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Separation Events in Modern Greek

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SEPARATION EVENTS IN MODERN GREEK

A Thesis

Presented to

The Faculty of the Department of Linguistics and Language Development

San José State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Vasiliki L. Rounti

December 2018

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SEPARATION EVENTS IN MODERN GREEK

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ABSTRACT

SEPARATION EVENTS IN MODERN GREEK

by Vasiliki L. Rounti

The semantic domain of separation events has been studied for a number of languages. In this thesis, a study on how Modern Greek expresses separation events and how semantically distinct they are from other languages is presented. This is the first study on the semantic features of separation events for Modern Greek. Furthermore, it is the only study so far on separation events for which data have been gathered from a large number of native speakers. Thus, this thesis not only offers a great insight on the language's semantic structures, but it also presents more concrete observations and conclusions compared to previous studies on separation events. Four types of major separation events are examined for Modern Greek: breaking, cutting, tearing, and opening. Using the data from a study in which 35 Greek speakers describe 61 videos showing actions of separation, I examine the semantic structures of the verbs found in their responses. Furthermore, I take a brief look into other events of separation such as peeling and pulling apart. In addition, I study spontaneous actions of separation and how their semantic structures are affected by word order. I conclude that Modern Greek is one of the few languages that does not distinguish between actions of snapping and smashing, since they are described with the same verb. Moreover, the generic verbs for actions of cutting and tearing are used interchangeably by Greek native speakers.

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TABLE OF CONTENTS

List of Tables.....	viii
List of Abbreviations.....	ix
1. Introduction.....	1
1.1 Literature Review.....	3
1.2 The Modern Greek Language	8
1.3 Methodology.....	9
2. Breaking Events.....	13
2.1 The Verb <i>Spao</i> ‘to Break’ in Breaking Events.....	13
2.2 The Verb <i>Kovo</i> ‘to Cut’ in Breaking Events.....	19
2.3 The Verb <i>Xtipo</i> ‘to Hit’ in Breaking Events.....	21
2.4 Nominalization and Two-Action Structures in Breaking Events.....	24
2.5 Verbs Encoding Manner, Instrument and Result State in Breaking Events	26
3. Cutting Events.....	29
3.1 The Verb <i>Kovo</i> ‘to Cut’ in Cutting Events.....	30
3.2 The Verb <i>Spao</i> ‘to Break’ in Cutting Events.....	35
3.3 The Verb <i>Sxizo</i> ‘to Tear’ in Cutting Events.....	36
3.4 Nominalization Structures in Cutting Events.....	38
3.5 Verbs Encoding Instrument and Result State in Cutting Events.....	39
4. Tearing Events.....	46
4.1 The Verb <i>Sxizo</i> ‘to Tear’ in Tearing Events.....	46
4.2 The Verb <i>Kovo</i> ‘to Cut’ in Tearing Events.....	49
4.3 The Verbs <i>Misosxizo</i> ‘to Tear a Little Bit’ and <i>Ksesxizo</i> ‘to Tear with Violence’ in Tearing Events.....	50
4.4 Nominalization Structures in Tearing Events.....	50
5. Events of Opening, Peeling and Pulling Apart.....	52
5.1 Opening Events.....	52
5.2 Peeling Events.....	58
5.3 Events of Pulling Apart.....	64
6. Spontaneous Events of Separation.....	68

7. Conclusion..... 71

References..... 74

Appendix A..... 76

LIST OF TABLES

Table 1: Correspondence of Event Types to Generic Verbs Used by Participants.....	12
Table 2: Verbs and Structures Describing Breaking Events.....	14
Table 3: Verbs and Structures Describing Actions of Smashing.....	18
Table 4: Verbs and Structures Describing Actions of Snapping.....	18
Table 5: Verbs and Structures Describing Videos with Yarn and Rope.....	20
Table 6: Frequency of Breaking and Hitting Verbs in Breaking Events.....	22
Table 7: Verbs and Structures Describing Cutting Events.....	31
Table 8: Verbs and Structures Describing an Event of Making an Incision.....	43
Table 9: Verbs and Structures Describing Tearing Events.....	47
Table 10: Verbs and Structures Describing Opening Events.....	53
Table 11: Verbs and Structures Describing Peeling Events.....	59
Table 12: Verbs Describing Pulling Apart Events.....	64

LIST OF ABBREVIATIONS

1, 2, 3	First, second, third person
ACC	Accusative case
ART	Article
DEF	Definite
DIM	Diminutive
FEM	Feminine
INDF	Indefinite
M	Masculine
MID	Middle voice
NEUT	Neuter
NOM	Nominative
PST	Past tense
PL	Plural
PRS	Present
SG	Singular

1. Introduction

Actions of separation with material destruction are found in cultures around the world. Humans have been breaking, snapping and chopping for thousands of years. The universality of these actions has led to many linguistic studies that identify the way each language expresses actions of separation, and whether semantic features of these events are commonly shared among different languages. More specifically, cutting and breaking events have been particularly interesting for linguists because, despite the universal character of their domain, different languages categorize these events in a different way when it comes to their extension patterns (Majid et al., 2008). Bohnemeyer (2007) shows that cross-linguistically cutting verbs "...specify use of a particular kind of Instrument and a generic state change..." while breaking verbs "...specify a particular kind of change or a particular type of Theme argument, but are nonspecific regarding Instruments involved..." (p.14) Therefore, cutting and breaking events do share semantic features across languages. However, Pye (1994) demonstrates that cutting and breaking verbs have different extension patterns across languages. For example, in English the verb *break* is used to describe the separation of rigid objects such as plates and sticks (Pye, 1993). However, in Garifuna the verb *bowguana* is used for breaking plates and the verb *halaguana* is used for breaking sticks (Pye, 1993). In Garifuna, the breaking of a round object such as a plate is categorized as a different event than the breaking of a long object such as a stick. Therefore, cross-linguistically various semantic features such as type of object (material or shape), instrument, manner of separation, and result state of separation affect the choice of verb for the description of separation events. As a result, the study of

separation events provides information on both shared and language-specific semantic features that verbs of separation encode, while at the same time offers a great linguistic insight on the way separation events are categorized across languages.

In the current thesis, which is based on a cross-linguistic study of the semantic domain of cutting and breaking events that was conducted by Majid, Bowerman, Staden and Boster (2008), I examine separation events in Modern Greek. This is the first study on separation events that has been conducted for Modern Greek. What distinguishes the current research is the large pool of data gathered from 35 native speakers, compared to other languages that are part of Majid et al.'s cross-linguistic study that include data from only a small number of participants that range between 1 to 7. In this thesis, I aim to answer the following questions:

1. Do expressions of separation events in Modern Greek encode similar semantic features as in other languages that have been examined in Majid et al. (2008) cross-linguistic study, or are there semantic differences?
2. What factors determine the semantic features of separation events in Modern Greek?
3. Are there any semantic features that differentiate Modern Greek from other languages, when it comes to the expression of separation events?

I show that Modern Greek encodes similar semantic features to those of other languages and therefore, does conform to the cross-linguistic tendencies identified by Majid et al. However, there are minor semantic features that deviate from the shared characteristics among actions of separation, such as the fact that Modern Greek does not

distinguish between actions of snapping and smashing. In addition, Greek native speakers tend to use the same verbs to describe both tearing and cutting events.

In Section 1, I provide relevant literature on separation events across languages and describe the methodology I use for the analysis of the following sections. In addition, I present information on the Modern Greek language, its morphology and syntactic structures. In Sections 2 through 5, I look into four major separation event categories -- breaking, cutting, tearing, and opening-- and the different ways that verbs of separation are expressed in Modern Greek. I look primarily into verbs and structures that participants use most frequently to describe each event yielding the highest percentages. Frequency tables are provided at the beginning of each chapter. I also examine factors that determine their semantic structures, along with tendencies among participants towards specific verbs or structures. In Section 6, I study structures of spontaneous separation for some of the previously discussed events. In Section 7, I summarize my findings and discuss how separation events are expressed in Modern Greek compared to findings of other languages. I also identify any deviations from the cross-linguistic tendencies found by Majid et al.

