustrate the point.

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3 It should be noted that expressions conjoined by the conjunction *kuliko* ‘and’ normally sound very awkward and very English-like. In particular, it seems that expressions involving adjectives coordinated by *kuliko* such as those in (ii) sound worse than those involving nouns coordinated by *kuliko* such as those in (i).
Given the incompatibility with the i-marked adverb phrase, as illustrated in the (b) sentences, it is predicted that the key-marked phrases in (11a) and (12a) should be not coordinated with an adverb if Wechsler and Noh’s claim is correct. However, this predication is not borne out. The key-marked phrases tantanha-key ‘solid’ and napcakha-key ‘flat’ can be conjoined with an uncontroversial adverb, as (13) shows.

Mary-NOM ice-ACC solid-KEY and quickly freeze-CAUS-PAST-DECL

‘Mary froze ice solid and quickly.’

John-NOM metal-ACC flat-KEY and slowly pound-PAST-DECL

‘John pounded the metal flat and slowly.’
Given the assumption that adverbs are freely coordinated with one another, the fact that the sentences in (13) are grammatical may suggest that key-marked forms are adverbs. However, the problem is that this contradicts with the assumption that key-marked forms occurring in resultatives based on transitive verbs are secondary predicates. In other words, the coordination test does not give convincing results about the status of key-marked phrases occurring in resultatives built around unaccusative verbs. Therefore, it may not be safe to say that key-marked phrases occurring in unaccusative-based resultatives are adverbs, based on the results of the coordination test.

4.2.4 Paraphrase with the –a/ese ‘so...that’ clause

The dividing line between the two uses (i.e., predicate versus adverb) of a key-marked phrase may be hard to draw with unaccusative verbs. But, its compatibility with the –a/ese ‘so...that’ clause may help illuminate the difference between the two functions. In the -a/ese ‘so...that’ clause, the morpheme –a/ese is preceded by the expression describing the causing event, and the matrix verb denotes the resulting event (or a result state), as illustrated in (14b).

(14) Cause-effect –a/ese ‘so...that’ clause

   John-TOP a.lot walk-CONJ tired-DECL
   ‘John walked a lot, so he was tired.’

   \[
   \begin{array}{cccc}
   \text{cause} & \text{effect} \\
   \end{array}
   \]
Given that the -a/ese ‘so...that’ clause expresses a cause-effect relation, it is predicted that a sentence involving a key-marked adverb, which describes the manner in which the event expressed by a matrix verb took place, may not be paraphrased with the -a/ese ‘so...that’ clause. The reason is that a change of state in the referent of the subject or the direct object is not implied by the meaning of the sentence since the key-marked adverb is predicated of neither of them.

For example, the key-marked phrase alumtap-key ‘beautifully’ in (15a) is an adverb, which describes the manner in which the singing event was done. (15a) cannot mean that namca ‘the man’ became beautiful as a result of the singing event since the key-marked adverb alumtap-key ‘beautifully’ is not predicated of the subject. Thus, (15a) cannot be paraphrased with the -a/ese ‘so...that’ clause, as shown in (15b).

(15) Paraphrase with a sentence involving a key-marked adverb

a. mos sayngkin namca-ka alumtap-key nolayhay-ss-ta.
   ugly man-NOM beautiful-KEY sing-PAST-DECL
   ‘The ugly man sang beautifully.’
   (Wechsler and Noh 2001: 409)

b. * mos sayngkin namca-ka nolayhay-se alumtap-ta.
   ugly man-NOM sing-CONJ beautiful-DECL
   ‘The ugly man sang, so he became (was) beautiful.’

In contrast, sentences involving a key-marked phrase used as a predicate such as (16a) can be paraphrased with the -a/ese ‘so...that’ clause. The key-marked phrase pwululep-key ‘soft’ in (16a) describes the state achieved by the referent of the direct object due to the event of cooking (boiling), being predicated of the direct object. As
shown in (16b), the adjective *pwululep-ta* ‘soft’ can denote a result in the *-a/ ese* ‘so...that’ clause.

(16) **Paraphrase with a sentence involving a key-marked predicate**

a. Mary-ka koki-lul **pwululep-key** salm-ass-ta.
   Mary-NOM meat-ACC soft-KEY boil-PAST-DECL
   ‘Mary boiled the meat soft.’

b. Mary-ka koki-lul salm-ase koki-ka **pwululep-ta**.
   Mary-NOM meat-ACC boil-CONJ meat-NOM soft-DECL
   ‘Mary boiled the meat, so it became soft.’

A similar contrast is found with resultative constructions based on unaccusative verbs. When a sentence involves a key-marked adverb, the sentence cannot be paraphrased with the *-a/ese* ‘so...that’ clause, as illustrated in (17). The key-marked phrase in (17a) is an adverb, which describes the manner in which the freezing event took place. Sentence (17a) does not necessarily mean that the river became thick due to the event of freezing. That is, the phrase *twukep-key* ‘thick’ may not be predicated of the subject *kang* ‘river.’

(17) **Paraphrase with an unaccusative-based sentence involving a key-marked adverb**

a. **kang-**i **twukkep-key** el-ess-ta.
   river-NOM thick-KEY freeze-PAST-DECL
   ‘The river froze thickly (i.e., in a thick manner).’

b. ??/* **kang-**i el-ese **twukkep-ta**.
   river-NOM freeze-CONJ solid-DECL
   ‘The river froze, so it was (became) thick.’
In contrast to sentences involving a key-marked adverb, resultatives occurring with a key-marked predicate can be paraphrased with the -a/ese ‘so...that’ clause, as illustrated in (18).

(18) Paraphrase with a resultative involving a key-marked predicate

a. kang-i tantanha-key el-ess-ta.
   river-NOM solid-KEY freeze-PAST-DECL
   ‘The river froze solid.’

b. kang-i el-ese tantanha-ta.
   river-NOM freeze-CONJ solid- DECL
   ‘The river froze, so it was (became) solid.’

If the key-marked phrase tantanha-key ‘solid’ in (18a) was an adverb which modifies the event of freezing, it would not be expected to occur in the -a/ese ‘so...that’ clause since there would be no predication relation between the key-marked phrase and the subject. However, as shown in (18b), the adjective tantanha-ta ‘solid’ can describe a result in the -a/ese ‘so...that’ clause, which suggests that the key-marked phrase tantanha-key ‘solid’ may be a predicate, contrary to what Wechsler and Noh claim.

This seems to hold true for other unaccusative-based resultatives since they can also be paraphrased with the -a/ese ‘so...that’ clause. It should be reminded that Wechsler and Noh (2001)’s discussion is mainly based on one example. Thus, it is important to show that key-marked phrases occurring in other unaccusative-based resultatives can occur in the result clause of the -a/ese ‘so...that’ pattern.

Let us consider the examples in (19) and (20).
The key-marked phrases in (19a) and (20a) can describe a result in the –a/ese ‘so...that’ clause, as illustrated in the (b) sentences. If key-marked phrases occurring in resultatives based on unaccusative verbs were adverbs, as Wechsler and Noh argue, the paraphrase with the –a/ese ‘so...that’ clause would not be expected. However, the fact that (19b) and (20b) are grammatical suggests that key-marked phrases occurring in resultatives built around unaccusative verbs are not adverbs, but predicates.

To sum up, it was shown in this section that some key-marked phrases occurring in unaccusative-based resultatives are (secondary) predicates. An examination of more examples has revealed that Wechsler and Noh’s (2001) claim that key-marked phrases occurring in resultative constructions based on unaccusative verbs are adverbs may not be maintained.
4.3 Resultatives based on unaccusative verbs and the causative alternation

This section examines the relation between resultative patterns based on unaccusative verbs and their transitive causative counterparts. It is shown that not all unaccusative-based resultatives have transitive causative counterparts. This may be attributed to the fact that Korean only allows agentive causers in the transitive causative uses of unaccusative verbs, in contrast to English which allows non-agentive as well as agentive causers (Levin and Rappaport 1995).

4.3.1 The causative alternation in Korean and English

The causative alternation in Korean is manifested differently than in English. In English, verbs that participate in the causative alternation share the same form of the verb in the intransitive and transitive uses (Gruerssel 1986, Hale and Keyser 1986, Levin and Rappaport 1995), as (21) through (23) illustrate.

(21) a. Mary broke the window.
    b. The window broke.

(22) a. Tom opened the door.
    b. The door opened.

(23) a. Cameron sank the ship.
    b. The ship sank.

On the other hand, the causative alternation in Korean involves morphologically related forms of the verb in the intransitive and transitive uses. Transitive variants are normally
formed by the addition of one of the following causative morphemes \( i, hi, li, ki, wu, kwu, \) and \( chwu. \)

<table>
<thead>
<tr>
<th>Intrans</th>
<th>Transitive</th>
<th>Intrans</th>
<th>Transitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. tha-ta</td>
<td>thay-wu-ta</td>
<td>‘burn’</td>
<td>h. cwul-ta</td>
</tr>
<tr>
<td>b. pi-ta</td>
<td>pi-wu-ta</td>
<td>‘empty’</td>
<td>i. kkulh-ta</td>
</tr>
<tr>
<td>c. el-ta</td>
<td>el-li-ta</td>
<td>‘freeze’</td>
<td>j. malu-ta</td>
</tr>
<tr>
<td>d. ik-ta</td>
<td>ik-hi-ta</td>
<td>‘ripen/cook’</td>
<td>k. kwulu-ta</td>
</tr>
<tr>
<td>e. nok-ta</td>
<td>nok-i-ta</td>
<td>‘melt’</td>
<td>l. sik-ta</td>
</tr>
<tr>
<td>f. olu-ta</td>
<td>ol-li-ta</td>
<td>‘increase’</td>
<td>m. kalaanc-ta</td>
</tr>
<tr>
<td>g. nul-ta</td>
<td>nul-li-ta</td>
<td>‘increase’</td>
<td></td>
</tr>
</tbody>
</table>

Korean also differs from English with respect to types of verbs that can participate in the causative alternation. In English, verbs of change of state, such as \textit{break}, \textit{open} and \textit{sink}, which are considered prototypical unaccusative verbs, regularly participate in the causative alternation (Levin and Rappaport 1995: 80). But, the causative alternation is not regularly found with prototypical unergative verbs such as \textit{laugh}, \textit{play}, and \textit{cry}, as (25) and (26) illustrate. The examples are taken from Levin and Rappaport (1995: 80).

b. *The teacher played the children.
   (cf. The teacher made the children play.)

(24)\footnote{Korean also has verbs whose form is identical in the intransitive and transitive uses although they are not common.}

(i) \textit{nayli-ta} ‘move down’
(ii) \textit{huli-ta} ‘be/make muddy’
(iii) \textit{talli-ta} ‘run’
(iv) \textit{memchwu-ta} ‘stop’
(v) \textit{wulli-ta} ‘ring’
(vi) \textit{wumciki-ta} ‘move’
(26)  a. The crowd laughed.
    b. *The comedian laughed the crowd.
       (cf. The comedian made the crowd laugh.)

As is the case of English, in Korean, many verbs that participate in the causative
alternation are unaccusative verbs. However, in Korean, unergative verbs such as wus-ta
‘laugh’, wul-ta ‘cry’ and ket-ta ‘walk’ also regularly participate in the causative
alternation, as illustrated in (27). Therefore, in Korean, the causative alternation is not a
characteristic just of unaccusative verbs, unlike in English.

(27)  | Intransitive          | Transitive        |
      |                      |                  |
      a. wus-ta  ‘laugh’    | wus-ki-ta  ‘make laugh’ |
      b. ket-ta  ‘walk’      | kel-li-ta  ‘make walk’ |
      c. nol-ta  ‘play’      | nol-li-ta  ‘make play’ |
      d. wul-ta  ‘cry’       | wul-li-ta  ‘make cry’ |

Although both unergative and unaccusative verbs participate in the causative
alternation, the former differ from the latter with respect to the meaning associated with
them. In the transitive uses of unergative verbs, the referent of the direct object NP does
not undergo a change of state. Rather, it performs an action described by the verb, which
indicates that the direct object NP Mary bears the AGENT role.

(28)  | Korean unergative verbs and the causative alternation |
      |                      |                  |
      Mary-NOM            | cry-PAST-DECL     |
      ‘Mary cried.’       |                  |
      b. Nay-ka           | Mary-lul          |
      I-NOM               | wul-li-ess-ta.    |
      ‘I made Mary cry.’  | cry-CAUS-PAST-DECL|
In contrast, in the transitive uses of unaccusative verbs, the entity denoted by the direct object NP undergoes a change of state. For example, the meaning of (29b) implies that the referent of the direct object *elum* ‘ice’ melted, which indicates that the direct object NP bears the PATIENT role.

(29) **Korean unaccusative verbs and the causative alternation**

a. **elum-i**
   
   **ice-NOM**
   
   **nok-ass-ta.**
   
   melt-PAST-DECL

‘The ice melted.’

b. **Tom-i**
   
   **elum-ul**
   
   **Tom-NOM**
   
   **ice-ACC**
   
   **nok-i-ess-ta.**
   
   melt-CAUS-PAST-DECL

‘Tom melted the ice.’

In the next section, resultative patterns based on unaccusative verbs are examined in relation to their transitive causative counterparts. It is argued that if an unaccusative verb allows the transitive causative use, it also has the intransitive use, and that its ability to form resultatives follows from this. However, the opposite may not be true due to the fact that Korean only allows agentive causers. That is, an unaccusative verb can form a resultative pattern in its transitive use only when an agentive causer is involved. On the other hand, an unaccusative verb may not have a transitive resultative counterpart when the involvement of a non-agentive causer (e.g., the weather) is implied by the meaning of an intransitive sentence, due to the agentive causer condition on the causative construction involving unaccusative verbs.
4.3.2 The resultative construction and the causative alternation

Let us first consider the following examples.

(30) Resultative patterns in the intransitive use

a. elum-i [tantanha-key] el-ess-ta.  
   ice-NOM solid-KEY freeze-PAST-DECL  
   ‘The ice froze solid.’

b. kwuk-i [kelccwukha-key] kkulh-ess-ta.  
   soup-NOM thick(sticky)-KEY boil-PAST-DECL  
   ‘The soup boiled sticky.’

c. chima-ka [ccalp-key] cwul-ess-ta.  
   skirt-NOM short-KEY shrink-PAST-DECL  
   ‘The skirt shrank short.’

d. khephi-ka [chakap-key] sik-ess-ta.  
   coffee-NOM cold-KEY cool.off-PAST-DECL  
   ‘Coffee cooled off cold.’

e. nampi-ka [kkamah-key] tha-ss-ta.  
   pot-NOM black-KEY burn-PAST-DECL  
   ‘The pot burned black.’

   blouse-NOM blue-KEY dye-PAST-DECL  
   ‘The blouse dyed blue.’

Given that the unaccusative verbs in (30) are change of state verbs, the meaning of the sentences in (30) entails that some sort of change has happened to the referent of the subject NP due to the event described by the verb. The resultative phrases in (30) further specify the achieved state entailed by the meaning of the verb. The sentences in (30) have transitive causative counterparts, as exemplified in (31), in which the direct object NP bears the same role (i.e., PATIENT) as the subject NP in the intransitive use.
Resultative patterns in the transitive causative use

   Mary-NOM ice-ACC solid-KEY freeze-CAUS-PAST-DECL
   'Mary froze the ice solid.'

   older.sister-NOM soup-ACC thick(sticky)-KEY boil-CAUS-PAST-DECL
   'The older sister boiled the soup sticky.'

   mother-NOM skirt-ACC short-KEY shrink-CAUS-PAST-DECL
   'Mother shrunk the skirt short.'

   John-NOM coffee-ACC cold-KEY cool-CAUS-PAST-DECL
   'John cooled coffee cold.'

   Mary-NOM pot-ACC black-KEY burn-CAUS-PAST-DECL
   'Mary burned the pot black.'

   Sue-NOM blouse-ACC blue-KEY dye-CAUS-PAST-DECL
   'Sue dyed the blouse blue.'

However, not all resultatives based on unaccusative verbs have a causative counterpart in Korean. Compared to English, Korean allows a smaller set of external forces or causes that bring about the eventuality described by a verb. English allows an external cause to be an agent, an instrument, a natural force, or a circumstance (Levin and Rappaport 1995), as illustrated in (32) through (34).

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5 According to Levin and Rappaport (1995: 93), only the verbs whose meaning implies the existence of an external cause (externally caused verbs) have the transitive causative use. In contrast, verbs whose eventuality is brought about by some property inherent to the argument of the verb (internally caused verbs) do not have a causative counterpart. Those include bloom, decay, rot and rust.
On the other hand, Korean does not seem to allow non-agentive external causes such as *bawui* ‘rock’ and *thayyang* ‘sun’ as easily as does English. In particular, a causer cannot be non-agentive when the base verb is unaccusative, as the ungrammaticality of the examples in (35) suggests.

(35) **Transitive causative sentences occurring with a non-agentive causer**

a. */??*thayyang-i elum-ul nok-i-ess-ta.
   sun-NOM ice-ACC melt-CAUS-PAST-DECL
   ‘The sun melted the ice.’

   sun-NOM clothes-ACC dry-CAUS-PAST-DECL
   ‘The sun dried the clothes.’