1.1 Literature Review

Investigation on verb categorization first began with Fillmore (1970) in his study on hitting and breaking verbs. He shows that there are two classes of transitive verbs in English, change of state verbs, such as *break*, *crack*, *bend*, and surface contact verbs, such as *hit*, *strike* and *slap*. Categorization of a verb in one of the classes is determined by similarity in meaning with the rest of the verbs in the class and by shared syntactic

properties, such as participation in specific alternations (Fillmore, 1970). Levin (1993) expands on Fillmore's verb categorization by using eight categories of alternations and constructions in order to determine whether a verb belongs to a specific semantic class. Levin (1993) shows that certain verbs participate in alternations that other verbs do not, such as the verb *break*, which cannot participate in the conative alternation¹ while the verb *cut* can. Therefore, these verbs are not categorized in the same semantic class. Levin and Hovav (1995) show that cutting-type verbs have a different semantic structure than breaking-type verbs. For example, the verb *cut* requires an instrument that is used by a volitional agent in order to cause the change of state described by the verb, while the verb *break* does not. At the same time, Pye (1996) and Pye, Loeb and Pao (1996) argue that despite the shared semantic properties of cutting and breaking verbs (which from now on will be referred to as C&B, following naming conventions by Majid et al.), their extension patterns vary across languages. For example, in Mandarin the same verb is used to describe the separation of a cloth and a plate, but a different verb is used for the separation of a stick. This cross-linguistic diversity has led to more recent research on C&B events that reveals similar findings to those of Pye (1996) and Pye et al. (1996). According to Bowerman (2005), each language chooses different features to describe different events, combining them in language-specific semantic and syntactic structures. In English, for example, the verb *break* is used with rigid objects and sometimes with three-dimensional flexible objects, such as a rope and a thread. However, it is not used

¹ According to Levin (1993), in the conative alternation the agent attempts an action that might not achieve the intended result.

with flexible two-dimensional objects, such as a blanket or a sheet of paper. Instead, the verb *tear* is used in these cases (Bowerman, 2005). However, not all languages follow the same distinction between breaking and tearing events. Some languages take into account the semantic features of shape or material of the object in order to categorize these events (Bowerman, 2005).

Majid et al. (2008) provide a more detailed cross-linguistic study that examines separation events in 28 diverse languages. Designed by members of the Event Representation Project at the Max Planck Institute for Psycholinguistics in Nijmegen, Netherlands, the project created 61 videos depicting scenes, in which cutting and breaking events, along with other related scenes, were taking place. These videos were presented to native speakers of 28 diverse languages, who were asked to provide a short description of each scene. For each language, the number of participants range from one to seven, with an average of three per language (Majid et al., 2008) The videos include different types of separations with material destruction, most of which introduce a causal agent, with a few showing spontaneous separation. A variety of objects and instruments are used, along with a variety in the manner of the actions such as actions taking place with great intensity, in a calm way, or repeatedly (Majid et al., 2008).

In order to determine the similarity of the semantic categories of C&B events across languages, Majid et. al compare the extensions of the verbs elicited from the speakers. Videos that are often described with the same verb are considered more similar semantically than those described with different verbs. If at least one participant describes two videos with the same verb for a particular language, then the two videos are

scored as completely similar. If no participant describes them with the same verb, then they are marked as completely dissimilar (Majid et al., 2008) Then, through a correspondence analysis, the main dimensions of the semantic categorization across languages are extracted. As a result, a semantic map is created on which the videos are plotted. Videos described with the same verbs are plotted close together, while those that are described with different verbs are plotted far apart (Majid et al., 2008). The three main dimensions found by Majid et al. are the following:

- Dimension 1, which is based on the predictability of the location of the separation (Majid et al., 2008). The location of separation with a cutting verb is easier to predict, since the separation occurs at the point which the blade of an instrument comes in contact with an object. Therefore, cutting verbs are considered higher in predictability of location of the separation. Breaking verbs are considered low in predictability, because the point of separation can occur in more than one points at the same time, and therefore, is not easy to predict.
- Dimension 2, which is based on the fact that tearing events most commonly use a verb specifically for their description. In addition, tearing events are intermediate in the predictability of location of separation, which means that the separation mostly occurs at the point of contact between the instrument and the semantic theme, but it is not always possible to predict as with cutting events (Majid et al. 2008).
- Dimension 3, which distinguishes between snapping and smashing events (Majid et al., 2008).

The three dimensions exclude other types of events such as opening, peeling, and pulling apart (Majid et al., 2008).

Majid et al. show that each language categorizes C&B events in a different way, despite the shared semantic features. For example, the comparison of four Germanic languages demonstrates that even closely related languages have differences in the semantic categories of C&B verbs. Chopping events in English are grouped together with cutting events, while German, Dutch, and Swedish group them together with breaking events (Majid, Gullberg, Staden, & Bowerman, 2007). In Tzeltal, there is a great variety of verbs that express C&B events. Over 50 semantically specific verbs used to describe the videos, but there are no general terms that express the meaning of ‘cut’ or ‘break’ (Brown, 2007). What differentiates C&B events in Tzeltal is spatial and textural properties of the semantic theme (Brown, 2007). In Ewe, there are four classes of C&B events, highly agentive, agentive, non-agentive, and highly non-agentive, with agentive and non-agentive behaving either as cut-verbs or break-verbs (Ameka & Essegbey, 2007). Therefore, findings in Ewe show that the distinction between C&B verbs is more complex than original studies by Fillmore (1970) and Levin and Hovav (1995) suggest. In Yeli Dnye, only three transitive verbs and their intransitive counterparts are used to describe most of the 61 separation videos, which makes it difficult to talk about a clear distinction between cutting and breaking verbs (Levinson, 2007). The Jalonke language, despite semantic similarities with other languages, distinguishes between C&B events that include a semantic theme being whole and those in which the semantic theme is detached from an entity (Lüpke, 2006). All the distinct features found in these languages

indicate that the domain of C&B events can be a great linguistic resource for the way separation events are expressed across different languages. Therefore, the current thesis aims to provide more information to this line of inquiry, by adding observations for C&B events in Modern Greek, a language that is not included in Majid et al.'s (2008) cross-linguistic study.

1.2 The Modern Greek Language

Modern Greek is an Indo-European language currently spoken by more than 13 million people (Simons&Fennig, 2018). “All Greek verbs...are obligatorily marked for middle or active voice. Voice is indicated by verbal suffixes which also encode tense, aspect, and modality” (Manney, 1993, p. 21). There is also subject-verb agreement for person and number. Nouns and articles are marked for number, gender, and case, with noun-article agreement.

For this thesis, the structures that are most relevant and appear quite often in the data are nominalization and middle voice. Nominalizations have a short and simple structure that allow for a focus on the action taking place. According to Alexiadou (2009), what distinguishes nominalization in Modern Greek from that in English is the inflectional nominal classes of the Greek nominals. All nominals are inflected for case and for both singular and plural (Alexiadou, 2009). There are various nominal affixes that attach to verb stems, but the one that is mostly found in the data of the current study is the infix *-sim-*. For example, *spao* ‘to break’ is nominalized as *spasimo* ‘breaking,’ and *kovo* ‘to cut’ is nominalized as *kopsimo* ‘cutting.’ Examples of nominalization found in the data are discussed in more detail in the following sections.