According to Park (1994: 163), a causative morpheme introduces an AGENT role into the argument structure of the verb in Korean when the base verb is unaccusative. Hence, a non-agentive causer cannot be encoded as the subject of a transitive causative resultative, if the meaning of the intransitive sentence implies that a natural force (e.g., *thayyang* ‘the sun’) is a possible causer in bringing about the eventuality described by the matrix verb. The examples in (36) help illustrate the point.
(36) a. Resultative built around an unaccusative verb⁶
kang-i [tantanha-key] el-ess-ta.
river-NOM solid-KEY freeze-PAST-DECL
‘The river froze solid.’

b. Transitive causative counterpart involving a non-agentive causee
cold weather-NOM river-NOM solid-KEY freeze-CAUS-PAST-DECL
‘The cold weather froze the river solid.’

c. Transitive causative counterpart involving an agentive causer
scientist-PL-NOM river-NOM solid-KEY freeze-CAUS-PAST-DECL
‘The scientists froze the river solid.’

In general, the meaning of the intransitive sentence in (36a) implies that a natural force such as the cold weather is responsible for bringing about the event of freezing. Hence, its transitive causative counterpart is unacceptable, as shown in (36b), which follows from the agentive causer restriction on the causative construction derived from unaccusative verbs. In contrast to (36b), sentence (36c) is acceptable because the causer

⁶ Park distinguishes causative patterns derived from unaccusative verbs from those derived from unergative verbs even though he does not explicitly state it. The two types of causative construction are different from each other in several respects. First, in the former, the causee bears the PATIENT role whereas in the latter it bears the AGENT role. Second, causative patterns derived from unergative verbs seem to allow a larger set of causers in that they can also occur with non-agentive causers, as exemplified in (i).

(i) ku umak-i na-lul wu-li-ess-ta.
that music-NOM I-ACC cry-CAUS-PAST-DECL
‘That music made me cry.’

⁷ Non-agentive external causers are normally marked by the morpheme –ey ‘due to/by.’

(i) chwuwun nalssi-ey kang-i tantanha-key el-ess-ta.
cold weather-due.to river-NOM solid-KEY freeze-PAST-DECL
‘Due to the cold weather, the river froze solid.’
is agentive although an event of the scientists’ freezing a river may not sound as felicitous as does an event of Mary’s freezing water.

In sum, the generalization seems to be that an unaccusative verb can form a resultative pattern only if it can form a resultative in its transitive causative use, which follows from the fact that transitive causative counterparts are constrained by the agentive causer condition. However, the fact that an unaccusative verb can form a resultative in its intransitive use does not guarantee that it can have a transitive causative resultative counterpart.

4.4 The restriction on resultatives based on unaccusative verbs

This section considers an aspectual constraint on resultative patterns based on unaccusative verbs (i.e., the Single Delimiting Constraint). In Korean, verbal resultative predicates cannot occur with unaccusative verbs, in contrast to adjectival resultative predicates. It is argued that this contrast may be explained with respect to the Single Delimiting Constraint, which states that a verb phrase may not be delimited more than once (Tenny 1994: 79).  

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8 Tenny (1987, 1994) proposes three different constraints on a verb’s arguments (i.e., external, direct internal, and indirect internal arguments, respectively). This chapter focuses mainly on a constraint on direct internal arguments (i.e., the Measuring-Out Constraint), which is central to the discussion of the thesis. This thesis is not concerned with a constraint on indirect internal arguments, which states that the event described by a verb can have only one terminus (Tenny 1994: 68), because resultative patterns do not involve indirect internal arguments. In addition, the Non-Measuring out Constraint on external arguments is not discussed since this constraint as well as the other two are subsumed under the Single Delimiting Constraint (Tenny 1994: 79).
4.4.1 The Single Delimiting Constraint (Tenny 1987, 1994)

It has been observed that sentences involving a delimited eventuality such as *John built the house* can only occur with frame adverbial phrases such as *in an hour* whereas those involving a non-delimited eventuality can only occur with durational adverbial phrases such as *for an hour* (Tenny 1987, 1994). For example, the verbs *drink* and *push* do not describe an eventuality that has an inherent endpoint, and the event they describe can go on in time without reaching an endpoint. These verbs can occur with durational adverbial phrases such as *for an hour*, but not with frame adverbial phrases such as *in an hour*, as (37) shows.

(37) a. Tom drank (for an hour/*in an hour).  
   b. John pushed the car (for an hour/*in an hour).

   (non-delimited)  
   (non-delimited)

The eventuality described by a verb can be delimited in several ways depending on the aspectual property of the verb. It may be done through the addition of a direct object, a goal phrase, or a resultative phrase. This is because the addition of a direct object, a goal phrase or a resultative phrase provides an endpoint for the event described by a verb, which makes them take on the function of delimiting the event. For example, (37a) can occur with the frame adverbial phrase *in an hour*, but not with the durational adverbial phrase *for an hour*, if a direct object is added, as (38a) illustrates. Similarly, (37b) can occur with the frame adverbial phrase, but not with the durational adverbial phrase, if a goal phrase is added, as illustrated in (38b).
Although the addition of a direct object, a goal phrase or a resultative phrase provides an endpoint for the eventuality denoted by a verb (Tenny 1994: 37-8), a verb phrase may be delimited only once. Tenny (1994: 79) formulates this as a restriction on delimiting eventualities as follows:

(39) The Single Delimiting Constraint

The event described by a verb may only have one measuring out and be delimited only once.

For example, the sentence John hammered the metal flat involves one measuring-out, in that the sentence has only one direct object, which serves to measure out the event of hammering. The change of state in the metal is brought about gradually at each interval of the hammering event until it becomes flat, and that change is measurable on a single scale (from not being flat to being flat). In addition, the verb phrase is delimited once since the sentence involves one result state (i.e., being clean) and the event of hammering is perceived to progress towards one endpoint. The event of hammering is

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9 In the case of the addition of a direct object, the object must denote a specific quantity to delimit the eventuality described by the verb (Tenny 1987: 171). Mass nouns do not function as a delimiter, as (i) illustrates. In contrast, count nouns can function as a delimiter, as (ii) shows. Thus, the distinction between count and mass nouns may correspond to the distinction between delimitedness and non-delimitedness (Tenny 1987: 171, Tenny 1994: 25).

(i) Tom drank beer (for an hour/*in an hour). (non-delimited)
(ii) Tom drank a bottle of beer (*for an hour/in an hour). (delimited)
understood to progress through the metal until it reaches the state of being flat, and the metal being flat marks an endpoint of the hammering event.

The fact that a verb phrase may involve no more than one delimiting is further supported by the ungrammaticality of sentences involving more than one delimiter such as (40).

(40) Sentences with two delimiters
   a. *John pushed the car to a gas station to San Francisco.
   b. *Sarah pounded the pavement flat to Bloomingdale’s.
   b. *Martha wiped the table dry clean.
      (Tenny 1994: 78, 80-81)

In (40a), both to a gas station and to San Francisco delimits the event of pushing the car. Similarly, the verb phrase in (40b) is delimited both by the resultative phrase flat and by the goal phrase to Bloomingdale’s. In (40c), the direct object the table measures out the wiping event twice, in that the event of wiping is understood to progress towards two different endpoints (i.e., being dry and being clean). In other words, the wiping event in (40c) is delimited twice, once by the resultative phrase dry and once by the resultative phrase clean.

4.4.2 Unaccusative verbs and the Single Delimiting Constraint

Although the Single Delimiting Constraint is formulated mainly based on transitive verbs that take an NP complement, it can also apply to unaccusative verbs if we assume that an argument of an unaccusative verb is a direct object at some level of representation (Burzio 1986, Perlmutter 1978, 1989), as Tenny (1994) suggests. In other
words, an argument of an unaccusative verb, which occupies the surface subject position, also serves to measure out the event described by the verb (Tenny 1994: 63), as direct internal arguments of transitive verbs do. This is because unaccusative verbs are lexically delimited, and their meaning entails some sort of change of state in their argument, which may be characterized on a scale (i.e., a result state) inherently entailed by the meaning of the verb.

For example, the argument of the unaccusative verb freeze, as in The river froze, is a delimiting argument, in that the river being frozen serves to mark a temporal end of the freezing event. The meaning of the verb freeze inherently entails a scale on which the change in the argument of the verb can be measurable, although it may not be measurable as gradually as is the change in the direct argument of a transitive verb such as build, due to the fact that a freezing event normally takes place instantaneously.

Turning to resultative constructions, the ungrammaticality of sentences such as (41) may be attributed to the fact that they manifest double delimiting. Given that the verb arrive specifies an achieved endpoint (i.e., an attained location; Levin and Rappaport 1995: 58), (41) involves two result states, one entailed by the matrix verb (i.e., a change in location) and one described by the resultative phrase breathless. That is, the verb phrase is delimited more than once, which leads to a violation of the Single Delimiting Constraint. The sentence is acceptable only on a depictive reading.

(41) *Mary arrived breathless.
Intended meaning: ‘Mary became breathless as a result of arriving.’
What is interesting about resultatives based on unaccusative verbs is that a resultative predicate does not serve as a delimiter if it serves to further specify the achieved endpoint that is inherently involved in the meaning of a verb (Levin and Rappaport 1995, Tenny 1992, 1994). For example, the resultative predicate **solid** in *The river froze solid* is not a delimiter, in that its meaning (i.e., being solid) is part of the meaning entailed by the verb *freeze* (i.e., becoming hard or stiff from cold, from the Oxford Advanced Learners’ Dictionary of Current English). The resultative predicate **solid** provides a further specification of the achieved state inherent in the verb’s meaning. In other words, the meaning of the resultative predicate **solid** is not independent of the meaning of the verb *freeze*, which means the addition of the resultative predicate **solid** does not provide a second result state. This explains why the sentence *The river froze solid* is grammatical.

This also holds true for Korean resultative patterns. Korean unaccusative verbs can occur with resultative predicates that further specify the achieved state inherently entailed in their meaning. The meaning of the phrases *tantanha-key* ‘solid’ and *phalah-key* ‘blue’ in (42) is inherently involved in the meaning of the associated matrix verb. Solidity is part of the meaning of the verb *el-ta* ‘freeze.’ Similarly, the meaning of the verb *mwultul-ta* ‘dye’ entails that a color is involved and the color is specified by the resultative phrase, as in (42b).

(42)  Korean resultative patterns involving an adjectival predicate

a. hoswu-ka
   lake-NOM
   [tantanha-key]
   solid-KEY
   el-ess-ta.
   freeze-PAST-DECL
   ‘The lake froze solid.’
blouse-NOM blue-KEY dye-PAST-DECL
‘The blouse dyed blue.’

To put it another way, lexically delimited verbs such as unaccusative verbs cannot take “another syntactically encoded delimiter that specifies a change of state” (Levin and Rappaport 1995: 58). Unaccusative verbs cannot occur with resultative predicates which describe a second state that is independent of their meaning. They are only compatible with resultative predicates that provide a further specification of the achieved state inherent in their meaning. This may be formulated as a constraint on lexically delimited eventualities, which follows from the Single Delimiting Constraint.

(43) The Further Specification Constraint (dubbed by Tortora 1998)

Lexically delimited verbs such as unaccusative verbs can occur with a resultative phrase only if the resultative phrase serves to provide a further specification of the achieved state inherent in the meaning of the verb.

Let us consider the example in (44) to see how the Single Delimiting Constraint (and the Further Specification Constraint) help explain the ungrammaticality of certain unaccusative-based resultative patterns in Korean.

(44) Korean resultative pattern involving a verbal predicate
*pyeng-i [yelli-key] kkayci-ess-ta.
bottle-NOM open-KEY break-PAST-DECL
‘The bottle broke open.’

What is interesting about the Korean sentence in (44) is that it involves a verbal resultative predicate, in contrast to its English counterpart, which occurs with an
adjectival resultative predicate. Korean does not have an adjective that describes a result state expressed by the English adjective open. Instead, the intransitive verb yelli-ta ‘open (intr.)’ is used. Nevertheless, the meaning of the verbal resultative predicate yelli-key ‘open (intr.)’ implies that the referent of the NP (i.e., the surface subject) of which it is predicated is open as a result of the event described by the matrix verb.

Given this implied meaning, the verbal resultative predicate yelli-key ‘open (intr.)’ seems to further specify the achieved state entailed by the meaning of the matrix verb kkayci-ta ‘break’, in that “breaking open is a very specific type of breaking in the sense that something can break without breaking open” or break apart (Levin and Rappaport 1995: 59). In other words, the verbal resultative predicate yelli-key ‘open (intr.)’ satisfies the Further Specification Constraint. In this respect, it has a function similar to that of the adjectival resultative predicate in the English counterpart.

However, the puzzle is that sentence (44) is not acceptable, whereas its English counterpart is grammatical. The ungrammaticality of the Korean sentence may stem from the fact that the verbal resultative predicate yelli-key ‘open (intr.)’ is lexically delimited, in contrast to the adjectival resultative predicate open in the English equivalent. Adjectives are non-delimited since they describe a state which does not have an endpoint. The fact that the verb yelli-ta ‘open (intr.)’ describes a delimited eventuality is supported by its compatibility with a frame adverbial phrase (e.g., in a minute), as (45a) illustrates.

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10 Similar observations are made about Japanese resultative constructions (Washio 1997a & b).
However, consistent with its delimited nature, the verb *yelli-ta* ‘open (intr.)’ cannot occur with a durational adverbial phrase (e.g., *for a minute*), as shown in (45b).

(45)  

\[\begin{align*}
\text{a. With an } & \text{in frame adverbial phrase} \\
\text{pyeng-i} & \quad \text{kumsey} \\
\text{bottle-NOM} & \quad \text{in.a.second} \\
\text{‘The bottle opened in a second.’}
\end{align*}\]

\[\begin{align*}
\text{b. With a } & \text{for durational adverbial phrase} \\
\text{*pyeng-i} & \quad \text{il.pwun-tongan} \\
\text{bottle-NOM} & \quad \text{one.minute.during} \\
\text{‘*The bottle opened for a minute.’}
\end{align*}\]

Given the lexical delimitation of the matrix verb *kkayci-ta* ‘break (intr.)’, the addition of the verbal resultative predicate *yelli-key* ‘open (intr.)’ leads to double delimiting of the verb phrase. The verb phrase is delimited more than once, once by the matrix verb and once by the verbal resultative predicate, and this violates the Single Delimiting Constraint, which states that a verb phrase may not involve more than one delimiting (Tenny 1994: 79).

The delimited aspectual property of a verbal resultative predicate also explains the ungrammaticality of the Korean equivalent of the English sentence *The climbers froze to death*. In the Korean equivalent, as illustrated in (46), a verbal resultative predicate would have to be used to convey the meaning expressed by a prepositional resultative phrase in the English counterpart.

(46)  

\[\begin{align*}
\text{Resultative pattern involving a verbal predicate} \\
\text{*tungsankayk-tul-i} & \quad [cwuk-key] \\
\text{climber-PL-NOM} & \quad \text{die-KEY} \\
\text{‘The climbers froze to death.’}
\end{align*}\]
As is the case of (44), the verbal resultative predicate cwuk-key 'die' seems to serve to provide a further specification of the achieved state entailed by the meaning of the matrix verb el-ta 'freeze (intr.)', in that being dead could be one of the natural results caused by the event of freezing when a living being is involved. But, the Korean sentence is still ungrammatical, in contrast to its English equivalent. This may have to do with the fact that the verbal resultative predicate cwuk-key 'die' describes a delimited eventuality, as the grammaticality of (47a) suggests. The verb cwuk-ta 'die' can occur with an in frame adverbial whereas it is not compatible with a for durational adverbial phrase, as illustrated in (47b), consistent with its lexical delimitation.

(47)  

a. With an in frame adverbial phrase  

tungsankayk-tul-i pamsai-ey cwuk-ess-ta. 
climber-PL-NOM over.night die-PAST-DECL  
‘*The climbers died over night.’

b. With a for durational adverbial phrase  

*tungsankayk-tul-i il-cwuil-tongan cwuk-ess-ta.  
climber-PL-NOM one-week-during die-PAST-DECL  
‘*The climbers died for a week.’

The verb phrase in (46) manifests more than one delimiting, due to the delimitation of the matrix verb el-ta 'freeze (intr.)' and the verbal resultative predicate cwuk-key 'die.' This leads to a violation of the Single Delimiting Constraint, which states that a verb phrase may be delimited only once.

In conclusion, the contrast between the Korean sentence and its English equivalent in (44) and (46) comes down to the difference in the aspectual properties of a resultative phrase in which they occur. Adjectives such as open and dead (or the
prepositional phrase to death) are non-delimited whereas verbs such as yelli-ta ‘open (intr.)’ and cwuk-ta ‘die’ are delimited. Hence, the addition of verbal resultative predicates such as yelli-key ‘open (intr.)’ and cwuk-key ‘die’ results in the ungrammaticality of a sentence, due to a violation of the Single Delimiting Constraint, even though verbal resultative phrases also serve to further specify the achieved state inherently entailed by the meaning of the matrix verb. Based on this, it may be said that verbal resultative predicates cannot occur with unaccusative verbs in Korean.

4.5 Agentivity and resultatives based on unaccusative verbs

This section discusses the relation between agentivity and a verb’s ability to form a resultative construction. Wechsler and Noh (2001) claim that unaccusative verbs cannot participate in resultative formation, based on the unacceptability of patterns involving a verbal resultative predicate. According to them, the fact that unaccusative verbs cannot form resultative patterns is attributed to the non-agentivity feature associated with them. In other words, a verb can form a resultative construction only if it can have an agentive argument.

However, their claim cannot be valid since the occurrence of verbal resultative predicates with unaccusative verbs is restricted by the Single Delimiting Constraint that hinges on the (aspectual) properties of resultative predicates, as discussed in the previous section. In other words, the non-agentivity feature associated with unaccusative verbs does not have a bearing on their ability to form resultative constructions. In addition, as shown in section 4.2, unaccusative verbs can occur with adjectival resultative predicates,
forming grammatical resultatives, which also adds support to the claim that the non-agentivity or agentivity feature of a verb is not a factor in resultative formation.\textsuperscript{11}

Let us first consider the example in (48), which involves a verbal resultative predicate.

(48) Unaccusative-based resultative with a verbal predicate

| *kwuk-i  | [talh-key]   | kkulh-ess-ta. |
|———-|———-|———-|
| soup-NOM | dry-KEY | boil-PAST-DECL |

‘The soup boiled dry.’

(Wechsler and Noh 2001: 412)

According to Wechsler and Noh (2001), the ungrammaticality of (48) lies in the fact that the matrix verb \textit{kkulh-ta} ‘boil (intr.)’ does not occur with an agent argument. However, as will be shown shortly, the non-agentivity of the verb does not have to do with its ability to form resultative patterns. Rather, the unacceptability of (48) may be attributed to the fact that it involves the verbal resultative predicate \textit{talh-key} ‘dry (intr.)’, which describes a delimited eventuality. Since the resultative phrase \textit{talh-key} ‘dry (intr.)’ is predicated of the subject, the verb phrase manifests more than one delimiting, once by

\textsuperscript{11} Recall that in Wechsler and Noh’s (2001) view key-marked phrases occurring in resultatives based on unaccusative verbs are adverbs, not predicates. However, it was shown in section 4.2 that some key-marked phrases such as those in (i) and (ii) are predicates, contrary to Wechsler and Noh’s claim.

(i) hoswu-ka  [tantanha-key]  el-ess-ta.
| lake-NOM | solid-KEY | freeze-PAST-DECL |

‘The lake froze solid.’

(ii) blouse-ka  [phalah-key]  mwultul-ess-ta.
| blouse-NOM | blue-KEY | dye-PAST-DECL |

‘The blouse dyed blue.’
the matrix verb *kkulh-ta* ‘boil (intr.)’ and once by the resultative predicate. This violates
the Single Delimiting Constraint, which states that a verb phrase may be delimited only
once. That is, (48) is ungrammatical due to a violation of an aspectual constraint, which
has nothing to do with the fact that the matrix verb *kkulh-ta* ‘boil (intr.)’ lacks an agent
argument.

The claim that (48) is ruled out for an independent reason, which does not hinge
on the non-agentivity feature of the matrix verb, is further supported by the fact that (48)
becomes grammatical when the verbal resultative predicate *talh-key* ‘dry (intr.)’ is
replaced by an adjectival predicate. Observe the grammaticality of (49).

(49) With an adjectival resultative predicate

| kwuk-i | [kelcwukha-key] | kkulh-ess-ta. |
| soup-NOM | sticky-KEY | boil-PAST-DECL |

‘The soup boiled sticky.’

If the ungrammaticality of (48) is due to the lack of an agent argument, the well-
formedness of (49), whose meaning entails that the soup became sticky as a result of a
boiling event, should not be expected. However, (49) is grammatical and this undermines
Wechsler and Noh’s (2001) claim that the unacceptability of sentence (48) stems from
the fact that the matrix verb *kkulh-ta* ‘boil (intr.)’ lacks the agentivity feature. That is,
grammatical resultative patterns such as (49) constitute counterexamples to Wechsler and
Noh’s (2001: 413) claim that only verbs with agent arguments can form resultative
constructions.

The ungrammaticality of sentence (50) involving an adjectival resultative
predicate can be explained along the same line. As is the case of (48), sentence (50) is
unacceptable because it violates the Single Delimiting Constraint. As will be shown shortly, the fact that (50) is ungrammatical does not provide evidence for the Wechsler and Noh’s view.

(50) **Unaccusative-based resultative with an adjectival predicate**

*os-i [kkaykkusha-key] cec-ess-ta.
clothes-NOM clean-KEY wet-PAST-DECL

Literal meaning: ‘The clothes wetted clean.’

(Wechsler and Noh 2001: 412)

The ungrammaticality of (50) may arise from the fact that the verb *cec-ta* ‘wet (intr.)’ does not select for cleanness as a result state in Korean since (50) cannot mean that the clothes became clean as a result of a soaking event. That is, in Korean, being clean may not be perceived as an achieved state inherent in the meaning of *ces-ta* ‘wet (intr.)’ (i.e., soak with water or other liquid; the Oxford Advanced Learners’ Dictionary of Current English). Hence, the (adjectival) resultative predicate *kkaykkusha-key* ‘clean’ does not provide a further specification of the attained state entailed by the meaning of the verb *ces-ta* ‘wet (intr.)’. Rather, *kkaykkusha-key* ‘clean’ describes a second result state. Given the lexical delimitation of the matrix verb, the occurrence of the resultative predicate *kkaykkusha-key* ‘clean’ constitutes a second delimiting, which leads to double delimiting of the verb phrase and a violation of the Single Delimiting Constraint.

The support for the observation that being clean is not inherently associated with the meaning of the verb *ces-ta* ‘wet (intr.)’ comes from the fact that the (adjectival) resultative predicate *kkaykkusha-key* ‘clean’ cannot also occur in the transitive (causative) use of the verb. Observe the ungrammaticality of (51).
If Wechsler and Noh (2001: 413) are correct in claiming that only verbs with an agent argument can form resultative constructions, the ungrammaticality of (51) is unexpected since the transitive causative verb cek-si-ta ‘soak (tr.)’ occurs with an agent argument. The fact that the sentence is not acceptable despite the agentivity feature of the verb suggests that something else is responsible for the unacceptability of (51). The reason may lie in the fact that being clean is not perceived as a state achieved as a result of the event described by the verb cek-si-ta ‘soak (tr.)’ since (51) cannot mean that the clothes became clean as a result of Mary’s soaking them in some sort of liquid.

To sum up, the ungrammaticality of sentences such as (51), which involve the matrix verb with an agent argument, lends support to the claim that the non-agentivity feature of unaccusative verbs has no bearing on their ability to form resultative constructions. That is, the ungrammaticality of transitive-based resultatives such as (51) seriously undermines Wechsler and Noh’s (2001) claim that unaccusative verbs cannot participate in resultative formation due to their non-agentivity feature.

4.6 Conclusion

This chapter examined the syntactic properties of resultative patterns built around unaccusative verbs. First, it was shown that some key-marked phrases occurring in unaccusative-based resultatives (e.g., kang-i tantanja-key el-ess-ta ‘The river froze
solid') are not adverbs. Rather, it was argued that they are secondary predicates, based on the fact that resultative patterns such as *kang-i tantanha-key el-ess-ta* ‘The river froze solid’ can be paraphrased with the -a/ese ‘so...that’ clause, in which a result is described by the matrix verb. The paraphrase with the -a/ese ‘so...that’ clause is not possible with sentences involving adverbs (e.g., *mos sayngkin namca-ka alumtap-key nolayhay-ss-ta* ‘The ugly man sang beautifully’) since the key-marked phrase in those sentences does not describe a result.

The second half of the chapter showed that as in English, unaccusative-based resultatives in Korean are also constrained by an aspectual condition (the Single Delimiting Constraint), which states that a verb phrase may involve only one delimiting (Tenny 1994: 79). To ensure the grammaticality of a sentence, the Single Delimiting Constraint should be observed and a resultative predicate must provide a further specification of the achieved state inherently entailed by the meaning of the matrix verb (Levin and Rappaport 1995: 58).

Section 4.4 also showed that the Single Delimiting Constraint helps explain why verbal resultative predicates such as *yelli-key* ‘open (intr.)’ and *cwuk-key* ‘die’ are not permitted in resultatives based on unaccusative verbs in Korean even though their meaning implies a result state inherently associated with the meaning of the matrix verb. The reason lies in the fact that these verbal resultative predicates are lexically delimited, which leads to double delimiting of a verb phrase, given the lexical delimitation of the matrix unaccusative verb. The verb phrase is delimited twice, once by the matrix verb and once by the verbal resultative predicate, which violates the Single Delimiting
Constraint. That is, the occurrence of verbal resultative predicates with unaccusative verbs is prohibited by an aspectual constraint.

Lastly, this chapter examined the relation between the acceptability of resultative patterns and the agentivity of a matrix verb. It was argued that unaccusative verbs can participate in resultative formation, contrary to Wechsler and Noh's claim that agentivity plays a role in resultative formation. Firstly, it was shown in section 4.2 that some key-marked phrases occurring with unaccusative verbs are secondary predicates. Secondly, it was shown in section 4.4 that verbal resultative predicates are not permitted due to a violation of the Single Delimiting Constraint, since their occurrence results in double delimiting of a verb phrase. In other words, there is no relation between the non-agentivity of a matrix (unaccusative) verb and its ability to form resultative patterns.
Chapter 5

Two types
of resultative constructions based on transitive verbs

5.1 Introduction

This chapter examines two types of resultative constructions based on transitive verbs and the semantic properties of resultative predicates occurring in them. The discussion draws on the assumption that resultative patterns built around transitive verbs may not be homogeneous with respect to the type of resultative predicates that occur in them. In particular, resultative patterns based on transitive verbs can be grouped into two types, one involving adjectival resultative predicates (Type I) and the other involving verbal resultative predicates (Type II).

It is argued in section 5.2 that the occurrence of verbal resultative predicates in transitive-based resultatives is permitted by the Single Delimiting Constraint, which states that a verb phrase may be delimited only once (Tenny 1994: 79). Then, attention is drawn to the differences between Type II (verbal) patterns and the periphrastic causative construction with respect to negation. Based on the negation facts, which show that Type II (verbal) patterns behave like Type I (adjectival) resultative patterns, it is concluded that Type II patterns are resultatives, not causatives.
In section 5.3, semantic or aspectual properties associated with Type I (adjectival) and Type II (verbal) resultative predicates are examined with respect to stativity, agentivity, and telicity. It is shown that Type I (adjectival) resultative predicates behave uniformly with respect to these three features, being [+stative], [-agentive], and [-telic], whereas Type II (verbal) resultative predicates do not converge in terms of these features. Telicity (or delimitedness) distinguishes between the two types in that Type I (adjectival) resultative predicates are associated only with a [-telic] feature while Type II (verbal) resultative predicates only share a [+telic] feature.

In this chapter, periphrastic causative constructions that involve intransitive verbs in the lower clause are mainly discussed for a fair comparison of resultative and causative constructions. This is because it is through the comparison between transitive-based resultatives and periphrastic causatives involving intransitive verbs, which share a very close resemblance, that more insights can be obtained and more reliable conclusions can be drawn about the resultative construction and its relation to the causative construction.

(1) a. Resultative construction
John-NOM metal-ACC flat-KEY pound-PAST-DECL
'John pounded the metal flat.'

b. NP-Nom NP-Acc ADJN-key V

(2) a. Causative construction
John-i Mary-lul ttena-key hay-ss-ta.
John-NOM Mary-ACC leave-KEY do-PAST-DECL
'John made Mary leave.'

b. NP-Nom NP-Acc ADJ/V-key V
5.2 Two types of resultantive patterns based on transitive verbs

5.2.1 Type I (adjectival) and Type II (verbal) patterns

Resultative patterns based on transitive verbs in Korean allow verbal as well as adjectival resultantive predicates, unlike English transitive-based resultantive constructions, which do not allow the former type. Examples of each type are provided in (3) and (4), respectively.

(3) Patterns with an adjectival resultantive predicate (Type I)

Mary-NOM meat-ACC soft-KEY boil-PAST-DECL
‘Mary boiled the meat soft.’

John-NOM wall-ACC red-KEY paint-PAST-DECL
‘John painted the wall red.’

Yumi-NOM table-ACC clean-KEY wipe-PAST-DECL
‘Yumi wiped the table clean.’

(4) Patterns with a verbal resultantive predicate (Type II)

Mary-NOM Tom-ACC bruised-KEY beat-PAST-DECL
‘Mary beat Tom black and blue.’

John-NOM balloon-ACC explode-KEY inflate-PAST-DECL
‘John blew the balloon to the point where it exploded.’

Sentence (3a) means that the meat is soft as a result of a boiling action. Similarly, the meaning of (3b) entails that the wall is red due to a painting event, and in (3c) the table is clean as a result of a wiping action. In these sentences, the resultantive predicate
names the result state achieved by the referent of the direct object. Type II (verbal) patterns yield similar interpretations although verbal resultative predicates do not explicitly name the result state achieved by the referent of the direct object, as adjectival resultative predicates do. The meaning of (4a) entails that Mary is bruised as a result of a beating action, and the meaning of (4b) implies that phwungsen ‘balloon’ is in a different shape than prior to the culmination of the causing event.

In addition, matrix verbs in both Type I (adjectival) and Type II (verbal) patterns exhibit two properties that are required to participate in resultative formation (Rapoport 1990: 39-40). The first requirement is that the matrix verb must denote an activity or a process. The verbs ttayli-ta ‘beat’ and pwul-ta ‘inflate’ in (4) as well as the verbs salm-ta ‘boil’, chinla-ta ‘paint’ and takk-ta ‘wipe’ in (3) have the syntactic properties of activity verbs, as illustrated in (5). They can occur in imperatives, as in (5a), as a complement of verbs such as sellukha-ta ‘persuade’ and sikhi-ta ‘force’, as in (5b), and with agentive adverbials such as ilpwule ‘on purpose’, as in (5c).

(5)  

a. Imperative formation

phwungsen-ul pwul-ela.
balloon-ACC inflate-IMPERATIVE
‘Blow the balloon.’

b. As a complement of the verb sikhi-ta ‘force’
I-NOM John-DAT balloon-ACC inflate-TOLOK force-PAST-DECL
‘I forced John to blow the balloon.’

c. With an agentive adverb ilpwule ‘on purpose’
John-NOM on.purpose balloon-ACC inflate-PAST-DECL
‘John blew the balloon on purpose.’
The matrix verbs in (3) and (4) also satisfy the second required property that they must entail some sort of contact with or effect on the referent of the NP of which a resultative predicate is predicated (Rapoport 1990: 39-40). Their meaning implies that an action described by the verb is performed upon the referent of the direct object. Hence, some sort of effect on the referent of the direct object naturally follows. In particular, the meaning of the verbs *ttayli-ta* 'beat', *chilha-ta* 'paint' and *takk-ta* 'wipe' also entails that some sort of (physical) contact takes place between the referent of the direct object and the entity that performs the action described by the verb.

In addition, the occurrence of verbal resultative predicates in resultatives based on transitive verbs is permitted by the Single Delimiting Constraint, which states that a verb phrase may involve one measuring-out and be delimited only once (Tenny 1994: 79). This is because the constraint is not a restriction on the type of resultative predicate. The occurrence of a verbal resultative predicate may be permitted as long as it does not violate the Single Delimiting Constraint. As will be shown in the next section, both Type I (adjectival) and Type II (verbal) resultative patterns satisfy the Single Delimiting Constraint, in that verbal as well as adjectival resultative predicates provide an endpoint (or terminus) for the event described by a matrix verb and make the direct internal argument take part in measuring out the event described by the matrix verb.

### 5.2.2 Type II patterns and the Single Delimiting Constraint

As mentioned in section 2.4.3, a resultative predicate has the property of enforcing a delimited reading of a verb phrase and forces the direct internal argument to
"take on the function of measuring out the event" (Tenny 1994: 37). In other words, a verb occurring with the direct internal argument that does not have a measuring-out function turns into a change of state verb if a resultative predicate is added (Tenny 1994: 37).1

For example, the hammering event is non-delimited in that it can go on without reaching a definite endpoint. Hence, as shown in (6a), the sentence can occur with durational adverbial phrases such as for an hour, but not with frame adverbial phrases such as in an hour. However, the sentence can occur only with the frame adverbial phrase in an hour if a resultative predicate is added, as illustrated in (6b), which suggests that (6b) has a delimited interpretation and that the addition of the resultative predicate flat enforces a delimited reading by providing an endpoint for the hammering event.

(6) a. John hammered the metal (for an hour/*in an hour).
   b. John hammered the metal flat (*for an hour/in an hour).

In (6b), the direct object serves to measure out the event described by the verb hammer. The event of hammering is understood to progress through the metal, in that some property (i.e., the shape) of the metal changes bit by bit during each interval of hammering until it becomes flat. In other words, the progress of the hammering event is

---

1 This is also true for verbs that have both delimited and non-delimited readings in that the sentence, as in (i), has only a delimited interpretation if a resultative predicate is added.

(i) The waiter wiped the table (for a minute/in a minute).
(ii) The waiter wiped the table clean (*for a minute/in a minute).
    (Levin and Rappaport 1995: 58)
measured out in a single parameter in that the change in the direct object *the metal* is measurable on a scale that ranges from not being flat to being flat. In this, the metal being flat marks an endpoint of the hammering event. The verb phrase is measured out and delimited only once since the sentence involves one direct internal argument and the event of hammering progresses towards one endpoint (i.e., the metal being flat). This is consistent with the Single Delimiting Constraint, which states that a verb phrase may involve one measuring out and be delimited only once (Tenny 1994: 79).