A second structure found in the data specifically for descriptions of spontaneous events of separation is the middle voice. Smyth suggests that a middle voice construction “...denotes the action of an agent who acts in his own interest or for his own benefit.” (as cited in Manney, 1993, p. 3). Furthermore, it is used for events that do not include an agent (Manney, 1993). Manney (1993) shows that voice suffixes in Modern Greek encode tense, aspect and modality. Greek verbs can be categorized in three morphological classes: the first one includes verbs that only have an active form, such as the verb *spao* ‘to break,’ the second includes verbs that have both active and middle voice forms, and the third includes verbs that have only a middle voice form (Manney, 1993). The verbs that are found in the data of the current study belong to the first and second categories. Middle voice structures in the data denote events without an agent. Further discussion on how middle voice affects the meaning of these verbs is found in Section 6.

1.3 Methodology

The data for this thesis were collected online through the Qualtrics website, which is an online survey software available for San José State University students, after acquiring the necessary approval from the San José State University’s Human Subjects Review Board. Sixty one short video clips were uploaded in the form of a survey on the Qualtrics website showing a variety of separation events taking place. The videos are the same ones used by Majid et al. in their cross-linguistic study (Bohnenmeyer, Bowerman, & Brown, 2001). Seventy six participants, who are native Greek speakers currently living in Greece, watched each video and were asked to describe the actions taking place in the clips by typing their responses in a comment box in their native language, Greek. The

participants were recruited through social media with posts describing what the survey entailed and what they had to do. Out of the seventy six participants, only thirty five provided complete descriptions for all 61 videos. Their answers are anonymous. The participants have not provided any other personal information. Their answers were collected and descriptions of each video were evaluated using the following parameters:

1. Types of verbs and other structures used for the description of each video.
2. How the result state of separation, manner of separation and instrument are expressed, if at all (i.e. lexicalized on the verb, or expressed by an adjunct).
3. Whether the verb is used in an induced event or a spontaneous event and how it affects the semantic structures of separation verbs.

The methodology described in the current section follows in part the methodology used by Majid et al. for their cross-linguistic study. However, necessary changes were made due to the short amount of time for the development of the current thesis, the fact that I could not be in Greece for the data collection, and the need for a larger pool of data. For these reasons, the data collection was conducted online rather than the one-on-one method adopted by Majid et al. Due to the online nature of the research, I was able to collect a wider pool of data with at least 35 responses for each video, while in Majid et al.'s cross-linguistic study there was an average of 3 speakers for each language with a range from 1 to 7. Furthermore, the participants of my study were not able to interact with me during the elicitation process and ask questions, something which might have affected their descriptions of the videos. Their responses varied significantly from one word answers to elaborate descriptions of the videos, which shows that every participant

perceived each video in their own unique way and could not have been affected by other responses or the researcher.

The online survey method chosen for this study presented potential downsides. For example, the number of the videos was quite large for an online research, and as a result, some participants did not complete the descriptions of all the 61 videos, despite the fact that there was no time limit, and they could stop at any point and continue with their responses at a later time from where they stopped. In addition, the greater number of participants and the fact that any native Greek speaker could participate in the research allowed for a larger number of different dialects to show up in the responses. As a result, some verbs used in the participants' answers seem to be dialect specific. Moreover, some answers were too formal, written in a way that does not reflect the everyday Modern Greek language, and others were written in a humorous way that was off topic. In order to maintain data quality and accuracy, 17% of the responses were not taken into account for the data analysis, of which 14% were dialect specific and 3% were off topic or too formal. The responses that are listed in the frequency tables provided at the beginning of each section as 'Other.' Furthermore, as previously mentioned in Section 1.2, nouns in Modern Greek are marked for case and number with noun-article agreement for both case and number. However, since these details are not relevant to the analysis of verbs for the current thesis, nouns found in the examples from the data are not marked for case or number. Only their corresponding articles are marked for both case and number.

As a preamble to the detailed analysis in the subsequent sections, in Table 1 I have summarized the general tendencies of only the generic verbs with which participants

describe the four major events. A more detailed analysis of the verbs used for each event will be given in Sections 2 through 5.

Table 1

Correspondence of Event Types to Generic Verbs Used by Participants

TYPES OF ACTIONS	<i>spao</i> 'to break'	<i>kovo</i> 'to cut'	<i>sxizo</i> 'to tear'	<i>anigo</i> 'to open'
breaking	48%	23%	1%	0
cutting	6%	58%	5%	0
tearing	0	7%	80%	0
opening	0	0	0	78%

2. Breaking Events

Bowerman (2005) describes a breaking event as the separation of a solid theme into pieces that is caused by an agent, usually with the application of force. After the action of breaking is completed, the theme loses its structural integrity. Among the languages that have been studied so far, the most common properties that breaking verbs encode are manner/intensity, instrument, result state and change of state of the semantic theme. According to Majid et al. (2008), breaking events are low in predictability in terms of location of separation. In this section, I study breaking verbs as found in the participants' responses, in order to find out what motivates the participants' choice of verbs for the description of breaking events. I conclude that even though breaking verbs in Modern Greek share semantic features with other languages such as the fact that they encode the change of state of the semantic theme, they do not distinguish between actions of snapping and smashing, and therefore disregard Dimension 3, a semantic feature found in only a few of the languages that have been studied so far. Furthermore, actions that include yarn, rope or similar themes that Majid et al. group together with breaking events, are more likely to be described with the verb *kovo* 'to cut,' rather than *spao* 'to break.'

2.1 The Verb *Spao* 'to Break' in Breaking Events

In Modern Greek, the verb *spao*, which specifically means 'to apply force on a solid object (with sudden movement, hitting, etc.), so that it separates into pieces'² (Dictionary of Standard Modern Greek, 1998) is the generic verb used to describe breaking events. Its

² Author's translation of the original: "ασκώ επάνω σε στερεό αντικείμενο δύναμη (με απότομη κίνηση, χτύπημα κτλ.) και το χωρίζω σε περισσότερα κομμάτια."

meaning encodes information about the change of state that the object undergoes. Majid et al. include fifteen breaking-type videos in their cross-linguistic study. In Table 2 we can see that *spao* ‘to break’³ is the verb that most participants choose for the description of videos showing actions of breaking. However, 23% also use the verb *kovo* ‘to cut.’ A complete list of the 61 videos from the study by Majid et al. (2008) and the actions they depict can be found in Appendix A.

Table 2

Verbs and Structures Describing Breaking Events

Verbs and structures	Frequency
<i>spao</i> ‘to break’	48%
<i>kovo</i> ‘to cut’	23%
Nominalization structures of breaking verbs	5%
<i>xtipo</i> ‘to hit’	2%
Two-action descriptions of hitting and breaking	2%
<i>kommatiozo</i> ‘to break in large pieces’	1%
<i>kopanao</i> ‘to hit with intensity’	1%
<i>dialio</i> ‘to crush’	1%
<i>thrimatizo</i> ‘to break in small pieces’	1%
<i>tsakizo</i> ‘to crush’	1%
<i>sxizo</i> ‘to tear’	1%
<i>ligizo</i> ‘to bend’	1%
<i>sfirokopo</i> ‘to hit with hammer’	1%
<i>poltopio</i> ‘to mash’	1%
<i>temaxizo</i> ‘to break in pieces’	1%
<i>sinthlivo</i> ‘to crush with intensity’	1%
<i>karfono</i> ‘to hit with nail’	1%
<i>varao</i> ‘to hit with intensity’	1%
<i>kano kommatia</i> ‘to break in pieces’	1%
<i>thravo</i> ‘to break in pieces’	1%
‘try to...’ structures with breaking verbs	1%
Other	4%
Total	100%

³ From here on, the verb *spao* will be translated as ‘to break,’ which is also the generic translation of the verb in Modern Greek.