The same holds for Type I (adjectival) patterns in Korean. For example, sentence (7) can be ambiguous between a non-delimited and a delimited reading. The sentence can occur either with a durational adverbial phrase (e.g., *for a week*) or with a frame adverbial phrase (e.g., *in a week*).

(7) Sentence without a resultative phrase

a. With a durational adverbial phrase

John-NOM one-week-during house-ACC  paint-PAST-DECL
‘John painted the house for a week.’

b. With a frame adverbial phrase

John-NOM one-week-in house-ACC  paint-PAST-DECL
‘John painted the house in a week.’

However, the sentence only yields a delimited interpretation if a resultative predicate is added. As illustrated in (8), the sentence occurs only with frame adverbial phrases (e.g., *in a week*).
Sentence with a resultative phrase

a. With a durational adverbial phrase
   ??John-i il-cwuil-tongan cip-ul [ppalkah-key] chilhay-ss-ta.²
   John-NOM one-week-during house-ACC red-KEY paint-PAST-DECL
   ‘*John painted the house red for a week.’

b. With a frame adverbial
   John-NOM one-week-in house-ACC red-KEY paint-PAST-DECL
   ‘John painted the house red in a week.’

In (8b), the (whole) house being red marks an endpoint of the painting event although the house may not necessarily undergo a change of state. The direct object cip ‘house’ serves to measure out the painting event, in that the event of painting is perceived to come to an end when the (whole) house is red. Given that sentence (8) involves one endpoint, the verb phrase is delimited only once, consistent with the Single Delimiting Constraint.

The same is also true for patterns (Type II) involving a verbal resultative predicate such as (9), in that the verbal resultative predicate provides an endpoint for the event described by the matrix verb. In (9a), the explosion of the balloon marks an endpoint of the inflating event, and in (9b) the beating event reaches an endpoint when the referent of the direct object faints.

² The sentence may be acceptable on an iterative reading in which painting the house red repeatedly took place for a week.
Type II (verbal) resultative patterns

(9)  

John-NOM balloon-ACC explode-KEY inflate-PAST-DECL  
‘John blew the balloon to the point where it exploded.’

Mary-NOM Tom-ACC faint-KEY beat-PAST-DECL  
‘Mary beat Tom to the point where he fainted.’

The change the direct internal arguments (i.e., *phwungsen ‘balloon’* and *Tom*) in (9) undergo may not be measurable over a period of time due to the fact that the events described by the verbal resultative predicates take place instantaneously. Nevertheless, the direct internal arguments in (9) serve to measure out the event described by the matrix verb by taking part in marking a temporal endpoint of the event. In particular, the inflating event in (9a) is perceived to progress through the change in the direct argument *phwungsen ‘balloon.’* The state of the balloon changes little by little at each stage of the process of the inflating event until it explodes. In this sense, the direct internal argument *phwungsen ‘balloon’* has the role of measuring out the event described by the verb *pwul-ta ‘inflate.’*

Given that the sentences in (9) involve one direct internal argument and one endpoint of the event described by the matrix verb, the verb phrase is measured out only once. The verb phrase is also delimited only once through this measuring out, which means that patterns occurring with a verbal resultative predicate (Type II) satisfy the Single Delimiting Constraint. In other words, the occurrence of a verbal resultative predicate in transitive-based resultatives is allowed by the Single Delimiting Constraint,
which states that a verb phrase may involve one measuring out and be delimited only once (Tenny 1994: 79).

However, it should be noted that not all verbal predicates can occur in resultative constructions based on transitive verbs. Given the delimitation requirement, the meaning of a verbal resultative predicate must entail a result state, which may be predicated of a delimiting argument, if it does not name an endstate for the event described by the matrix verb, as do adjectival resultative predicates. The semantic properties of verbal (Type II) resultative predicates occurring in resultative patterns based on transitive verbs are discussed in detail in section 5.4 in comparison with those of adjectival (Type I) resultative predicates.

Even though it was shown in this section and the previous section that patterns involving a verbal resultative predicate (Type II) exhibit the properties of resultative constructions, one might still speculate that they are not resultatives, based on the fact that verbal (Type II) patterns have a close resemblance to causative constructions. As illustrated in (10), the only difference between the two constructions is in the matrix verb. The resultative construction involves a transitive verb whereas the causative construction involves the causative verb \( ha- \). It is shown in the next section that verbal (Type II) patterns do not behave like causatives, despite its close resemblance to the causative construction.

(10)  

<table>
<thead>
<tr>
<th>(10)</th>
<th>a. Resultative construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary-ka</td>
<td>Tom-ul [kicelha-key] ttayl-ess-ta.</td>
</tr>
<tr>
<td>Mary-NOM</td>
<td>Tom-ACC faint-KEY beat-PAST-DECL</td>
</tr>
<tr>
<td>'Mary beat Tom to the point where he fainted.'</td>
<td></td>
</tr>
</tbody>
</table>
b. **Causative construction**

Mary-ka Tom-ul kicelha-key hay-ss-ta.
Mary-NOM Tom-ACC faint-KEY do-PAST-DECL

‘Mary made Tom faint.’

5.3 The comparison of resultative and causative constructions

This section discusses several pieces of evidence, which suggests that verbal (Type II) patterns behave like adjectival (Type I) resultative patterns. In addition, periphrastic causative constructions are compared to show that verbal (Type II) patterns are not causatives.

5.3.1 Long form negation (-ci anh-)

Resultative constructions differ from causative constructions with respect to long form negation –ci anh-. It has been observed that –ci anh- normally takes scope over the verb it immediately follows (K-H Kim 1994: 211, Sells 1998: 130). In the resultative construction, only the resultative phrase can be negated (Kim and Maling 1997: 196, J-B Kim 1999: 63-4), while negation is also possible with the matrix verb in the causative construction. It should be noted that this difference is found only when –ci anh- follows the matrix verb. The caused or resulting event is negated in both causative and resultative constructions (Type I and Type II), when the negative –ci anh- occurs after the embedded predicate, as the examples in (11) help illustrate.

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3 Kim and Maling (1998) cite Li (1990), who examines Chinese resultative constructions.
The negative –ci anh- on the embedded predicate

a. **Causative construction**

| Subject | Object | Predicate | Result
|---------|--------|-----------|--------|
| John-un | Mary-lul | ttena-ci anh-key | hay-ss-ta.
| John-TOP | Mary-ACC | leave-not-KEY | do-PAST-DECL

‘John made Mary not leave.’

b. **Adjectival resultative construction (Type I)**

| Subject | Object | Predicate | Result
|---------|--------|-----------|--------|
| John-NOM | table-ACC | clean-not-KEY | wipe-PAST-DECL

‘John wiped the table clean, not to the point where it was clean.’

Not possible: ‘John did not wipe the table.’

c. **Verbal resultative construction (Type II)**

| Subject | Object | Predicate | Result
|---------|--------|-----------|--------|
| Mary-TOP | Tom-ACC | bruised-not-KEY | beat-PAST-DECL

‘Mary beat Tom, but not to the point that he was bruised.’

The examples in (12) illustrate the contrast between resultative and causative constructions when –ci anh is placed after the matrix verb.

(12) The negative –ci anh- on the matrix verb

a. **Causative construction**

| Subject | Object | Predicate | Result
|---------|--------|-----------|--------|
| John-un | Mary-lul | ttena-key | ha-ci anh-ass-ta.
| John-TOP | Mary-ACC | leave-KEY | do-not-PAST-DECL

‘John did not make Mary leave.’

b. **Adjectival resultative construction (Type I)**

| Subject | Object | Predicate | Result
|---------|--------|-----------|--------|
| John-NOM | table-ACC | clean-KEY | wipe-not-PAST-DECL

‘John wiped the table clean, not to the point where it was clean.’

Not possible: ‘John did not wipe the table.’

c. **Verbal resultative construction (Type II)**

| Subject | Object | Predicate | Result
|---------|--------|-----------|--------|
| Mary-TOP | Tom-ACC | bruised-KEY | beat-not-PAST-DECL

‘Mary beat Tom, but not to the point where he was bruised.’

Not possible: ‘Mary did not beat Tom.’
In the causative sentence in (12a), long form negation \(-ci\ anh-\) takes scope over the causing event, negating the matrix verb. Hence, the sentence means that the causing event did not take place. In contrast, this is not possible with the resultative sentence in (12b). The sentence cannot mean that the table became clean as a result of John not wiping it. The only possible interpretation is that John wiped the table, but the table was not clean. Similarly, in (12c) involving a verbal resultative predicate, the resulting event is negated even though \(-ci\ anh-\) is placed after the matrix verb. Hence, the sentence means only that the resulting event did not take place.

The observation that \(-ci\ anh-\) does not have scope over the matrix verb in resultative sentences is supported by the fact that a contradiction seems to arise between the two sentences if another sentence involving the negation of the causing event is added. The examples in (13) illustrate the point.

(13) Type I and Type II patterns with an in-fact sentence

a. **Adjectival resultative construction (Type I)**

John-TOP table-ACC clean-KEY 
‘John wiped the table, but not to the point where it was clean.’

* * sasil John-un thakca-lul cenhye takk\(-ci\ anh\)-ass-ta.
in.fact John-TOP table-ACC at.all 
*‘In fact, he did not wipe the table at all.’

b. **Verbal resultative construction (Type II)**

Mary-nun Tom-ul [mengtul-key] ttayli-\(ci\ anh\)-ass-ta.
Mary-TOP Tom-ACC bruised-KEY 
‘Mary beat Tom, but not to the point where he was bruised.’

??/*sasil Mary-nun Tom-ul cenhye ttayli-\(ci\ anh\)-ass-ta.
in.fact Mary-TOP Tom-ACC at.all 
*‘In fact, Mary did not beat Tom at all.’
In (13a), if the matrix verb, which describes the causing event, can be negated in the first sentence, such a contradiction should not emerge with the second sentence. However, the *in fact* sentence is not acceptable, which suggests that it is the resulting event that is negated in the first sentence. The fact that the same also holds true for Type II (verbal) patterns such as (13b) suggests that Type II patterns may be resultatives, not causatives.

The fact that *-ci anh* cannot negate the matrix verb in resultative constructions naturally follows from the insight that there will no resulting event if the causing event does not take place in the first place, as mentioned in Kim and Maling (1997: 196) and J-B Kim (1999: 63-4). That is, the impossibility of such an eventuality in the real world forces an interpretation in which the resulting event is negated even when the negative *-ci anh* follows the matrix verb. However, such a restriction is not imposed on causative constructions.

The facts about the scope of long form negation *-ci anh* in resultative and causative constructions are summarized in Tables 1 and 2.

Table 1. The scope of long form negation *-ci anh* on the matrix verb.

<table>
<thead>
<tr>
<th>1. Causative construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Resultative construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP</td>
</tr>
</tbody>
</table>
Table 2. The scope of long form negation -ci anh- on the embedded verb.

1. Causative construction

```
NP  NP  ADJ/V-ci anh-key  V(ha)
```

2. Resultative construction

```
NP  NP  ADV/V-ci anh-key  V
```

5.3.2 Negative imperatives

A contrast between resultative and causative constructions regarding the scope of negation is also observed when negative imperatives involving -ci ma(la) ‘do not’ are considered. Negation has scope over the matrix verb in causative constructions, as is the case of long form negation -ci anh-. In contrast, the resultative predicate is negated in resultative constructions.

Let us consider the following sentences.

(14) a. Causative construction

```
Mary-lul  ttena-key  ha-ci ma.
Mary-ACC  leave-KEY  do-NEG.IMP
‘Do not make Mary leave.’
```

b. Adjectival resultative construction (Type I)

```
kwuk-ul  [kelccwuha-key]  ttulhi-ci ma.
soup-ACC  sticky-KEY  boil-NEG.IMP
‘Boil the soup, but not to the point where it is sticky.’
```

c. Verbal resultative construction (Type II)

```
phwungsen-ul  [theci-key]  pwul-ci ma.
balloon-ACC  explode-KEY  inflate-NEG.IMP
‘Blow the balloon, but not to the point where it explodes.’
```
The causative sentence in (14a) makes a request not to make Mary leave. However, the resultative sentence in (14b) does not behave the same, in that the scope of negation is over the resulting event, as indicated in the English translation. The request is to make the soup not sticky, anticipating that the causing event (i.e., a boiling action) will unfold. The same is true for (14c) involving a verbal predicate in which the request is not to explode the balloon.

The observations about the scope of long form negation –ci anh- and the negative imperative form –ci ma(la) strongly suggest that verbal (Type II) patterns do not behave like causatives. Rather, they behave like adjectival (Type I) resultative patterns, leading to the speculation that they are resultatives, not causatives.

5.3.3 Short form negation (an-)

Another piece of evidence, which supports the claim that verbal (Type II) patterns are not causatives, comes from the scope of short form negation an-. Verbal (Type II) patterns behave the same as adjectival (Type I) resultative patterns when an- immediately precedes the matrix verb. In both patterns, the resultative predicate is negated regardless of where an- occurs. For examples, in (15b) and (15c) an- negates the resultative predicate despite the fact that the negative an- is attached to the matrix verb. This behavior contrasts with that of causatives since the matrix verb is negated in the latter, as indicated in the English translation in (15a).
(15) The negative an- on the matrix verb

a. **Causative construction**

emeni-kkeyse ttal-ul mek-key an ha-si-ess-ta.
mother-NOM(HON) daughter-ACC eat-KEY not do-HON-PAST-DECL

‘Mother did not make her daughter eat.’

b. **Adjectival resultative construction (Type I)**

Yumi-NOM table-ACC clean-KEY not wipe-PAST-DECL

‘Yumi wiped the table, but not to the point where it was clean.’
Not possible: ‘Yumi did not wipe the table.’

c. **Verbal resultative construction (Type II)**

I-TOP balloon-ACC explode-KEY not inflate-PAST-DECL

‘I blew the balloon, but not to the point where it exploded.
Not possible: ‘I didn’t blow the balloon and as a result it exploded.’

Verbal (Type II) patterns also behave differently than causatives when an- is placed before the embedded predicate. It has been observed that causative constructions yield more than one reading (Bratt 1993, 1996, K-W Kim 1994, Y-S Lee 1988, Sells and Cho 1991), when an- precedes the embedded predicate, as illustrated in (17a), although one reading may be preferred to the other. However, such scope ambiguity does not seem to arise with resultative constructions, as illustrated in (16b) and (16c).

---

4 Ambiguity disappears when the causee NP is in the nominative. The negative an- takes scope only over the embedded verb, negating the caused event.

(i) emeni-kkeyse [ttal-i an mek-key] ha-si-ess-ta.
mother-NOM(HON) daughter-ACC not eat-KEY do-HON-PAST-DECL

‘Mother made her daughter not eat.’

5 For counterarguments, see Chai (2000).
(16) The negative an- on the embedded predicate

a. Causative construction

\[
\text{emeni-} \ k\text{keyse} \quad \text{ttal-ul} \quad \text{an} \ \text{mek-key} \quad \text{ha-si-ess-ta.}
\]

mother-NOM(HON) daughter-ACC not eat-KEY do-HON-PAST-DECL

Reading A: ‘Mother made her daughter not eat.’
Reading B: ‘Mother didn’t make her daughter eat.’

b. Adjectival resultative construction (Type I)

\[
\text{Yumi-ka} \quad \text{thakca-lul} \quad [\text{an} \ \text{kkaykkusha-key}] \quad \text{takk-ass-ta.}
\]

Yumi-NOM table-Acc not clean-KEY wipe-PAST-DECL

‘Yumi wiped the table, but not to the point where it was clean.’
Not possible: ‘Yumi did not wipe the table.’

c. Verbal resultative construction (Type II)

\[
\text{na-nun} \quad \text{phwungsen-ul} \quad [\text{an} \ \text{the ci-key}] \quad \text{pwul-ess-ta.}
\]

I-TOP balloon-ACC not explode-KEY inflate-PAST-DECL

‘I blew the balloon, but not to the point where it exploded.
Not possible: ‘I did not blow the balloon.’

As is the case of –ci anh-, the contrast observed in (16) can be explained based on the fact that the resulting event cannot be brought about if the causing event does not take place. That is, an- cannot yield an interpretation in which the causing event is negated when it occurs in the resultative construction.

Another explanation may also be possible, which has to do with a structural difference between the two constructions (O’Grady, p.c.). In the causative construction, when negation takes scope over the embedded verb, an- combines with the embedded verb first and the causative verb ha- is added to it, as illustrated in (17b). On the other hand, when an- has scope over the causative verb ha-, the embedded verb combines with the verb ha- first and an- is attached to the complex verb, as illustrated in (18b).
(17) **Causative construction**

mother-NOM(HON) daughter-ACC not eat-KEY do-HON-PAST-DECL  
‘Mother made her daughter not eat.’

b. NP-Nom NP-Acc [an [V-key] ha-ta]

(18) **Causative construction**

a. emeni- kkeyse ttal-ul an [mek-key ha]-si-ess-ta.  
mother-NOM(HON) daughter-ACC not eat-KEY do-HON-PAST-DECL  
‘Mother didn’t make her daughter eat.’

b. NP-Nom NP-Acc [an [V-key ha-ta]]

However, the fact that short form negation *an-* does not have scope over the matrix verb in resultative constructions, in contrast to causatives, suggests that the resultative predicate combines with the matrix verb after *an-* is attached to the resultative predicate, as (19b) and (20b) illustrate.

(19) **Adjectival resultative construction (Type I)**

Yumi-NOM table-ACC not clean-KEY wipe-PAST-DECL  
‘Yumi wiped the table, but not to the point where it was clean.’

b. NP-Nom NP-Acc [(an V-key) V]

c. *NP-Nom NP-Acc [an [V-key V]]  
Not possible: ‘Yumi did not wipe the table and as a result it became clean.’

(20) **Verbal resultative construction (Type II)**

I-TOP balloon-ACC not explode-KEY inflate-PAST-DECL  
‘I blew the balloon, but I stopped so that it did not explode.’
b. NP-Nom      NP-Acc      \([an \ V-key] \ V\]

c. *NP-Nom      NP-Acc      \([an [\ V-key \ V]]\]
    Not possible: ‘I didn’t blow the balloon and as a result it exploded.’

The facts about long form negation –ci anh- and short form negation an- strongly suggest that verbal (Type II) patterns are not causatives. They also suggest that verbal (Type II) patterns are resultatives in that they behave the same as adjectival (Type I) resultative patterns.

5.4 Semantic properties of Type I and Type II resultative predicates

This section discusses the semantic properties of Type I and Type II resultative predicates with respect to stativity, agentivity, and telicity. Adjectival (Type I) resultative predicates can be uniformly characterized as [+stative], [-agentive], and [-telic]. In contrast, verbal (Type II) resultative predicates do not converge in terms of the first two features. Telicity distinguishes between the two types of resultative predicates.

5.4.1 Stativity

In Korean, adjectival predicates are [+stative] and verbal predicates are normally [-stative]. This distinction is based on the general tendency for adjectives to describe a state, property or quality of the entity it is predicated of whereas verbs describe an activity or a process. This might lead one to speculate that stativity may distinguish adjectival (Type I) resultative predicates from verbal (Type II) resultative predicates.

\[\text{\textsuperscript{6}}\text{ For an extensive study of Korean adjectives, see H-K You (1998).} \]
However, this may not be correct because some Type II (verbal) resultative predicates are characterized as [+stative] with respect to progressive formation, which is known to be a test for stativity.

It is known that the progressive form -ko iss- can only occur with predicates that are [-stative] (Y-J Kim 1990: 67), as the examples in (21) help illustrate. In contrast, adjectival predicates, which are [+stative], cannot occur with the progressive form -ko iss-, as illustrated in (22).

(21) **Non-stative predicates (verbs)**

   a. Mary-ka solichi-ko iss-ta.  
      Mary-NOM shout-PROG-DECL  
      'Mary is shouting.'

      Yumi-NOM cry-PROG-DECL  
      'Yumi is crying.'

(22) **Stative predicates (adjectives)**

      meat-NOM soft-PROG-DECL  
      'The meat is being soft.'

   b. *Yumi-ka pwulhayngha-ko iss-ta.  
      Yumi-NOM unhappy-PROG-DECL  
      '*Yumi is being unhappy.'

It should be noted that unlike English adjectives, some of which may occur with the progressive form when used agentively, Korean adjectives cannot form progressives even when they are used agentively (Y-J Kim 1990: 69), as (23) illustrates. In other
words, Korean adjectives cannot form progressives in any case, which suggests that Type I resultative predicates can be uniformly characterized by the [+stative] feature.

(23) Type I (adjectival) resultative predicates

   John-NOM honest-PROG-DECL
   ‘John is being honest.’

   Mary-NOM humble-PROG-DECL
   ‘Mary is being humble.’

In contrast to adjectival (Type I) resultative predicates, verbal (Type II) resultative predicates do not behave uniformly with respect to progressive formation. Some of them such as mengtul-ta ‘be bruised’ and kicelha-ta ‘faint’ cannot occur with the progressive form -ko iss-, as (24a) and (24b) show. On the other hand, other verbal predicates such as theci-ta ‘explode’ can occur with the progressive form, as the acceptability of (24c) suggests. Hence, a uniform generalization cannot be made about verbal (Type II) resultative predicates with respect to stativity.

(24) Type II (verbal) resultative predicates

a. ?(*)Mary-ka kicelha-ko iss-ta.
   Mary-NOM explode-PROG-DECL
   ‘Mary is fainting.’

b. ?(*)Yumi-ka mengtul-ko iss-ta.
   Yumi-NOM bruised-PROG-DECL
   ‘Yumi is being bruised’

c. phwungsen-i theci-ko iss-ta.
   balloon-NOM explode-PROG-DECL
   ‘The balloon is exploding.’
Based on the fact that all Type I (adjectival) resultative predicates share the [+stative] feature, it may be tempting to say that the [-stative] feature picks out the resultative predicates that cannot appear in adjectival (Type I) patterns. However, this cannot be true even though it comes quite close to capturing the dividing line between Type I (adjectival) and Type II (verbal) resultative predicates. This is because some Type II (verbal) resultative predicates are [+stative] with respect to progressive formation, as shown in (24) above.

Table 3. Characteristics of Type I and II resultative predicates with respect to stativity.

<table>
<thead>
<tr>
<th></th>
<th>Type I (adjectival)</th>
<th>Type II (verbal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progressive formation</td>
<td>all [+stative]</td>
<td>some [-stative], some [+stative]</td>
</tr>
</tbody>
</table>

5.4.2 Agentivity

Stative verbs, including adjectival predicates, are normally non-agentive and therefore do not pass agentivity tests such as imperative formation, propositive formation, occurring as a complement of the control verb *try, and occurring in an embedded clause of *force or *ask (Y-J Kim 1990: 69, 71-2). Examples are provided in (25).

(25) Non-agentive adjective

a. Imperative formation
   *ccalp-ala!
   short-IMPERATIVE
   'Be short.'
b. **Propositive formation**

*(wuli) ccalp-ca.
we short-PROPOSITION
‘Let’s be short.’

c. **As a complement of the control verb ayssu-ta ‘try’**

*ccalp-ulyeko ayssu-ess-ta.
short-COMP try-PAST-DECL
‘(One) tried to be short.’

d. **As an embedded verb of the verb sikhi-ta ‘force’**

*nay-ka Mary-eykey ccalp-tolok sikhi-ess-ta.
I-NOM Mary-DAT short-COMP force-PAST-DECL
‘I forced Mary to be short.’

Given that Type I patterns involve adjectival predicates, it may be tempting to say that Type I resultative predicates are uniformly [-agentive]. But, the existence of adjectives such as solcikha-ta ‘honest’, chimchakha-ta ‘calm’, and kyemsonha-ta ‘humble’, which pass agentivity tests, as illustrated in (26), seems to pose a problem to this generalization. However, what is important to our discussion is whether these adjectives can occur in resultative constructions. If it turns out that they cannot, the generalization may be maintained.

(26) **Potentially agentive adjective**

a. **Imperative formation**

chimchakhay-la!
calm-IMPERATIVE
‘Be calm.’

b. **Propositive formation**

(wuli) chimchakha-ca
we calm-PROPOSITION
‘Let’s be calm.’
c. **As a complement of the control verb assu-ta ‘try’**
   chimchakha-ulyeko ayssu-ess-ta.
   calm-COMP try-PAST-DECL
   ‘(One) tried to be calm.’

d. **As an embedded predicate of the verb tangpwuha-ta ‘ask’**
   nay-ka Mary-eykey chimchakha-tolok tangpwuhay-ss-ta.
   I-NOM Mary-DAT calm-COMP ask-PAST-DECL
   ‘I asked Mary to be calm.’

Before examining the ability of these potentially agentive adjectives to occur in resultative constructions, the distinction between individual-level and stage-level predicates is worth noting (Carlson 1977, Diesing 1989, Kratzer 1989). Individual-level predicates describe inherent or permanent properties of an individual or an object. In contrast, stage-level predicates describe transitory properties of an individual. Properties associated with stage-level predicates are properties of stages in which a stage refers to a space or time aspect of an individual. These properties are temporal in that they hold of an individual at a particular time and place, in contrast to properties denoted by individual-level predicates.

Drawing on Rapoport’s (1990) work, Levin and Rappaport (1995: 55) point out that not all adjectives can be used as resultative predicates. Resultative phrases cannot be headed by individual-level predicates such as tall and intelligent, as (27a) illustrates, which attribute an inherent or permanent property to an individual. In other words, only stage-level predicates, which describe a temporary or transitory property of an individual, can occur in the resultative construction, as shown in (27b).
(27)  a. Individual-level predicate
*The witch frightened the children [intelligent].
(Levin and Rappaport 1995: 55)

b. Stage-level predicate
Tom sang himself [sick].

Turning back to potentially agentive adjectives such as *solcikha-ta* ‘honest’, *chimchakha-ta* ‘calm’ and *kyemsonha-ta* ‘humble’, they describe a behavior of an individual, not a personality, when they are agentive. That is, they denote an activity that holds at a particular time when they are used agentively. For example, sentence (28) below is about the request for Sue to act in a calm manner, not about a permanent quality of her.

(28)  emma-ka Sue-eykey chimchakha-tolok tangpwuhay-ss-ta.
     mother-NOM Sue-DAT calm-COMP ask-PAST-DECL
     ‘Mother asked Sue to be calm.’

This is further confirmed by the fact that a durational adverbial phrase can be added to the sentence (Kratzer 1989).

(29)  emma-ka Sue-eykey kicahoikyen-tongan chimchakha-tolok
     I-NOM Sue-DAT press.conference-during calm-COMP
     tangpwuhay-ss-ta.
     ask-PAST-DECL

     ‘Mother asked Sue to be calm during the press conference.’

Given their stage-level use, it may be speculated that potentially agentive adjectives can appear in the resultative construction. However, contrary to the
speculation, they cannot occur in the resultative construction. As a matter of fact, these adjectives yield a depictive interpretation, when they occur in resultative constructions, as (30) illustrates.

(30) *Mary-nun Tom-lul chimchakha-key tayli-ess-ta.
    Mary-TOP Tom-ACC calm-KEY beat-PAST-DECL

'Mary beat Tom in a calm manner.'
Intended meaning: 'Mary beat Tom so that he behaved in a calm manner.'

Sentence (30) cannot mean that a beating action caused Tom to act in a calm manner. Rather, the key-marked phrase chimchakha-key 'calm' modifies the matrix verb, yielding the interpretation that the beating action took place in a calm manner. Given that potentially agentive adjectives yield a depictive interpretation when they occur in the resultative construction, the generalization appears to be that adjectival (Type I) patterns only occur with a subset of adjectival predicates, which are non-agentive.

In contrast to Type I (adjectival) resultative predicates, Type II (verbal) resultative predicates do not behave uniformly with respect to agentivity. Some of them such as theci-ta 'explode' and mengtul-ta 'be bruised' are not agentive, and they do not pass any of the agentivity tests, as shown in (31).

(31) Non-agentive Type II (verbal) resultative predicate

a. Imperative formation
   *theci-ela.
   explode-IMPETRATIVE
   'Explode.'
b. **Propositive formation**

*we* theci-ca.

‘Let’s explode.’

c. **As a complement of control verbs such as ayssu-ta ‘endeavor’**

*Mary-ka theci-lyeko ayssu-ess-ta.*

Mary-NOM explode-COMP try-PAST-DECL

‘Mary tried to explode.’

d. **As an embedded predicate of verbs such as sikhi-ta ‘force’**

* nay-ka Mary-eykey theci-tolok sikhi-ess-ta.*

I-NOM Mary-DAT explode-COMP force-PAST-DECL

‘I forced Mary to explode.’

On the other hand, verbal predicates such as *kichela-ta ‘faint’* are potentially agentive and they pass some of the agentivity tests. As illustrated in (32c) and (32d), they can appear as the complement of control verbs such as *ayssu-ta ‘endeavor’* and *nolyekha-ta ‘try’*, and in the embedded clause of verbs such as *sikhi-ta ‘force’*. However, they cannot occur with the imperative form *-ale la* and the propositive form *-ca ‘Let’s’*, as shown in (32a) and (32b), respectively.

(32) **Potentially agentive Type II (verbal) resultative predicate**

a. **Imperative formation**

?? kichelhay-la.

faint-IMPERATIVE ‘Faint.’

b. **Propositive formation**

?? wuli kichelha-ca.

we faint-PROPOSITIVE ‘Let’s faint.’

c. **As a complement of control verbs such as ayssu-ta ‘endeavor’**

(?) kichel-lyeko ayssu-ess-ta.

faint-COMP try-PAST-DECL

‘(One) tried to faint.’
d. As an embedded clause of verbs such as *sikhi-ta* 'force'

(?) nay-ka Mary-eykey kicelha-tolok sikhi-ess-ta.
I-NOM Mary-DAT faint-COMP force-PAST-DECL
'I forced Mary to faint.'

Furthermore, an agentive interpretation can be invoked with verbal predicates such as *kicelha-ta* 'faint', when volitional adverbials such as *ilpwule* 'on purpose' are added. The meaning of sentences such as (33) implies that the referent of the NPs these verbs are predicated of has control over the situation described by the verb.

(33) With the volitional adverbial *ilpwule* 'on purpose'
Mary-ka *ilpwule* kicelhay-ss-ta.
Mary-NOM on.purpose faint-PAST-DECL
'Mary fainted on purpose.'

Given that some of Type II (verbal) resultative predicates can be potentially agentive, Type II resultative predicates may not be characterized by the [-agentive] feature. That is, agentivity does not distinguish Type II (verbal) resultative predicates from Type I (adjectival) since the [-agentive] feature is associated with both types of resultative predicates.

Table 4. Properties of Type I and II resultative predicates with respect to agentivity.

<table>
<thead>
<tr>
<th>Agentivity tests</th>
<th>Type I</th>
<th>Type II</th>
</tr>
</thead>
<tbody>
<tr>
<td>[-agentive]</td>
<td></td>
<td>some [-agentive], some [-agentive] or [+agentive]</td>
</tr>
</tbody>
</table>
5.4.3 Telicity

It was shown in the previous two sections that [+stative] and [-agentive] features are uniformly shared by Type I (adjectival) resultative predicates such as those in (34).

(34) Type I (adjectival) resultative patterns

| Mary-NOM | meat-ACC | soft-KEY | boil-PAST-DECL |
| ‘Mary boiled the meat soft.’ |

| John-NOM | wall-ACC | red-KEY | paint-PAST-DECL |
| ‘John painted the wall red.’ |

| Yumi-NOM | table-ACC | clean-KEY | wipe-PAST-DECL |
| ‘Yumi wiped the table clean.’ |

In contrast, Type II (verbal) resultative predicates such as those in (35) can be characterized neither by the [-stative] feature nor by the [-agentive] feature. This is because some of them may be potentially agentive, and some of them are [+stative].

(35) Type II (verbal) resultative patterns

| Mary-TOP | Tom-ACC | faint-KEY | beat-PAST-DECL |
| ‘Mary beat Tom to the point where he fainted.’ |

| Mary-NOM | balloon-ACC | explode-KEY | inflate-PAST-DECL |
| ‘Mary inflated the balloon to the point where it exploded.’ |

In this section, it is shown that telicity distinguishes Type II (verbal) resultative predicates from Type I (adjectival). That is, the [+telic] feature factors out the former
type in that it is associated only with Type II (verbal) resultative predicates. Based on this, it may be concluded that telicity is a required feature for verbal predicates to occur in the resultative construction.

It has been observed that the perfective aspectual marker \(-a/e iss-\) is sensitive to telicity (Y-J Kim 1990: 91-2, K-D Lee 1978). The marker \(-a/e iss-\) only occurs with intransitive verbs and passive forms of transitive verbs, but not with transitive verbs. Furthermore, only a subset of intransitive verbs can occur with the perfective aspectual marker \(-a/e iss-\). Verbs whose meaning do not entail an endpoint, such as ket-ta 'walk', wul-ta 'cry' and talli-ta 'run', cannot appear with the perfective aspectual marker \(-a/e iss-\), as (36) illustrates.

(36) Atelic verbs

   Mary-NOM run-PERF-DECL
   'Mary has run.'

b. *Yumi-ka wul-e iss-ta.
   Yumi-NOM cry-PERF-DECL
   'Yumi has cried.'

In contrast, verbs such as nok-ta 'melt', el-ta 'freeze', cwuk-ta 'die', tochakha-ta 'arrive', and o-ta 'come', whose meaning entails an endpoint of the event, can occur with the perfective aspectual marker \(-a/e iss-\), as (37) shows.

(37) Telic verbs

a. elum-i nok-a iss-ta.
   ice-NOM melt-PERF-DECL
   'The ice has melted.'
b. say-ka cwuk-e iss-ta.
bird-NOM die-PERF-DECL
‘A bird has died.’

Turning to resultative constructions, Type I (adjectival) resultative predicates, such as pwutulep-ta ‘soft’ and kkaykkusha-ta ‘clean’, cannot occur with the perfective aspectual marker –a/e iss-, as the examples in (38) illustrate. This follows from the fact that adjectival predicates normally describe a state, whose eventuality does not have an inherent endpoint.