(4) Ο άντρας έσπασε το
 ο andras espase to
 ART.SG.DEF.M.NOM man break-3SG.PST ART.SG.DEF.NEUT.ACC

κλαδί με το τσεκούρι.
 kladi me to tsekuri
 branch with ART.SG.DEF.NEUT.ACC axe
 ‘The man chopped the branch with the axe.’

The verb *spao* does not lexicalize manner. Nevertheless, the data demonstrate that there are two ways to express manner with *spao* in Greek. One way is to add an adverb of manner, as in (5), or a noun that expresses manner as an adjunct, as shown in (6). As noted above, the meaning of the verb *spao* encodes information about the change of state of the theme. However, it does not explicitly express whether the theme is broken in two or more pieces. The result of the state of the theme can be expressed with the addition of adjuncts, as in (7).

(5) Το αγόρι σπάει θυμωμένα
 to agori spai thimomena
 ART.SG.DEF.NEUT.NOM boy break-3SG.PRS angrily

ένα κλαδί.
 ena kladi
 ART.SG.INDF.NEUT.ACC branch
 ‘The boy is breaking a branch angrily.’

(6) Με δύναμη σπάει ένα κλαρί.
 me dinami spai ena klari
 with strength break-3SG.PRS ART.SG.INDF.NEUT.ACC twig
 ‘(He/she) snaps a twig with (great) force.’ (lit. breaks a twig with strength)

Table 3

Verbs and Structures Describing Actions of Smashing

Verbs and structures	Frequency
<i>spao</i> ‘to break’	53%
<i>xtipao</i> ‘to hit’	8%
<i>kopanao</i> ‘to hit with intensity’	5%
Nominalization structures of breaking verbs	5%
<i>thrimatizo</i> ‘to break in small pieces’	4%
<i>dialio</i> ‘to smash’	3%
<i>sfirokopo</i> ‘to hit with hammer’	3%
<i>varao</i> ‘to hit with intensity’	3%
<i>thravo</i> ‘to break in pieces’	2%
<i>kommatiazo</i> ‘to break in large pieces’	2%
<i>poltopio</i> ‘to mash’	2%
<i>sinthlivo</i> ‘to crush’	2%
<i>temaxizo</i> ‘to cut in large pieces’	1%
<i>tsakizo</i> ‘to crush’	1%
<i>liono</i> ‘to mash’	1%
Other	5%
Total	100%

Table 4

Verbs and Structures Describing Actions of Snapping

Verbs and structures	Frequency
<i>spao</i> ‘to break’	65%
<i>kovo</i> ‘to cut’	16%
Nominalization structures of breaking verbs	5%
<i>tsakizo</i> ‘to crush’	3%
<i>try to...</i> structures with breaking verbs	3%
<i>ligizo</i> ‘to bend’	2%
<i>temaxizo</i> ‘to cut in large pieces’	1%
Other	5%
Total	100%

In this section, I show that the generic verb *spao* is used in the majority of the participants’ responses. It encodes the change of state of the semantic theme and it is used

with rigid objects, similar semantic features found in other languages by Majid et al. Manner, result state and instruments are expressed with the addition of adverbs or adjuncts, since the verb *spao* does not lexicalize any of these semantic features. However, the verb *spao* is used for descriptions of both snapping and smashing events, as seen through the participants' responses. Therefore, Greek speakers do not distinguish between events of snapping and smashing. As a result, Modern Greek belongs among the few languages that do not comply with Dimension 3 described by Majid et al., which categorizes languages that distinguish between actions of snapping and smashing.

2.2 The Verb *Kovo* 'to Cut' in Breaking Events

Examining the five most frequent verbs in Table 2, we find that the second most used verb for descriptions of breaking events is the verb *kovo* 'to cut.'⁴ This verb is mainly found in descriptions of actions depicted in videos 35⁵, 38⁶, and 61⁷ that Majid et al. have grouped together with breaking events, and which include yarn and rope as themes. Table 5 demonstrates that it is typical to use the verb *kovo* when the theme is made of materials that are soft and easy to separate.

⁴ The verb *kovo* and its definition will be discussed in detail in Chapter 3. In this section, the verb *kovo* will only be studied in terms of specific breaking-type videos.

⁵ Video No. 35: Break yarn into many pieces with fury

⁶ Video No. 38: Break single piece of yarn by hand.

⁷ Video No. 61: Break rope stretched between two tables with single karate-chop of hand.

Table 5

Verbs and Structures Describing Videos with Yarn and Rope

Verbs and structures	Frequency
<i>kovo</i> ‘to cut’	61%
<i>spao</i> ‘to break’	10%
<i>sxizo</i> ‘to tear’	5%
<i>komatiazo</i> ‘to break in large pieces’	5%
Nominalization structures of cutting verbs	5%
Two-action descriptions of pulling and cutting	5%
<i>travao</i> ‘to pull’	4%
<i>katastrefo</i> ‘to destroy’	2%
<i>xtipo</i> ‘to hit’	1%
Other	2%
Total	100%

We can see that 61% of participants associate the verb *kovo* with the type of the material of the semantic theme rather than the manner or the instrument. Actions of cutting yarn or rope by hands, as depicted in these videos, are routinely described with the verb *kovo*. This is proved by the large number of participants using the verb *kovo* for the description of events that are categorized by Majid et al. as breaking events.

Therefore, prototypicality of the action is what motivates the choice of verb in this case, since it is not common to use the verb *spao* ‘to break’ with themes such as yarn and rope. In examples (8), (9), and (10) we can see how participants describe videos 35, 38, and 61 respectively. We should note that thread and yarn have the same meaning in Greek and are both translated as ‘klosti.’

- (8) Κόβει την κλωστή.
 kovi tin klosti
 cut-3SG.PRS ART.SG.DEF.F.ACC thread
 ‘(He/she) is cutting the thread.’

- (9) Έκοψε ένα κομμάτι κλωστή.
 ekopse ena komati klosti
 cut-3SG.PST ART.SG.INDF.NEUT.ACC piece thread
 ‘(He/she) cut a piece (of the) thread.’
- (10) Κόβει το σχοινί.
 kovi to sxini
 cut-3SG.PRS ART.SG.DEF.NEUT.ACC rope
 ‘(He/she) is cutting the rope.’

In this section, I show that with semantic themes such as yarn and rope, the majority of participants use the verb *kovo* ‘to cut’ to describe the action of separation, despite the fact that Majid et al. categorize such types of separation as actions of breaking. The participants focus on the material of the theme rather than the manner or instrument involved in the action.

2.3 The Verb *Xtipo* ‘to Hit’ in Breaking Events

Looking into the five most frequent verbs used for descriptions of breaking events, the fourth most used verb in the data is the verb *xtipo* ‘the hand, foot or an object towards something using fast and violent movements’⁸ (Dictionary of Standard Modern Greek, 1998), as seen in Table 2. It is found in 2% of the participants’ responses for descriptions of breaking events. Fillmore (1970) shows that a semantic difference between the verbs *break* and *hit* is that the former expresses a change of state of the theme, while the latter is a surface contact verb that does not necessarily imply a change of state. Hale and Keyser (1987) also show that English *break* verbs entail a result that cannot be cancelled, something which is not the case with *hit* verbs. More specifically, *break* verbs entail a

⁸ Author’s translation of the original: “φέρνω το χέρι, το πόδι ή κάποιο αντικείμενο, με πολύ γρήγορες και βίαιες κινήσεις, επάνω σε κτ.”

separation in the material integrity of the semantic theme that cannot be undone, while *hit* verbs do not have such entailment. Furthermore, Kroeger (2010) adds that physical properties of the theme motivate the selection of *break* verbs in English, while physical properties of the instrument motivate the selection of *hit* verbs. The verb *xtipo*, which from now on will be defined with the generic term ‘to hit’, does not entail the change of state or the result state of the theme in its meaning. So, Greek hitting verbs share the same semantic properties with English hitting verbs, as discussed by Fillmore (1970) and Hale and Keyser (1987).

As seen in Table 2, 2% of participants use the verb *xtipo* for descriptions of videos that depict breaking events. The videos that this verb is found most frequently are summarized in Table 6.

Table 6

Frequency of Breaking and Hitting Verbs in Breaking Events

Actions of breaking	breaking-type verbs	hitting-type verbs
Video No. 21: Smash carrot into several fragments with hammer blows.	72%	36%
Video No. 31: Smash a stick into several fragments with single hammer blow.	69%	29%
Video No. 39: Smash flower pot with single hammer blow.	89%	9%
Video No. 40: Smash plate with single hammer blow.	86%	8%
Video No. 53: Break stick in two with single downward chisel blow	43%	23%

As we can see in Table 6, the choice of verb is motivated by both the manner in which the action takes place, since all actions depicted occur using intense blows, and the

The study of the verb *xtipo* ‘to hit’ demonstrates that, similar to English, this is a surface contact verb that does not entail a change of state or result state of the semantic theme in its meaning. From the data, we can see that what motivates Greek speakers to use the verb *xtipo* for descriptions of actions of breaking, are both the physical properties of the tool, and the manner that the action occurs.

2.4 Nominalization and Two-Action Structures in Breaking Events

As discussed in Section 1.2, nominalization in Modern Greek is formed by the addition of affixes to verb stems that are inflected for case in both the singular and plural (Alexiadou, 2009). Going through the five most frequent verbs and structures found in the data, as Table 2 demonstrates, nominalization structures are third in the participants preference for the descriptions of breaking events, with 5% of the participants describing breaking events using nominals of breaking-type verbs. As previously mentioned in Section 1.2, nominalizations are short, simple structures that are formed with the use of various nominal affixes that attach to verb stems. In this study, the infix that is mainly found in nominalization structures is the infix *-sim-*. For breaking events, from the verb *spao* ‘to break’ we find in the data the nominal *spasimo* ‘breaking.’ Since nominalization structures have not been extensively studied from a semantic point of view for Modern Greek, we can only hypothesize about the reason behind the participants’ choice for such structures. As discussed in Section 1.3, nominalization allows participants to focus solely on the description of the action, even if an instrument or other aspects such as manner and repetitive movement are involved. This can be seen in example (13) that describes video 40, in which a plate is smashed with a hammer, and the response only focuses in

the action, not the manner/intensity or the instrument. However, nominalizations are also found for descriptions that do not include instruments, as in (14) which describes video 5, in which someone is breaking a stick over his knee several times with intensity.

Therefore, there is no correlation found between the use of instruments and nominalization structures in the data for descriptions of breaking events. In addition, the current study has been conducted online with participants having to type their responses for all 61 videos. So, it is expected that participants choose structures which are shorter, and therefore faster, to type. Only a few participants use adjuncts that express other aspects of the action, such as manner, intensity or repetition of movement, with nominalization structures, as in (15).

(13) Σπάσιμο πιάτου.
spasimo piatou
breaking plate-SG.GEN
'Plate breaking.'

(14) Τσάκισμα βέργας.
tsakisma vergas
crushing stick-SG.GEN
'Crushing (of a) stick.' (lit. breaking a stick)

(15) Σπάσιμο κλαδιού μετά από αλλεπάλληλα χτυπήματα τσεκουριού.
spasimo kladiou meta apo alepalila xtipimata tsekouriou
breaking branch-SG.GEN after of repetitive hitting axe-SG.GEN
'(The) chopping (of the) branch (happened with) repetitive axe-hitting (movements).'

Among the five most frequent verbs and structures, as shown in Table 2, are descriptions of breaking events as two separate actions taking place one after the other. The first action involves the use of an instrument with which the action is carried out, and the second shows the result that was caused by the first action (16).

- (16) Χτύπησε με τσεκούρι το πιάτο και
 xtipise me tsekouri to piato ke
 hit-3SG.PST with hammer ART.SG.DEF.NEUT.ACC plate and
- το έσπασε.
 to espase
 ART.SG.DEF.NEUT.ACC break-3SG.PST
 ‘(He/she) hit the plate with a hammer and it broke.’ (lit. he/she hit the plate with a hammer and broke it.)

In this section, I show that nominalization structures found in the participants’ responses for descriptions of breaking events do not correlate with any specific semantic feature such as the use of an instrument or the manner the action occurs. Even though there are a few instances in which nominalization structures are used with adjuncts, the majority of the participants use them in a similar way as seen in (13) and (14) above. As a result, we can hypothesize that participants opt for structures that focus on the action, while at the same time they are simple to type. Majid et al. do not discuss nominalizations in their cross-linguistic study, which indicates that no similar structures are found in the languages that have been studied so far. However, a more detailed investigation of these structures is beyond the scope of this study.

2.5 Verbs Encoding Manner, Instrument and Result State in Breaking Events

In addition to the five most frequent verbs and structures found in the data, there are verbs found in lower percentages, but whose morphology presents different ways that *breaking* verbs can encode various semantic features. In this section, I discuss briefly how their morphology interacts with some semantic features.

Efthymiou (2011) shows that there is a variety of verb-forming suffixes in Modern Greek such as *-izo*, *-ono*, *-(i)azo*, and *-evo*. Derivatives that carry the suffix *-izo* are the

In this section, I demonstrate that apart from the generic verb *spao* ‘to break,’ manner, instrument and result state are expressed by a variety of noun-derived verbs. The variety of these verbs allows Greek native speakers to focus on various aspects of the event such as manner and result state of the semantic theme.

From studying the structures found in the participants’ responses for descriptions of breaking events, we can see that breaking verbs in Modern Greek follow the shared semantic features described by Majid et al. (2008), such as the fact that they encode the change of state of the theme. However, actions of smashing and snapping are described by the majority of the participants with the generic verb *spao* ‘to break,’ which shows that Greek native speakers do not distinguish between the two actions. As a result, Modern Greek is one of the few languages that do not exhibit the tendency of Dimension 3 described by Majid et al. of distinguishing between actions of snapping and smashing.

3. Cutting Events

Bowerman (2005) describes a cutting event as the separation of a theme by an agent, in two or more pieces, usually involving the use of an instrument with a thin linear edge. The separation can be either partial or complete. In either case, after the action of cutting is concluded, the theme can still be identified by its pieces. According to Dimension 1 discussed in Section 1.1, the use of a blade instrument is the semantic feature that differentiates cutting events from breaking events (Majid et al., 2008). Furthermore, cutting events are considered higher in the predictability of the location of the separation, as previously discussed in Section 1.1, since the blade instrument usually does not cause any other separation of the theme, apart from the point that the blade comes in contact with. In this section, I study the five most frequent verbs and structures that participants use in the descriptions of cutting events. I conclude that Modern Greek disregards Dimension 2 according to which cutting and tearing events are grouped separately, as discussed by Majid et al. (2008). Since the generic verbs *kovo* ‘to cut’ and *sxizo* ‘to tear’ are used interchangeably in the participants’ responses for descriptions of cutting events, I conclude that Greek speakers tend to group together actions of cutting and tearing. Thus, Modern Greek is one of two languages found so far that do not follow the cross-linguistic tendencies described by Majid et al.

3.1 The Verb *Kovo* ‘to Cut’ in Cutting Events

The verb *kovo* ‘to separate a solid object into smaller pieces with appropriate instrument or tool’¹¹ (Dictionary of Standard Modern Greek, 1998) expresses the separation of a theme in two or more pieces through the contact of an instrument with the surface of the theme. *Kovo* entails the use of hands as an instrument of separation, even though this feature is not part of its original definition. This is also shown in Section 2.2, in which the verb *kovo* is used for descriptions of breaking events that include themes that are separated by hands such as yarn and rope. The separation described by *kovo* can be either partial or complete. In Table 7, we can see that 52% of the participants describe actions shown in cutting-type videos using the verb *kovo*, which from now on will be defined with the generic term ‘to cut.’ However, there are a great many other types of verbs that participants use, which offer better insight into the way Greek speakers describe actions of cutting.