(38) Adjectives

   meat-NOM soft-PERF-DECL
   ‘*The meat has been soft.’

b. *thakca-ka kkaykkushay-iss-ta.
   table-NOM clean-PERF-DECL
   ‘*The table has been clean.’

c. *pyck-i ppalkay-iss-ta.
   wall-NOM red-PERF-DECL
   ‘The wall has been red.’

Given that adjectival predicates are not compatible with the perfective aspectual marker –a/e iss-, Type I (adjectival) resultative predicates may be characterized as [-telic]. However, this is not to say that all atelic predicates can participate in resultative formation since atelic verbs cannot occur in resultative constructions, as will be shown shortly.

In contrast to Type I (adjectival) predicates, Type II (verbal) predicates such as kicelha-ta ‘faint’, mengtul-ta ‘be bruised’ and theci-ta ‘explode’ describe an eventuality
which has a definite endpoint. These predicates are telic (or delimited) and therefore they can occur with the perfective aspectual marker \(-ale \, iss-\), as the examples in (39) help illustrate.

(39) **Verbs used as resultative predicates**

\[\text{a. Mary-ka nemeci-e iss-ta.} \]
Mary-NOM fall.down-PERF-DECL
‘Mary has fallen down’

\[\text{b. Yumi-ka kicelhay-iss-ta.} \]
Yumi-NOM faint-PERF-DECL
‘Yumi has fainted.’

\[\text{c. phwungsen-i theci-e iss-ta.} \]
balloon-NOM explode-PERF-DECL
‘The balloon has exploded.’

The observation that telicity is shared by Type II (verbal) resultative predicates is further supported by the fact that atelic verbal predicates cannot occur in resultative constructions. Observe the contrast illustrated in (40). Sentence (40a) involving the atelic verbal predicate \(wul-key\) ‘cry’ is unacceptable. However, as (40b) shows, the sentence becomes grammatical when the atelic verbal predicate \(wul-key\) ‘cry’ is replaced by the telic verbal predicate \(mengtul-ta\) ‘be bruised.’

(40) a. **Resultative pattern with an atelic verbal predicate**

\*[kkangphye-ka Tom-lul [wul-key] ttayli-ess-ta.]
gangster-NOM Tom-ACC cry.KEY beat-PAST-DECL
‘A gangster beat Tom to the point where he cried.’

b. **Resultative pattern with a telic verbal predicate**

\*[kkangphye-ka Tom-ul [mengtul-key] ttayli-ess-ta.]
gangster-NOM Tom-ACC bruised-KEY beat-PAST-DECL
‘A gangster beat Tom to the point where he was bruised.’
Unlike the telic verbal predicate *mengtul-ta* ‘be bruised’, the verb *wul-ta* ‘cry’ describes an activity that can go on indefinitely. That is, the eventuality described by *wul-ta* ‘cry’ does not have an inherent endpoint. Hence, the atelic verbal predicate *wul-ta* ‘cry’ cannot occur with the perfective aspectual marker –*a/e iss-* whereas this is possible with the telic verbal predicate *mengtul-ta* ‘be bruised’, as illustrated in (41).

(41)  

(a. **Atelic resultative predicate**  
*Yumi-ka wul-e iss-ta.*  
Yumi-NOM cry-PERF-DECL  
‘Yumi has cried.’

(b. **Telic resultative predicate**  
(?)Tom-i mengtul-e iss-ta.  
Tom-NOM bruised-PERF-DECL  
‘Tom has been bruised.’

To recapitulate, a test involving the perfective aspectual marker –*a/e iss-* showed that Type I resultative predicates are [-telic], which is attributed to the fact that adjectives describe a state, which does not have an inherent endpoint. On the other hand, it was shown that Type II resultative predicates are uniformly characterized by the [+telic] feature since atelic verbs cannot occur as a resultative predicate in the resultative construction. In other words, telicity (or delimited) is a required condition for verbs to occur in resultative constructions.

Table 5 gives a summary of the semantic properties associated with Type I (adjectival) and Type II (verbal) resultative predicates with respect to stativity, agentivity and telicity.
Table 5. Semantic properties of Type I and Type II resultative predicates.

<table>
<thead>
<tr>
<th></th>
<th>Type I adjecival</th>
<th>Type II verbal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stativity</td>
<td>all [+stative]</td>
<td>some [-stative] or some [+stative]</td>
</tr>
<tr>
<td>Agentivity</td>
<td>[-agentive]</td>
<td>[-agentive], [-agentive] or [+agentive]</td>
</tr>
<tr>
<td>Telicity</td>
<td>[-telic]</td>
<td>[+telic]</td>
</tr>
</tbody>
</table>

5.5 Conclusion

This chapter has identified two types of resultative patterns built around transitive verbs, one involving adjectival (Type I) resultative predicates and the other involving verbal (Type II) resultative predicates. It was argued that the occurrence of a verbal resultative predicate is permitted in resultative patterns built around transitive verbs as long as it has the function of delimiting a verb phrase by providing an endpoint for the event described by the matrix verb. In other words, verbal resultative predicates occurring in resultatives based on transitive verbs satisfy the Single Delimiting Constraint, which states that a verb phrase may involve only one measuring out and be delimited only once (Tenny 1994: 79).

In section 5.3, it was argued that Type II (verbal) patterns are resultatives, based on the negation facts, which showed that Type II patterns behave the same as Type I (adjectival) resultative patterns. In both Type I and Type II resultative patterns, the resulting event is negated regardless of the position in which negation (e.g., long form negation \(-ci anh-\) and short form negation \(an-\)) occurs, in contrast to the causative
In addition, the facts about scope ambiguity involving short form negation *an*- showed that Type II patterns behave like Type I resultative patterns, yielding only one interpretation when *an*- occurs before the resultative predicate. This behavior contrasts with that of causatives in which *an*- yields more than one reading when it precedes the embedded verb.

Lastly, section 5.4 examined the semantic properties of resultative predicates occurring in each pattern (Type I and Type II) with respect to stativity, agentivity and telicity. It was shown that Type I (adjectival) resultative predicates are characterized as [+stative], [-agentive], and [-telic], which follows from the general fact that adjectives describe a state whose eventuality does not have a definite or inherent endpoint. In addition, it was shown that Type II (verbal) resultative predicates are characterized by the [+telic] feature, which leads to the claim that only telic verbal predicates can occur in resultative constructions.
Chapter 6

Case alternation in resultative constructions based on transitive verbs

6.1 Introduction

This chapter focuses on one of the differences between Type I (adjectival) and Type II (verbal) resultative patterns based on transitive verbs—a case alternation on the NP of which a resultative predicate is predicated.¹ This case alternation is observed only with Type II patterns involving a verbal resultative predicate. Type I patterns occurring with an adjectival resultative predicate do not allow the nominative marker, as shown in (1).

(1) Type I (adjectival) patterns

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>John-NOM</td>
<td>wall-ACC/NOM</td>
<td>red-KEY</td>
<td>paint-PAST-DECL</td>
</tr>
<tr>
<td>‘John painted the wall red.’</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Mary-NOM</td>
<td>table-ACC/NOM</td>
<td>clean-KEY</td>
<td>wipe-PAST-DECL</td>
</tr>
<tr>
<td>‘Mary wiped the table clean.’</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ A similar observation is made by J-B Kim (1999). But, he does not discuss the case alternation in terms of the types of resultative predicates.
(2) Type II (verbal) patterns

   Mary-NOM Tom-ACC/NOM bruised-KEY beat-PAST-DECL
   ‘Mary beat Tom black and blue.’

   Mary-NOM balloon-ACC/NOM explode-KEY inflate-PAST-DECL
   ‘Mary inflated the balloon to the point where it exploded.

In section 6.2, resultative constructions are compared with periphrastic causative constructions, which also allow a nominative-accusative case alternation on causee NPs. First, the differences in meaning associated with patterns involving a nominative-marked NP and those occurring with an accusative-marked NP are discussed in each construction. Then, the question of whether the dative marker –eykey occurs in the resultative construction is examined. It is argued that the resultative construction is not in a context that invokes the occurrence of the dative marker, in contrast to the causative construction.

Section 6.3 focuses on the nominative-accusative case alternation in Type II patterns involving a verbal resultative predicate. It is argued that patterns involving a nominative-marked NP of which the resultative predicate is predicated have a different syntactic structure than patterns occurring with an accusative-marked NP. Several tests including adverbial modification and those involving negative polarity items are examined in an attempt to show that the two patterns (i.e., nominative-marked and accusative-marked patterns) have different structures.
(3) Case alternation of transitive-based Type II (verbal) resultative patterns

a. Accusative-marked pattern
   NP-Nom  NP-Acc  V-key  V

b. Nominative-marked pattern
   NP-Nom  NP-Nom  V-key  V

6.2 Case alternation in resultative and causative constructions

6.2.1 Nominative-accusative case alternation

In both causative and resultative constructions, patterns occurring with an
adjectival predicate do not allow an alternation between nominative and accusative case.
In these patterns, the nominative marker cannot occur on the semantic subject of the
lower predicate (i.e., causee NPs in the causative construction and NPs of which the
resultative predicate is predicated in the resultative construction). Examples of each
construction are provided in (4) and (5).

(4) Causative construction

a. Tom-i  pang-ul/*i  kkaykkusha-key  hay-ss-ta.
   Tom-NOM room-ACC/NOM  clean-KEY  do-PAST-DECL
   ‘Tom made the room clean. / Tom cleaned the room.’

b. Mary-ka  kwuk-ul/*i  mayp-key  hay-ss-ta.
   Mary-NOM stew-ACC/NOM  spicy-KEY  do-PAST-DECL
   ‘Mary made the soup spicy.’

(5) Resultative construction

   Sue-NOM  hair-ACC/NOM  yellow-KEY  dye-PAST-DECL
   ‘Sue dyed her hair yellow.’
b. enni-ka os-ul/*i [kkaykkusha-key] ppal-ass-ta.
sister-NOM clothes-ACC/NOM clean-KEY wash-PAST-DECL
‘My sister washed the clothes clean.’

However, in both constructions, patterns involving a verbal predicate can occur with the nominative and the accusative marker, as (6) and (7) illustrate.

(6) Causative construction

a. Tom-i Mary-lul/ka ttena-key hay-ss-ta.
   Tom-NOM Mary-ACC/NOM leave-KEY do-PAST-DECL
   ‘Tom made/let Mary leave.’

b. emma-ka ai-ul/i ket-key hay-ss-ta.
   mother-NOM child-ACC/NOM walk-KEY do-PAST-DECL
   ‘Mother made/let the child walk.’

(7) Resultative construction

   Mary-NOM Tom-ACC/NOM bruised-KEY beat-PAST-DECL
   ‘Mary beat Tom black and blue.’

   Mary-NOM balloon-ACC/NOM explode-KEY inflate-PAST-DECL
   ‘Mary inflated the balloon to the point where it exploded.

In causative constructions, there is a difference in meaning between patterns involving an accusative-marked causee NP and those involving a nominative-marked causee NP (K-H Kim 1994, J-J Song 1996, among others). The difference lies in the degree of the involvement of the causer in accomplishing the caused event described by a lower predicate. The meaning associated with patterns occurring with an accusative-marked causee NP, as in (8a) and (9a) below, is that the causer is directly involved in
bringing about the caused event as an agent. In these patterns, the accusative-marked
causee NP is perceived as the direct target of the causer’s action, as mentioned in S. Lee
(2001: 585), which implies that the causer is an active participant in bringing about the
caused event.

(8) With an inanimate causee NP

   Yumi-NOM food-ACC rot-KEY do-PAST-DECL
   'Yumi made the food rotten (spoiled).

b. Yumi-ka umsik-i ssek-key hay-ss-ta.
   Yumi-NOM food-NOM rot-KEY do-PAST-DECL
   'Yumi let the food rotten (spoiled).

(9) With an animate causee NP

a. Tom-i Mary-hul ttena-key hay-ss-ta.
   Tom-NOM Mary-ACC leave-KEY do-PAST-DECL
   'Tom made Mary leave.'

b. Tom-i Mary-ka ttena-key hay-ss-ta.
   Tom-NOM Mary-NOM leave-KEY do-PAST-DECL
   'Tom let Mary leave.'

On the other hand, patterns occurring with a nominative-marked causee NP yield an
interpretation that the causer lets the caused event happen by not getting involved in the
caused event. For example, the meaning of (8b) and (9b) implies that the caused event
took place because the causer did not do anything to stop it from happening.

The observation that causative patterns with a nominative-marked causee NP
denote a lesser degree of involvement of the causer in bringing about the caused event is
further supported by the modification of adverbials such as ekciło ‘forcibly.’ The
meaning of these adverbials implies the active involvement of the causer in bringing about the caused event, which does not create a conflict with the meaning associated with accusative-marked patterns. Hence, (10a) is acceptable. In contrast, (10b) cannot occur with the adverb *ekcilo* ‘forcibly’, which is expected, given the meaning associated with nominative-marked patterns.

(10)  

a. **Accusative-marked pattern**  

*ekcilo* Tom-i Mary-lul ttena-key hay-ss-ta.  
forcibly Tom-NOM Mary-ACC leave-KEY do-PAST-DECL 
‘Tom forcibly made Mary leave.’

b. **Nominative-marked pattern**  

/*??ekcilo* Tom-i Mary-ka ttena-key hay-ss-ta.  
forcibly Tom-NOM Mary-ACC leave-KEY do-PAST-DECL 
‘??Tom forcibly let Mary leave.’

However, the degree of direct involvement of the matrix subject does not seem to play a role in the resultative construction. The reason is that the referent of the matrix subject NP is directly involved in bringing about the resulting event in both nominative-marked and accusative-marked resultative patterns. In other words, the referent of the matrix subject NP in nominative-marked resultative patterns carries out the action that causes the resulting event to happen, in contrast to nominative-marked causative patterns in which the causer lets the caused event unfold by doing nothing about it.

The intentionality of the referent of the matrix subject in bringing about the resulting event seems to play a role in the resultative construction. When the NP of which the resultative predicate is predicated is in the accusative case, a sentence implies that the referent of the matrix subject intentionally aims at making the resulting event happen. On
the other hand, such an interpretation is not implied by nominative-marked resultative patterns. Compatibility with volitional adverbials such as *ilpwule* ‘on purpose’ seems to bring out the difference.

Let us consider the examples in (11).

(11) a. **Accusative-marked resultative pattern**

forcibly Mary-TOP child-ACC faint-KEY beat-PAST-DECL

‘Mary beat the child on purpose to the point where s(he) fainted.’

b. **Nominative-marked resultative pattern**

forcibly Mary-TOP child-NOM faint-KEY beat-PAST-DECL

‘Mary beat the child on purpose to the point where s(he) fainted.’

In contrast to (11a), the meaning of (11b) implies that the referent of the matrix subject did not have an intention to cause the child to faint by beating him or her when the volitional adverb *ilpwule* ‘on purpose’ is not present. It just happens to be the case that the child fainted due to a beating action. Hence, (11b) is ungrammatical if the adverb *ilpwule* ‘on purpose’ is added, whose meaning implies strong intentionality.

Table 1 gives a summary of meanings associated with nominative-marked and accusative-marked patterns in each construction.

<table>
<thead>
<tr>
<th>Type of patterns</th>
<th>Causative construction</th>
<th>Resultative construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accusative-marked patterns</td>
<td>involvement</td>
<td>intentionality</td>
</tr>
<tr>
<td>Nominative-marked patterns</td>
<td>no direct involvement</td>
<td>no intentionality</td>
</tr>
</tbody>
</table>
6.2.2 Dative case marking

In causative constructions, the causee NP can be in the nominative, accusative or dative case, as the examples in (12) help illustrate.

(12) Causative construction

a. Tom-un Mary-ka ttena-key hay-ss-ta.
   Tom-TOP Mary-NOM leave-KEY do-PAST-DECL
   'Tom let Mary leave.'

b. Tom-un Mary-lul ttena-key hay-ss-ta.
   Tom-TOP Mary-ACC leave-KEY do-PAST-DECL
   'Tom made Mary leave.'

c. Tom-un Mary-eykey ttena-key hay-ss-ta.
   Tom-TOP Mary-DAT leave-KEY do-PAST-DECL
   'Tom let Mary leave.'

However, this does not seem to be the case for resultative constructions. The NP of which a resultative predicate is predicated cannot be dative-marked in the resultative construction, as (13c) illustrates.

(13) Resultative construction (Type II verbal pattern)

a. kkangppya-ka Tom-i [kicelha-key] ttayli-ess-ta.
   gangster-NOM Tom-NOM faint-KEY beat-PAST-DECL
   'A gangster beat Tom to the point where he fainted.'

   gangster-NOM Tom-ACC faint-KEY beat-PAST-DECL
   'A gangster beat Tom to the point where he fainted.'

   gangster-NOM Tom-DAT faint-KEY beat-PAST-DECL
   'A gangster beat Tom to the point where he fainted.'
Given this contrast, the question arises as to why the dative marker is not allowed in the resultative construction. Let us first consider contexts in which causative constructions allow dative-marked causee NPs, which may help to answer the question. It has been observed that dative-marked patterns in causative constructions are affected by a semantic constraint. The referent of the dative-marked causee NP must have control over the action described by the embedded predicate (Y-S Kang 1984, O'Grady 1991, Park 1994, Patterson 1974). By this constraint, inanimate entities cannot occur in the dative case, as illustrated in (14b).