¹¹ Author’s translation of the original: “με κατάλληλο όργανο ή εργαλείο διαιρώ ένα στερεό σώμα σε μικρότερα κομμάτια.”

Table 7

Verbs and Structures Describing Cutting Events

Verbs and structures	Frequency
<i>kovo</i> ‘to cut’	58%
<i>spao</i> ‘to break’	6%
<i>sxizo</i> ‘to tear’	5%
Nominalization structures of cutting verbs	4%
<i>temaxizo</i> ‘to cut in large pieces’	3%
<i>xarazo</i> ‘to make incision’	3%
<i>prionizo</i> ‘to cut with saw’	2%
Two-action descriptions of hitting and cutting	2%
<i>tsekurono</i> ‘to cut with axe’	1%
‘try to...’ structures with cutting verbs	1%
<i>xtipao</i> ‘to hit’	1%
<i>xorizo</i> ‘to separate’	1%
<i>varao</i> ‘to hit with force’	1%
<i>kopanao</i> ‘to hit with great force’	1%
<i>komatiazo</i> ‘to separate in pieces’	1%
<i>maxerono</i> ‘to cut with knife’	1%
<i>psalidizo</i> ‘to cut with scissors’	1%
<i>kurevo</i> ‘to cut hair with scissors’	1%
<i>diaxorizo</i> ‘to separate’	1%
<i>psilokovo</i> ‘to cut in small pieces’	0.4%
<i>katastrefo</i> ‘to destroy’	0.4%
<i>kano tomi</i> ‘to make an incision’	0.2%
Other	5%
Total	100%

Looking into the five most frequent verbs and structures in Table 7, we find that the semantic structure of the generic Greek verb *kovo* ‘to cut’ includes an agent who uses an instrument with a blade or his/her hands in order to cause a change of state on a theme, as in (19). As mentioned in Section 1.2, subject-verb agreement is expressed morphologically on the verb. Therefore, the agent does not need to be expressed explicitly in the clause, as seen in (20). In addition, naming the instrument is not

as seen in (28). For actions which do not involve a complete separation of the theme, the participants use adverbs such as *elafra* ‘lightly’ or *epifaniaka* ‘superficially’ to express this partial separation, as in (29) and (30).

(25) Κόβει το σπάγγο βίαια σε κομμάτια.
 kovi to spago viea se komatia
 cut-3SG.PRS ART.SG.DEF.M.ACC yarn violently in pieces
 ‘(He/she) is cutting the yarn violently.’

(26) Ο άντρας κόβει τα
 o antras kovi ta
 ART.SG.DEF.M.NOM man cut-3SG.PRS ART.PL.DEF.NEUT.ACC

καρότα με δύναμη.
 karota me dinami
 carrots with strength

‘The man is cutting the carrots with force.’ (lit. the man is cutting the carrots with strength.)

(27) Κόβει κάθετα το καρότο.
 kovi katheta to karoto
 cut-3SG.PRS vertically ART.SG.DEF.NEUT.ACC carrot

‘(He/she) is slicing the carrot lengthwise.’ (lit. he/she is cutting the carrot vertically.)

(28) Κόβει στη μέση το καρότο.
 kovi sti mesi to karoto
 cut-3SG.PRS at.the-SG.FEM middle ART.SG.DEF.NEUT.ACC carrot

‘(He/she) is cutting the carrot in half.’ (lit. he/she is cutting the carrot in the middle.)

(29) Η κοπέλα κόβει ελαφρά
 i kopela kovi elafra
 ART.SG.DEF.FEM.NOM girl cut-3SG.PRS lightly

ένα καρπούζι.
 ena karpuzi
 ART.SG.INDF.NEUT.ACC watermelon

‘The girl is slicing into a watermelon.’ (lit. the girl is cutting lightly at the watermelon.)

- (30) Έκοψε επιφανειακά το καρπούζι.
 ekopse epifaniaka to karpouzi
 cut-3SG.PST superficially ART.SG.DEF.NEUT.ACC watermelon
 ‘(He/she) made an incision on the watermelon.’ (lit. he/she cut the watermelon superficially.)

In this section, I describe the semantic structures of the verb *kovo* ‘to cut’ as found in examples taken from the data. I show that the generic verb *kovo* ‘to cut’ suggests the use of an instrument with a blade or the hands for the separation of the semantic theme. It also encodes the change of state of the theme. Manner can be expressed with different ways, such as prefixes, adverbs of manner and adjuncts.

3.2. The Verb *Spao* ‘to Break’ in Cutting Events

The second most frequent verb for the description of cutting events is the verb *spao* ‘to break.’ As Table 7 demonstrates, 6% of the participants describe actions of cutting using *spao*. The videos in which *spao* is found include instruments such as an axe¹⁴, chisel¹⁵, machete¹⁶ and a hammer¹⁷. In addition, the actions take place with the application of force. However, there is no correlation between the type of the instrument and the use of *spao*, since the verb does not entail an instrument in its sense. Furthermore, a machete is a sharp instrument mainly associated with *cutting* verbs. Thus, we can only assume that what motivates participants to choose *spao* is the application of some force on the theme during the separation. Descriptions using the verb *spao* for cutting events can be seen in (31), (32), and (33) below.

¹⁴ Video No. 13: Cut rope stretched between two tables with blow of axe.

¹⁵ Video No. 2: Cut rope stretched between two tables with single downward blow of chisel.

¹⁶ Video No. 3: Hack branch off tree with machete.

¹⁷ Video No. 23: Chop cloth stretched between two tables into two pieces with two blows of hammer.

Chapter 4. In this section the verb is studied only in terms of our findings in the participants' answers for cutting events.

Majid et al. (2008), in their discussion on Dimension 2, distinguish actions of tearing from other events, based on the fact that they are intermediate in the predictability of the location of separation. Therefore, tearing events are grouped separately from cutting events, which are higher in predictability. Furthermore, in most languages such as English, there is only one verb that is used exclusively for actions of tearing (Majid et al., 2008). However, the data demonstrate that 5% of the participants use the verb *sxizo* to describe cutting events. The sense of *sxizo*, which is described in detail in Chapter 4, entails the use of hands as the instrument causing the separation. However, in the data *sxizo* is found in descriptions of videos that include other instruments such as a hammer¹⁸ and a knife¹⁹. Thus, there is no correlation between the use of *sxizo* and the instrument causing the separation. The participants' responses show that in the cases where *sxizo* is used, the theme being separated is mainly a cloth. As a result, we can see that *sxizo* can replace *kovo* when the theme being separated is made of a flexible, easy-to-separate material, as in (34). This conclusion does not comply with the findings of the second dimension described by Majid et al., according to which most languages have one verb used exclusively for tearing events. A similar conclusion is discussed in more detail in Chapter 4, in which the verb *kovo* 'to cut' is used for descriptions of tearing events.

¹⁸ Video No. 23: Chop cloth stretched between two tables into two pieces with two blows of hammer.

¹⁹ Video No. 4: Chop cloth stretched between two tables with repeated intense knife blows.

Based only on our findings for cutting events, we can assume that Greek speakers tend to use *sxizo* and *kovo* interchangeably when the theme separated is a cloth.

- (34) Σχίζει το πανί.
sxizi to pani
tear-3SG ART.SG.DEF.NEUT.ACC cloth
'(He/she) is tearing the cloth.'