(14) a. Mary-nun cha-ka lul wumciki-key hay-ss-ta.
    Mary-TOP car-NOM/ACC move-KEY do-PAST-DECL
    ‘Mary caused the car to move.’

    b. * Mary-nun cha-eykey wumciki-key hay-ss-ta.
       Mary-TOP car-DAT move-KEY do-PAST-DECL
       ‘Mary let the car move.’

Furthermore, O'Grady (1991: 179) points out that even an animate entity cannot be dative-marked if (s)he cannot be in control of the action being caused. Sentence (15b) is ungrammatical because fainting is not an action over which an entity can normally have control.

(15) a. Mary-ka Tom-i ul kicelha-key hay-ss-ta.
    Mary-NOM Tom-NOM/ACC faint-KEY do-PAST-DECL
    ‘I made/let Tom faint.’

---

2 This constraint does not apply to patterns involving nominative-marked and accusative-marked causee NPs, as the grammaticality of (14a) suggests.
The fact that dative-marked NPs of which a resultative predicate is predicated are not allowed in the resultative construction may be explained with respect to the semantic restriction imposed on dative-marked causee NPs. It seems that the resultative construction is not in a context in which the referent of the NP of which the resultative predicate is predicated can have his/her control over the resulting event. That is, the resultative construction does not seem to leave room for the referent of the semantic subject of the resultative predicate to exert his or her control over the resulting event. This is because the resulting event takes place regardless of the will of the referent of the semantic subject of the resultative predicate. For example, the verb *kicelha-ta* ‘faint’, which can be used as a resultative predicate, can be potentially agentive and it is compatible with volitional adverbials such as *ilpwule* ‘on purpose’, as (16a) shows. However, it does not yield an agentive interpretation when it occurs in the resultative construction, as the ungrammaticality of (16b) suggests.

    Mary-NOM on.purpose faint-PAST-DECL
    ‘Mary fainted on purpose.’

   I-TOP Mary-NOM on.purpose faint-KEY beat-PAST-DECL
   ‘*I beat Mary to the point where she fainted on purpose.’

In contrast, such a reading is not necessarily entailed in the causative construction. The referent of the causee NP may be able to choose not to carry out the action described
by the lower verb (O'Grady 1991: 172). Hence, another sentence involving the negation of the caused event can be added to sentences such as (17a) (Cho 1988), as (17b) illustrates.

(17)  **Causative construction**

a. emma-ka ai-eykey pap-ul mek-key hay-ss-ta.
   mother-NOM child-DAT rice-ACC eat-KEY do-PAST-DECL
   'Mother let the child eat rice.'

b. emma-ka ai-eykey pap-ul mek-key hay-ss-ciman
   mother-NOM child-DAT rice-ACC eat-KEY do-PAST-although
   child-NOM rice-ACC eat-COMP not-PAST-DECL

   'Although mother let the child eat rice, (s)he didn’t eat.'

However, this is not possible with the resultative construction. A sentence involving the negation of the resulting event cannot be added to resultative constructions, as (18b) shows. The fact that (18b) is ungrammatical supports the observation that the referent of the semantic subject of the resultative predicate cannot be in control of carrying out the action being caused. In other words, the resultative construction is not in a context in which an agentive interpretation is invoked.

(18)  **Resultative construction**

   Mary-NOM Tom-NOM faint-KEY do-PAST-DECL
   'Mary beat Tom to the point where he fainted.'

b. */?? Mary-ka Tom-ul [kicelha-key] ttayli-ess-ciman
   l-NOM Tom-NOM faint-KEY beat-PAST-although
Tom-un kicelha-ci anh-ass-ta.
Tom-TOP faint-COMP not-PAST-DECL

' Although I beat Tom to the point where he fainted, he did not faint.'

Table 2 gives a summary of case alternation patterns in causative and resultative constructions.

Table 2. The case alternation in causative and resultative constructions.

<table>
<thead>
<tr>
<th>Case marking on the embedded NP</th>
<th>Causative construction</th>
<th>Resultative construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accusative</td>
<td>possible</td>
<td>possible</td>
</tr>
<tr>
<td>Nominative</td>
<td>possible</td>
<td>possible</td>
</tr>
<tr>
<td>Dative</td>
<td>possible when the referent of the causee NP is in control</td>
<td>not possible(^3)</td>
</tr>
</tbody>
</table>

6.3 The structure of accusative-marked and nominative-marked patterns

Focusing on Type II patterns involving a verbal resultative predicate, it is argued that the nominative-marked pattern has a different structure than the accusative-marked

\(^3\) It should be pointed out that there is a case which allows the occurrence of the dative marker on the NP of which a resultative predicate is predicated. The dative-marked NP may be allowed when it is interpreted as an experiencer, as in (ii), not an agent that can have control over the resulting event.

Mary-TOP child-NOM/ACC bruised-KEY beat-PAST-DECL
'Mary beat the child black and blue.'

Mary-TOP child-DAT bruised-KEY beat-PAST-DECL
'Mary beat the child black and blue.'
pattern. It is shown that in the accusative-marked pattern (NP-nom NP-acc V-key V) the accusative-marked NP and the matrix verb belong in the same clause, which is not the case for the nominative-marked pattern (NP-nom NP-nom V-key V). Given this difference, it is speculated that nominative-marked patterns are biclausal while accusative-marked patterns are monoclausal. That is, in contrast to the resultative predicate in the accusative-marked pattern, the resultative predicate in the nominative-marked pattern may form a clause with the NP of which it is predicated.

6.3.1 Adverbial modification (place adverbs)

Given different case markings, the speculation arises that the nominative-marked pattern (NP-nom NP-nom V-key V) may have a different syntactic structure than the accusative-marked pattern (NP-nom NP-acc V-key V). This claim is supported by the facts about adverbial modification. Accusative-marked patterns yield more than one interpretation when a place adverbial occurs between the resultative predicate and the NP of which it is predicated. The adverb can modify both the causing and resulting events, yielding an interpretation that both events happened in the same place. On another interpretation, the adverb only modifies the resulting event, implying that the causing event may have taken place someplace else.

For example, the accusative-marked pattern in (19a) could mean that both causing (i.e., a beating action) and resulting events (i.e., the fainting event) took place in the living room. Or, it can just mean that Tom fainted in the living room due to a beating action, for which the location is not specified.
(19) a. **Accusative-marked pattern**

I-TOP child-ACC living room-LOC faint-KEY beat-PAST-DECL

Reading A: 'I beat the child in the living room and as a result (s)he fainted there.'
Reading B: 'I beat the child and as a result (s)he fainted in the living room.'

b. **Nominative-marked pattern**

I-TOP child-ACC living room-LOC faint-KEY beat-PAST-DECL

'I beat the child and as a result (s)he fainted in the living room.'
(The beating may have happened someplace else.)

In contrast, scope ambiguity does not arise with the nominative-marked pattern in (19b). The adverb only modifies the resulting event, taking narrow scope. Hence, the sentence does not mean that the causing event (i.e., a beating action) took place in the living room. Rather, it only means that the resulting event (i.e., the fainting event) took place in the living room.

The fact that a place adverbial takes scope only over the resulting event in nominative-marked patterns suggests that nominative-marked patterns do not have the same structure as accusative-marked patterns. If the two patterns have the same structure, the adverb in nominative-marked patterns should take scope over the matrix verb as well as the resultative predicate, yielding more than one interpretation, as is the case of accusative-marked patterns.
6.3.2 Adverbial modification (agent-oriented adverbs)

The claim that the nominative-marked pattern (NP-nom NP-nom V-key V) has a different syntactic structure than the accusative-marked pattern (NP-nom NP-acc V-key V) is also supported by compatibility with volitional adverbs such as *ilpwule* ‘on purpose’, which are normally associated with an agent. These adverbs cannot occur in the embedded clause if they are to modify the matrix verb. As will be shown shortly, the adverb *ilpwule* ‘on purpose’ is not compatible with nominative-marked patterns whereas it can occur in accusative-marked patterns.

Let us first consider a sentence that involves an uncontroversial embedded clause such as (20). The adverb *ilpwule* ‘on purpose’ in (20a) cannot modify the matrix verb since it occurs in the embedded clause. On the other hand, the adverb must appear outside the embedded clause when it is associated with the entity denoted by the matrix subject, as illustrated in (20b).

(20) a. When occurring in the embedded clause
   * Tom-i [CP Mary-ka *ilpwule* tachi-ess-ta]-ko kecismalhay-ss-ta.
   Tom-NOM Mary-NOM on.purpose hurt-PAST-DECL-COMP lie-PAST-DECL
   Intended meaning: ‘Tom deliberately lied that Mary got hurt.’
   Literal meaning: ‘Tom lied that Mary deliberately got hurt.’

b. When occurring in the matrix clause
   Tom-i [CP Mary-ka tachi-ess-ta]-ko *ilpwule* kecismalhay-ss-ta.
   Tom-NOM Mary-NOM hurt-PAST-DECL-COMP on.purpose lie-PAST-DECL
   ‘Tom deliberately lied that Mary got hurt.’

Turning to resultative constructions, if the resultative predicate and the matrix verb in the accusative-marked pattern occur in the same clause, the accusative-marked
pattern should be able to occur with the adverb *ilpwule* ‘on purpose.’ This prediction is borne out. The volitional adverb *ilpwule* ‘on purpose’ successfully modifies the matrix verb when it occurs before the resultative predicate, as (21a) illustrates.

(21) a. **Accusative-marked pattern**


Mary-nun phwungsen-ul *ilpwule* theci-key pwul-ess-ta.
Mary-TOP balloon-ACC on.purpose explode-KEY inflate-PAST-DECL

‘Mary inflated the balloon on purpose to the point where it exploded.’

b. **Nominative-marked pattern**


* Mary-nun [phwungsen-i *ilpwule* theci-key] pwul-ess-ta.
Mary-TOp balloon-NOM on.purpose explode-KEY inflate-PAST-DECL

Intended meaning: ‘Mary inflated the balloon on purpose to the point where it exploded.’

In contrast, the nominative-marked pattern is ungrammatical when the adverb *ilpwule* ‘on purpose’ comes before the resultative predicate, as (21b) shows. If the nominative-marked pattern has the same syntactic structure as the accusative-marked pattern, this is not expected. Therefore, the fact that sentences such as (21b) are ungrammatical suggests that nominative-marked patterns have a different structure than accusative-marked patterns.

The fact that sentences such as (21b) are ungrammatical also suggests that the resultative predicate and the NP of which it is predicated in the nominative-marked

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4 The same also holds for adjectival (Type I) resultative patterns. In (i), the adverb *ilpwule* ‘on purpose’ indicates that the causing action, not the resulting event, was done deliberately by the referent of the matrix subject.

(i) Tom-i kumsok-ul *ilpwule* [napcakha-key] twutulki-ess-ta.
Tom-NOM metal-ACC on.purpose flat-KEY pound-PAST-DEC

‘Tom pounded the metal flat on purpose.’
pattern are not in the same clause since adverbs such as *ilpwule* 'on purpose' cannot modify the matrix verb, occurring in the embedded clause. Therefore, the facts about the modification of adverbs add support to the claim that nominative-marked and accusative-marked patterns have different structures, as do the results of the test involving scope ambiguity of place adverb modification. Furthermore, given the nominative case marking on the NP of which a resultative predicate is predicated (NP-nom NP-nom V-key V), it may be speculated that the resultative predicate and the NP of which it is predicated may form an independent clause in the nominative-marked pattern.

6.3.3 Negative polarity item (*-pakkey ... -ci anh-*)

It has been observed that negative polarity items are affected by the clausemate condition. The negative polarity item *-pakkey* and the associated negation element *-ci anh-* must be in the same clause (K-H Kim 1994: 322-26). When they occur in separate clauses (e.g., *-pakkey* in an embedded clause and *-ci anh-* in the matrix clause), the sentence is ungrammatical. A contrast is illustrated in (22), which involves an uncontroversial embedded clause.

(22) Sentence involving an embedded clause

a. Negation attached to the embedded predicate

Mary-nun [CP thakca-lul twu-kay-**pakkey** takk-ci **anh**-ass-ta-ko]
Mary-TOP table-ACC two-CL-DELIM wipe-COMP not-PAST-DECL-COMP
malhay-ss-ta.
say-PAST-DECL

'Mary said that she wiped only two tables.'
b. Negation attached to the matrix verb

*Mary-nun [cp thakca-lul twu-kay-pakkey takk-ass-ta-ko]
Mary-TOP table-ACC two-CL-DELIM wipe-PAST-DECL-COMP

malha- ci anh-ass-ta.
say-COMP not-PAST-DECL

‘Mary said that she wiped only two tables.’

Sentence (22a) is grammatical since both the negative polarity item –pakkey and the negative –ci anh- are in the embedded clause, consistent with the clausemate condition. On the other hand, in (22b), the negative polarity item –pakkey occurs in the embedded clause and –ci anh- is attached to the matrix verb. The negative polarity item –pakkey and –ci anh- are in separate clauses, which results in the ungrammaticality of the sentence due to a violation of the clausemate condition.

Let us turn to Type I (adjectival) resultative patterns, which allow only the accusative-marked NPs. In (23), –pakkey is associated with the NP of which the resultative predicate is predicated since the floated quantifier twu-kay ‘two’ refers to the accusative-marked NP thakca ‘table.’ Given the clausemate restriction on negative polarity items and the associated negation element, the fact that (23) is grammatical suggests that the matrix verb and the accusative-marked NP are in the same clause.

(23) Type I (adjectival) pattern

Mary-nun thakca-lul twu-kay-pakkey kkakkusha-key takk-ei
Mary-TOP table-ACC two-CL-DELIM clean-KEY wipe-COMP

anh-ass-ta.
not-PAST-DECL

‘Mary wiped only two tables clean.’
Similarly, Type II accusative-marked resultative patterns are grammatical when the negative polarity item -pakkey and -ci anh- occur in the same positions, as illustrated in (24a). The negative polarity item -pakkey is placed after the accusative-marked NP and -ci anh- is attached to the matrix verb. The grammaticality of (24a) suggests that the accusative-marked NP and the matrix verb are in the same clause since -pakkey is associated with the accusative-marked NP.

(24)  

a. **Type II (verbal) accusative-marked pattern**

\[
\begin{align*}
\text{Tom-un} & \quad \text{phwungsen-ul} \quad \text{sey-kay-pakkey} \quad \text{theci-key} \quad \text{pwul-ci} \\
\text{Tom-TOP} & \quad \text{balloon-ACC} \quad \text{three-CL-DELIM} \quad \text{explode-KEY} \quad \text{inflate-COMP} \\
\text{anh-ass-ta}. & \quad \text{not-PAST-DECL}
\end{align*}
\]

'Tom inflated only three balloons.'

b. **Type II (verbal) nominative-marked pattern**

\[
\begin{align*}
??/\ast \text{Tom-un} & \quad [\text{phwungsen-i} \quad \text{sey-kay-pakkey} \quad \text{theci-key}] \quad \text{pwul-ci} \\
\text{Tom-TOP} & \quad \text{balloon-ACC} \quad \text{three-CL-DELIM} \quad \text{explode-KEY} \quad \text{inflate-COMP} \\
\text{anh-ass-ta}. & \quad \text{not-PAST-DECL}
\end{align*}
\]

'Tom inflated only three balloons.'

---

5 Examples involving floating quantifiers are used to disambiguate case markings associated with each pattern. When the negative polarity item -pakkey appears on the NP of which a resultative predicate is predicated, it is impossible to tell which case marker is involved, as (i) helps illustrate, since the case marker is replaced by -pakkey.

(i)  

\[
\begin{align*}
\text{Tom-un} & \quad \text{phwungsen-pakkey} \quad \text{theci-key} \quad \text{pwul-ci anh-ass-ta}.
\text{Tom-TOP} & \quad \text{balloon-DELIM} \quad \text{explode-KEY} \quad \text{blow-COMP} \quad \text{not-PAST-DECL}
\end{align*}
\]

'Tom blew only the balloons to the point where they exploded.'
In contrast, the Type II nominative-marked pattern in (24b) is unacceptable when the negative polarity item -pakkey is associated with the NP of which the resultative predicate is predicated and -ci anh- is attached to the matrix verb. Given the clausemate condition on negative polarity items and the associated negation element, the fact that (24b) is ungrammatical suggests that the NP of which the resultative predicate is predicated and the matrix verb do not belong in the same clause. Therefore, the contrast between the two patterns with respect to the negative polarity item -pakkey and -ci anh- suggests that the nominative-marked pattern (NP-nom NP-nom V-key V) has a different structure than the accusative-marked pattern (NP-nom NP-acc V-key V).

6.3.4 Negative polarity item (amwu-(N)-to ... -ci anh-)

The negative polarity item amwu-(N)-to and the negation element -ci anh are also constrained by the clausemate condition, in that they must occur in the same clause (H-S Choe 1988). Given the clausemate condition, a biclausal sentence is grammatical when the negative polarity item amwuto ‘anybody’ and -ci anh- occur in the same clause, as (25a) helps illustrate. In (25a), the negative polarity item amwuto ‘anybody’ is in the embedded clause and the negative -ci anh- is attached to the embedded predicate.

(25) Sentence involving an embedded clause

a. Negation attached to the embedded predicate
malhay-ss-ta.
say-PAST-DECL
‘Mary said that Tom did not beat anybody.’

b. Negation attached to the matrix verb

* Mary-nun [CP Tom-i amwuto tayli-ess-ta-ko]
Mary-TOP Tom-NOM anybody beat-PAST-DECL-COMP

malha-ci anh-ass-ta.
say-DECL not-PAST-DECL

‘Mary said that Tom did not beat anybody.’

In contrast, the sentence is ungrammatical if the negative polarity item *amwuto* ‘anybody’ occurs in the embedded clause and −ci anh- is attached to the matrix verb, as in (25b). That is, the negative polarity item *amwuto* ‘anybody’ and −ci anh- occur in separate clauses, which is a violation of the clausemate condition.

Turning to resultative constructions, nominative-marked patterns differ from accusative-marked patterns with respect to negative polarity items involving *amwuto* and −ci anh-. To illustrate the point, the negative polarity item *amwu-(N)-to* is placed before the resultative predicate, and the associated negation element −ci anh- is placed after the matrix verb. As shown in (26), a contrast in grammaticality arises. The accusative-marked pattern is acceptable whereas the nominative-marked pattern is not.

(26) a. Type II accusative-marked pattern

Mary-ka Tom-ul *amwu-tey-to* mengtul-key tayli-ci
Mary-NOM Tom-ACC any part bruised-KEY beat-COMP

anh-ass-ta.
not-PAST-DECL

‘Mary beat Tom, but no bruises on any of his body.’
b. Type II nominative-marked pattern

Mary-nun [Tom-i amwu-tey-to mengtul-key] ttayli-ci
Mary-TOP Tom-NOM any part bruised-KEY beat-COMP

anh-ass-ta.
not-PAST-DECL

'Mary beat Tom, but no bruises on any of his body.'

The fact that (26a) is acceptable suggests that the accusative-marked NP and the matrix verb are in the same clause since the negative polarity item amwu-tey-to ‘any part of the body’ is associated with the accusative-marked NP. In contrast, the fact that (26b) is ungrammatical suggests that the negative polarity item amwu-tey-to ‘any part of the body’ is not in the same clause as the matrix verb. This in turn suggests that the NP of which the resultative predicate is predicated (i.e., Tom) and the matrix verb are not in the same clause, since the negative polarity item amwu-tey-to ‘any part of the body’ is associated with the NP Tom. Therefore, the contrast illustrated in (26) suggests that the nominative-marked pattern has a different syntactic structure than the accusative-marked pattern.

Furthermore, the fact that accusative-marked patterns such as (26a) are grammatical leads to the speculation that accusative-marked patterns may be monoclausal. The reason is that the fact that sentences such as (26a) are grammatical suggests that the accusative-marked NP, the negative polarity item and the matrix verb occur in the same clause. On the other hand, the fact that sentences such as (26b) are not acceptable points toward the conclusion that nominative-marked patterns may be biclausal since ungrammaticality suggests that the negative polarity item, the nominative-
marked NP with which it is associated (e.g., Tom), and the matrix verb are not in the same clause.

This claim is further supported by the fact that nominative-marked patterns become grammatical if the negative –ci anh- is attached to the resultative predicate, as illustrated in (27).

(27) Nominative-marked pattern (Negation attached to the resultative predicate)

Mary-nun [Tom-i amwu-ney-to mengtul-ci anh-key]
Mary-TOP Tom-NOM any part bruised-COMP not-KEY

ttayli-ess-ta.
beat-PAST-DECL

‘Mary beat Tom, but no bruises on any of his body.’

Given that the negative polarity item amwu-(tey)-to and the negative –ci anh- must occur in the same clause, the fact that sentence (27) is grammatical suggests that the resultative predicate and the NP of which it is predicated (i.e., Tom) are in the same clause since the NP Tom is associated with the negative polarity item. Recall that the ungrammaticality of nominative-marked patterns such as (26b) suggests that the matrix verb and the NP of which the resultative predicate is predicated (e.g., Tom) are not in the same clause since the NP Tom is associated with the negative polarity item. Given this, the grammaticality of nominative-marked patterns such as (27), in which the negative –ci anh is attached to the resultative predicate, suggests that the resultative predicate and the matrix verb are not in the same clause, which in turn entails that nominative-marked patterns are biclausal. In addition, the fact that the NP of which the resultative predicate is predicated is in the nominative leads to the speculation that it may form a clause with the resultative predicate.
The same test can be used to verify the claim that Type II accusative-marked patterns may be monoclausal. As shown in (28a), accusative-marked patterns are grammatical when the negative –ci anh is attached to the resultative predicate. In (28a), the negative polarity item amwu-(tey)-to is placed before the resultative predicate, to which the negative –ci anh- is attached. The fact that sentences such as (28a) are grammatical suggests that the negative polarity item and the resultative predicate are in the same clause, given the clausemate condition. This in turn suggests that the accusative-marked NP and the resultative predicate are also in the same clause since the negative polarity item is associated with the accusative-marked NP.

(28) Type II accusative-marked resultative pattern

a. Negation attached to the resultative predicate

Mary-ka Tom-ul amwu-tey-to mengtul-ci anh-key
Mary-NOM Tom-ACC any part bruised-COMP not KEY

ttayli-ass-ta.
beat-PAST-DECL

'Mary beat Tom, but no bruises on any of his body.'

b. Negation attached to the matrix verb

Mary-ka Tom-ul amwu-tey-to mengtul-key ttayli-ci
Mary-NOM Tom-ACC any part bruised-KEY beat-COMP

anh-ass-ta.
not-PAST-DECL

'Mary beat Tom, but no bruises on any of his body.'

Recall that the grammaticality of sentences such as (28b), in which negation is attached to the matrix verb, suggests that the matrix verb and the accusative-marked NP are in the
same clause because the negative polarity item is associated with the accusative-marked NP. In other words, the fact that both sentences in (28) are grammatical suggests that the resultative predicate and the matrix verb occur in the same clause, which lends support to the claim that accusative-marked patterns are monoclausal.

To sum up, the facts about negative polarity items, along with the adverbial modification facts, strongly suggest that nominative-marked patterns have a different syntactic structure than accusative-marked patterns. They also suggest that nominative-marked patterns (NP-nom NP-nom V-key V) are biclausal whereas accusative-marked patterns (NP-nom NP-acc V-key V) are monoclausal.

6.3.5 Future research

The observation that (Type II) nominative-marked and accusative-marked patterns do not have the same structure raises an interesting question about the status of the matrix verb occurring in a nominative-marked pattern. Given the assumption that the resultative predicate and the NP of which it is predicated form an independent clause in the nominative-marked pattern (NP-nom [NP-nom V-key] V), as shown in section 6.3, the status of the matrix verb as a transitive verb needs to be further examined. The speculation is that it is used intransitively since the matrix verb appears to lack a direct object, in contrast to when it occurs in an accusative-marked pattern (NP-nom NP-acc V-key V).

To put it differently, the Projection Principle states that “Representations at each syntactic level (i.e., LF, D- and S-structure) are projected from the lexicon, in that they
observe the subcategorization properties of lexical items” (Chomsky 1981: 29). That is, the subcategorization properties of the resultative predicate as well as those of the matrix verb should be projected at some level of representation. Given that nominative-marked patterns do not contain an NP that functions as direct object, it appears that the subcategorization properties of the matrix verb may not be satisfied at the surface structure if it is transitive. This leads to the speculation that matrix verbs in nominative-marked patterns (NP-nom NP-nom V-key V) are intransitive, in contrast to those in accusative-marked resultative patterns (NP-nom NP-acc V-key V).

6.4 Conclusion

The main focus of this chapter was on a case alternation on the NP of which the resultative predicate is predicated (NP-nom NP-acc/nom V-key V), which is a defining characteristic of transitive-based resultative patterns involving verbal resultative predicates (Type II patterns). A case alternation is not observed with transitive-based resultative patterns involving adjectival resultative predicates (Type I patterns; NP-nom NP-acc/*nom ADJ-key V). It was argued that the two Type II patterns (i.e., nominative-marked and accusative-marked patterns) have different syntactic structures, based on the results of tests involving negative polarity items and adverb modification. In particular, it was shown that nominative-marked patterns (NP-nom NP-nom V-key V) are biclausal whereas accusative-marked patterns (NP-nom NP-acc V-key V) are monoclausal, based on the differing behavior of each pattern with respect to negative polarity items involving *amuto* and *ci anh*.
Chapter 7
Conclusion

My goal in this thesis was to provide an overview of resultative constructions in Korean (i.e., patterns based on unergative, unaccusative and transitive verbs) and to examine the syntactic structure associated with each construction. It was revealed that Korean unergative verbs do not normally form the predicative type of resultatives, which involves a secondary predicate, whereas unaccusative and transitive verbs do. In contrast to resultatives based on unergative verbs in English, Korean unergative-based resultatives involve either a serial verb complex as the matrix verb (i.e., patterns involving agentive manner of motion verbs) or resultative expressions that are clausal. Based on these facts, it was argued that resultative constructions in Korean are constrained by the Direct Object Restriction, which states that a resultative phrase is predicated only of direct objects (Levin and Rappaport 1995), which is not the case for resultative constructions in English.

Resultative patterns built around unergative verbs differ most in the two languages, in that Korean does not allow the predicative type in the technical sense. Moreover, some English patterns involving agentive manner of motion verbs constitute counterexamples to the Direct Object Restriction since the resultative predicate is predicated of the matrix verb. On the other hand, as pointed out in section 3.2, in Korean,
serial verb constructions, which involve verbs such as o-ta 'come', nao-ta 'come out', ka-ta 'go' and naka-ta 'go out', are used in place of agentive manner of motion verbs to indicate a change in location and direction of an entity denoted by the subject NP. Given that the second verb in a serial verb construction functions as the main verb and verbs such as o-ta 'come', nao-ta 'come out', ka-ta 'go' and naka-ta 'go out' are unaccusative, it was argued that patterns occurring with agentive manner of motion verbs in Korean are consistent with the Direct Object Restriction since the resultative phrase is predicated of a direct object, in contrast to the situation in English.

Another issue involving resultatives based on unergative verbs in Korean is that unergative verbs only occur with resultative phrases which contain a theme argument (NP-nom *(THEME)ADJ/V-key V). A theme argument is either incorporated into the resultative phrase (NP-nom THEME-ADJ/V-key V) or occurs with a nominative case marker (NP-nom THEME-nom ADJ/V-key V). However, it was argued in section 3.2 that patterns occurring with a theme argument do not involve a violation of the Direct Object Restriction since the resultative predicate is predicated of the theme argument, not of the subject of a matrix verb. In other words, predication is satisfied within the resultative phrase in these patterns, which means that patterns involving a theme argument are not predicative, but clausal.

In addition, resultative patterns based on unergative verbs in Korean do not allow non-subcategorized NPs (i.e., fake objects in English in Simpson's (1983) terminology) that are accusative-marked. Non-subcategorized NPs in Korean, such as NPs denoting body parts and non-reflexive NPs, appear only in the nominative case, and this suggests
that they may not be a direct object of the matrix verb. In other words, unergative-based resultatives occurring with non-subcategorized NPs in Korean may be clausal, not predicative, in the sense that the resultative predicate has a syntactic subject. Section 3.3 showed, using several tests involving passivization, modification of place adverbials and scrambling, that nominative-marked non-subcategorized NPs occurring in resultatives based on unergative verbs are the subject of the resultative predicate, not a direct object of the matrix verb.

Another difference between resultative patterns in the two languages is that unlike English, Korean allows verbal as well as adjectival resultative predicates. The question of why such a contrast arises between the two languages was not pursued here. Instead, the present study attempted to provide an account for why verbal resultative predicates are not permitted in some resultative patterns (i.e., those based on unaccusative verbs) in Korean, but are allowed in others (i.e., those built around transitive verbs). The account presented in this thesis is based on the aspectual constraint (the Single Delimiting Constraint) on delimiting eventualities, which states that the event described by a verb may involve only one measuring out and be delimited only once (Tenny 1994: 79).

The fact that verbal resultative predicates are not allowed in resultatives based on unaccusative verbs may follow from the general fact that verbal predicates do not describe a state, unlike adjectival predicates. Verbal resultative predicates fail to name an endstate for the event described by the matrix verb. However, things are complicated when a verbal resultative predicate entails an endpoint or a result state, in that it is still not permitted in resultative patterns based on unaccusative verbs. The reason lies in the
fact that this type of verbal resultative predicates (i.e., delimited verbs) leads to double delimiting, which violates the Single Delimiting Constraint (Tenny 1994: 79). That is, a verb phrase is delimited twice, once by the matrix verb due to the fact that unaccusative verbs are lexically delimited, and once by the (delimited) resultative predicate, as shown in section 4.4.

The Single Delimiting Constraint, which states that a verb phrase may be delimited only once, also restricts the occurrence of adjectival resultative predicates with unaccusative verbs. A verb phrase is delimited more than once when an adjectival resultative predicate describes a state that is not inherently entailed by the meaning of the matrix verb, once by the matrix verb and once by the resultative predicate. That is, adjectival resultative predicates which do not provide a further specification of the state inherent in the meaning of a (matrix) verb are excluded due to a violation of the Single Delimiting Constraint, as pointed out in section 4.4.

In contrast to resultative patterns built around unaccusative verbs, verbal resultative predicates are permitted in resultative patterns based on transitive verbs. But, it should be remembered that only a limited set of verbal resultative predicates (i.e., delimited or telic verbs) can occur in resultative patterns, as shown in section 5.4. The reason is that resultative predicates must provide an endpoint for the event described by a (matrix) verb to enforce a delimited reading of the verb phrase. In other words, resultative patterns involving verbal resultative predicates that describe a non-delimited eventuality such as wul-ta ‘cry’ and kef-ta ‘walk’ are not allowed since they do not provide an
endpoint for the event described by the matrix verb, inconsistent with the Single Delimiting Constraint.

Section 5.2 showed that verbal resultative predicates occurring in resultatives based on transitive verbs have the function of enforcing a delimited interpretation of a verb phrase, as adjectival resultative predicates do. This is consistent with the Single Delimiting Constraint, which states that the event described by a verb may be delimited only once (Tenny 1994: 79). Both adjectival and verbal resultative predicates occurring in resultatives based on transitive verbs provide an endpoint for the event described by a verb, which forces the direct object to take part in measuring out the event. The claim that verbal resultative predicates have a delimiting function is supported by the fact that transitive-based resultative patterns involving verbal resultative predicates only occur with frame adverbial phrases such as *in an hour*, which are only compatible with delimited eventualities.

Although verbal resultative predicates occurring in resultatives based on transitive verbs serve to provide an endpoint for the event denoted by a verb, as do adjectival resultative predicates, only the former type (Type II patterns) allows a case alternation. In contrast to resultatives built around transitive verbs involving adjectival resultative predicates (Type I patterns), those occurring with verbal resultative predicates allow a nominative-accusative alternation on the NP of which a resultative predicate is predicated, as pointed out in section 6.2. Given that the difference between the two patterns is related to the syntactic category of resultative predicates, it is tempting to say that the case alternation follows from this difference (cf. see J-S Lee 1991, 1992 for the
discussion of the case alternation in causatives). But, this thesis leaves the matter for future research.

Focusing on case-alternating patterns (i.e., resultatives built around transitive verbs occurring with verbal resultative predicates; Type II patterns), section 6.3 showed that Type II nominative-marked patterns (NP-nom NP-nom V-key V) have a different syntactic structure than Type II accusative-marked patterns (NP-nom NP-acc V-key V). This conclusion was drawn, based on the fact that the two patterns behave differently with respect to tests involving negative polarity items such as amwuto/-pakkey –ci anh- and the modification of place adverbials and adverbs such as ilpwule 'on purpose.' The results of these tests strongly suggest that nominative-marked patterns do not have the same structure as accusative-marked patterns.

In particular, the results of tests involving the negative polarity item amwuto and the negative –ci anh- strongly suggest that the resultative predicate and the matrix verb in Type II nominative-marked patterns do not occur in the same clause. These tests also showed that the resultative predicate and the NP of which it is predicated occur in the same clause, which suggests that they may form an independent clause. This adds support to the claim that Type II nominative-marked patterns (NP-nom [NP-nom V-key] V) are biclausal. On the other hand, these tests showed that in Type II accusative-marked patterns the resultative predicate, the NP of which it is predicated and the matrix verb occur in the same clause, which lends support to the claim that accusative-marked patterns (NP-nom NP-acc V-key V) are monoclausal.
In sum, I have attempted to provide a general description of Korean resultative constructions. Although several questions remain unanswered, the path I have followed has led to the discovery of several important facts about permissible and non-permissible resultative patterns in Korean, which may help us better understand the nature of the resultative construction. I have shown that a range of permissible and non-permissible resultative constructions is governed by an (aspectual) constraint imposed on verb phrases, revealing new insights into the interaction between syntax and semantics in Korean. Finally, and perhaps most importantly, by examining the structure of various types of resultatives based on unergative verbs and a wide range of resultatives based on unaccusative verbs, I have shown that the Direct Object Restriction can be maintained for Korean and the resultative construction can be used as a diagnostic for unaccusativity in Korean.
Bibliography