In this section, I show that the verb *sxizo* 'to tear' can be used to describe cutting events when the theme separated is made of a flexible material such as a cloth. No correlation is found between the use of *sxizo* and the instrument used. Therefore, I conclude that the type of material is what motivates participants to choose *sxizo* instead of *kovo*. As a result, Modern Greek belongs among the few languages that use a *tearing* verb for descriptions of cutting events with an easy-to-separate theme.

3.4 Nominalization Structures in Cutting Events

Among the five most frequent verbs and structures for cutting events, we find nominalization structures in 4% of the data. As previously discussed in Section 2.4, they allow participants to focus on the actions depicted in the videos. Furthermore, these structures do not show any correlation to semantic features such as manner, instrument, change of state or result state of the theme for cutting events. Similar to observations made in Section 2.4, we can simply assume that nominalization structures are found in 4% the data as a way for some participants to provide short and simple responses, as shown in (35) and (36). For events that include manner, the participants use adjectives describing the intensity with which the even took place, as (36) and (37).

- (35) Κόψιμο σπάγκου.
 kopsimo spagou
 cutting rope-SG.GEN
 ‘(The) cutting (of the) rope.’
- (36) Σκίσιμο υφάσματος.
 skisimo ifasmatos
 tearing cloth-SG.GEN
 ‘(The) tearing (of the) cloth.’
- (37) Βίαιο κόψιμο υφάσματος.
 vioo kopsimo ifasmatos
 violent-SG.NEUT cutting cloth-SG.GEN
 ‘(The) cutting (of the) cloth (happens) in a violent way.’
- (38) Προσεκτικό κόψιμο.
 Prosektiko kopsimo
 careful-SG.NEUT cutting
 ‘(Someone) is careful(ly) cutting (the cloth).’ (lit. careful cutting)

Nominalization structures for cutting events for this study do not provide any additional information for the participants’ preference in these structures. No correlation is found with semantic features such as manner, instrument or result state of the theme. Therefore, following similar observations of previous sections, we can only assume that they allow participants to focus on the action, using a simple type of structure.

3.5 Verbs Encoding Instrument and Result State in Cutting Events

The fifth most frequent verb found in descriptions of cutting events, as presented in Table 7, is the verb *temaxizo*, which is used by 3% of the participants. The verb is formed from the noun *temaxio* ‘large piece/fragment’ and the addition of the affix *-izo*. It is defined as ‘to separate into pieces, to cut’²⁰ (Dictionary of Standard Modern Greek, 1998) entails the separation of the theme into large pieces in its sense, as in (39). As previously

²⁰ Author’s translation of the original definition: “χωρίζω κτ. σε κομμάτια, το κόβω, το κομματιάζω.”

Table 8

Verbs and Structures Describing an Event of Making an Incision

Verbs and structures	Video No 14: Make single incision in melon with knife.
<i>xarazo</i> ‘to make an incision’	54%
<i>kovo</i> ‘to cut’	13%
<i>sxizo</i> ‘to tear’	8%
<i>maxerono</i> ‘to stab’	5%
<i>travmatizo</i> ‘to wound’	5%
Nominalization of cutting verbs	5%
<i>tripao</i> ‘to poke a hole’	3%
<i>mpigo</i> ‘to insert’	3%
<i>kano maxairia</i> ‘to cut with knife’	3%
Others	1%
Total	100%

As previously discussed in Section 3.1, the separation described by *kovo* can be partial or complete. Thus, the result state of the semantic theme can be explicitly mentioned in the sentence for clarification purposes, especially when the separation is partial, as (45) shows.

- (45) Έκοψε επιφανειακά το καρπούζι.
 ekopse epifaniaka to karpouzi
 cut-3SG.PST superficially ART.SG.DEF.NEUT.ACC watermelon
 ‘(He/she) made an incision on the watermelon.’ (lit. he/she cut the watermelon superficially.)

Found in 1% of the data as seen in Table 7, the verb *kurevo* ‘to cut short someone’s hair’²⁶ (Dictionary of Standard Modern Greek, 1998) is used exclusively for the action of cutting hair. This verb is only found in data describing video 27, in which someone is

²⁶ Author’s translation of the original: “κόβω κοντά τα μαλλιά κάποιου.”

cutting a woman's hair with scissors. The data are not enough for a concrete generalization on the use of the verb. We can only note that *kurevo* entails the sense of hair in its sense, with the implied instrument always being a pair of scissors, as in (46). As a result, the instrument is usually not mentioned in the sentence, unless the haircut is performed with another tool with a sharp blade. Furthermore, the noun hair is not obligatory in the sentence, since it is entailed in the verb's sense. Therefore, it can be omitted without causing any change in the meaning.

- (46) Κούρεψε τα μαλλιά της
kurepse ta malia tis
cut.hair-3SG.PST ART.PL.DEF.NEUT.ACC hair of.the-SG.F.GEN
- κοπέλας.
kopelas.
girl
‘(He/she) cut the girl’s hair.’

In this section, I look into the semantic structures of *temaxizo* ‘to cut in large pieces’ along with a few other verbs found in the data whose morphology presents a variety of ways to describe a cutting event. Verbs such as *prionizo* ‘to cut with saw’ and *psalidizo* ‘to cut with scissors’ encode the instrument used, while the verb *kurevo* ‘to cut hair’ is used exclusively for the action of cutting hair, encoding both the instrument and the semantic theme. The verb *xarazo* ‘to make an incision’ encodes only a partial separation.

By studying cutting verbs and their structures in Modern Greek through the participants’ responses, I conclude that they deviate from the cross-linguistic tendencies described by Majid et al. (2008). I show that native speakers tend to use the verb *sxizo* ‘to tear’ for descriptions of cutting events. Therefore, the use of *sxizo* is not restricted to tearing events, a tendency which is observed in only a few other languages so far, as

mentioned by Majid et al. (2008). This tendency is discussed further in Section 4.

Moreover, the verb *spao* ‘to break’ is found in the data for descriptions of cutting events that include the application of force on the semantic theme. In addition, the study of nominalization structures and verbs found in smaller percentages in the data provides great information on the different ways cutting events are expressed in the language.

4. Tearing Events

Majid et al. (2008) describe a tearing event as the separation of an object, usually flexible, by pulling it apart in one or more pieces by hands. As briefly discussed in Section 3.3, Majid et al. group tearing events separately from cutting events. This is due to their intermediate predictability of the location of separation, which is different from that of C&B events (Majid et al., 2008). Furthermore, Majid et al. demonstrate that most languages use a specific verb exclusively for the description of actions of tearing. In their cross-linguistic study, only two videos show actions of tearing. One depicts the separation of a cloth being pulled apart by hands²⁷, and the other one shows a partial separation of a cloth by hands²⁸. In this section, I study the five most frequent verbs and structures as found in participants' responses for descriptions of tearing events. I conclude that the generic verb *sxizo* 'to tear,' does not follow the separate grouping of tearing events as described in Majid et al.'s Dimension 2, but it is grouped together with cutting events. Thus, Modern Greek is among the few languages studied so far on separation events that presents such a rare deviation.

4.1 The Verb *Sxizo* 'to Tear' in Tearing Events

The verb *sxizo* 'to pull by hands two sides of paper, fabric or similar material in opposite directions, in order to create an opening'²⁹ (Dictionary of Standard Modern Greek, 1998) expresses the separation of an object by hand. In Table 9, we can see that

²⁷ Video No. 1: Tear cloth in two pieces by hand.

²⁸ Video No. 36: Tear cloth half-way through with two hands.

²⁹ Author's translation of the original: "δημιουργώ ένα κατά μήκος άνοιγμα, τραβώντας με τα χέρια κατά τη φορά των νών και προς την αντίθετη κατεύθυνση τις δύο πλευρές χαρτιού, υφάσματος ή άλλου ανάλογου υλικού."

the overwhelming majority of participants chooses the verb *sxizo* to describe actions of tearing, which from now on will be defined with the generic term ‘to tear.’

Table 9

Verbs and Structures Describing Tearing Events

Verbs and structures	Frequency
<i>sxizo</i> ‘to tear’	80%
<i>kovo</i> ‘to cut’	8%
Nominalization of tearing verbs	6%
<i>misosxizo</i> ‘to tear alittle bit’	3%
<i>ksexizo</i> ‘to tear with violence’	1%
Other	2%
Total	100%

The semantic structure of *sxizo* requires an agent that causes a theme to separate into one or more pieces, as in (47). The sense of *sxizo* entails both the instrument with which the separation is caused, which is mainly the hands, and the nature of the theme, which is a flexible object that is very easy to separate in this way. *Sxizo* does not encode manner, however, the result state of the theme is either partial or complete separation without a total loss of its initial form. Thus, after the separation, the theme can still be identified by its components. Even though the verb *sxizo* implies the use of hands, the instrument can be explicitly mentioned in the sentence with the use of adjuncts, as seen in (48). In addition, similarly to *spao* ‘to break’ and *kovo* ‘to cut,’ manner can also be expressed with adjuncts showing intensity, as (49) shows.

(47) Η κοπέλα σκίζει το
 i kopela skizi to
 ART.SG.DEF.F.NOM girl tear-3SG.PRS ART.SG.DEF.NEUT.ACC

ύφασμα.
 ifasma
 cloth

‘The girl is tearing the cloth.’

(48) Η κοπέλα σχίζει το
 i kopela sxizi to
 ART.SG.DEF.F.NOM girl tear-3SG.PRS ART.SG.DEF.NEUT.ACC

ύφασμα με τα χέρια.
 ifasma me ta xeria
 cloth with ART.PL.DEF.NEUT.ACC hands

‘The girl is tearing the cloth with her hands.’

(49) Σκίζει ένα πανί με βία.
 skizi ena pani me via
 tear-3SG.PRS ART.SG.INDF.NEUT.ACC cloth with violence
 ‘(He/she) is tearing a cloth violently.’

From the study of the semantic structures of *sxizo* ‘to tear’ we can see that it encodes the semantic features of instrument, which is the hands, and the nature of the theme, which in this case is a cloth. The large percentage in which is found in the data demonstrates that native speakers highly associate *sxizo* with the partial or complete separation of a cloth. As previously discussed in Section 3.3, *sxizo* is also used for the description of cutting events when the theme being separated is a cloth, even if an instrument is causing the separation. Since no videos with different types of materials exist that depict tearing events so we can understand better the semantic structure of *sxizo*, we cannot make a broader generalization on its use with other materials.

4.2 The Verb *Kovo* ‘to Cut’ in Tearing Events

The second most frequent verb found in Table 9 is the verb *kovo* ‘to cut.’ Its definition and semantic structures are discussed in detail in Section 3.1. As previously mentioned, Majid et al. group tearing events separately from C&B events in Dimension 2, due to their intermediate predictability of location of separation (Majid et al., 2008). They also notice that there is a general tendency among languages to have a specific tearing verb that only describes actions of this group that is not shared with events of cutting or breaking. However, not all languages follow this generalization. The participants’ responses show that Modern Greek’s generic verb *sxizo* is also used for the description of cutting events. As already discussed in Section 3.3, the verb *sxizo* can be used in actions of cutting if the theme is a cloth, even if there is an instrument other than the hands that causes the separation. This is a rare feature found only in the Greek language making it one of the few languages that deviate from the tendencies in Dimension 2 as described by Majid et al. Similarly, as Table 9 illustrates, the verb *kovo* ‘to cut’ is found in 8% of the participants’ responses for the descriptions of actions of tearing, as seen in (50). Even though the percentage is not high, it does show that *sxizo* and *kovo* can be used interchangeably for both tearing and cutting events.

- (50) Κόβει το ύφασμα.
kovi to ifasma
cut-3SG.PRS ART.SG.DEF.NEUT.ACC cloth
‘(He/she) is tearing the cloth.’ (lit. he/she is cutting the cloth.)

The study of *kovo* in tearing events demonstrates that the type of material of the semantic theme plays an important role in the choice of verb for descriptions of tearing events. More specifically, both *sxizo* and *kovo* can describe tearing and cutting events

interchangeably when the theme being separated is a cloth. Even though we cannot make any further generalizations for other types of materials, our data suggest that tearing and cutting events do share verbs, and thus, Modern Greek becomes an exception to the tendencies in Dimension 2 as described by Majid et al.

4.3 The Verbs *Misosxizo* ‘to Tear a Little Bit’ and *Ksesxizo* ‘to Tear with Violence’ In Tearing Events

The fourth and fifth most frequent verbs in the data, as Table 9 shows, are *misosxizo* and *ksesxizo*, found in 3% and 4% of the responses respectively. *Sxizo* ‘to tear’ does not encode manner and result state. So, in order to express result state, the prefixes *miso-* ‘half-’ (51) and *kse-* (52) are added to specify the semantic feature of manner. The prefix *miso-* shows a partial separation of the theme, as seen in (51). The prefix *kse-* encodes the intensity with which the action takes place, as in (52). It denotes complete separation of the theme and indicates that it is possible that the theme has lost its structural integrity and cannot be identified from its parts.

(51) Μισοέσχισε το ύφασμα.
 misoesxise to ifasma
 half.tear-3SG.PST ART.SG.DEF.NEUT.ACC cloth
 ‘(He/she) tore the cloth halfway through.’

(52) Ξεσχίζει.
 ksesxizi
 tear.with.violence-3SG.PRS
 ‘(He/she) is tearing it with intensity.’

4.4 Nominalization Structures in Tearing Events

The third most frequent structure in the data is nominalization, which is found in 6% of descriptions of tearing events, as Table 9 demonstrates. As previously discussed in Sections 2.4, and 3.3, nominalizations shift the focus on the action, while at the same

time are simple in their structure. No correlation is found between nominalizations and semantic features such as manner or instrument in tearing events. The study of nominalizations presents a better insight on the different ways an event can be described in Modern Greek. However, based on the methodology followed for this thesis, we cannot reach a solid conclusion as to the reason behind the participants' preference on these structures. An example of nominalization in tearing events is found in (53).

- (53) Σκίσιμο υφάσματος.
skisimo ifasmatos
tearing cloth-SG.GEN
'(The) tearing (of the) cloth.'

In this section, I look into the semantic structures of *tearing* verbs. I show that the generic verbs *sxizo* 'to tear' and *kovo* 'to cut' are used for both tearing and cutting events when the separation features a cloth as the theme. Despite the lack of different material types and the small number of videos depicting tearing events, the data demonstrate that Greek native speakers tend to share verbs between tearing and cutting events. As a result, Modern Greek is one of the few languages that deviate from the tendencies described by Majid et al. in their cross-linguistic study.

5. Events of Opening, Peeling and Pulling Apart

Majid et al. (2008) show that events such as opening, peeling and taking apart are clearly distinguished from C&B events in that they do not share verbs with C&B events or with one another. However, as Majid et al. note, events of opening, peeling and taking apart are excluded from their analysis, since the videos depicting these events are only used for the investigation of argument structure. Therefore, these events are not relevant to the purpose of their study (Majid et. al, 2008). Nevertheless, in this section, I take a brief look into actions of opening, peeling and taking apart in Modern Greek as found in the participants' responses. I show that even though these types of separation do not share verbs with actions of cutting and breaking, the verb *vgazo* 'to move, to remove' is used for the description of all these events.

Bowerman (2005) identifies three properties that a theme must have to be opened. It must be a unitary object with parts that can be separated, its separation must be reversible, and the opening created after the separation must give the agent access to the contents or some space (Bowerman, 2005). Despite the properties described by Bowerman, she does not provide a concrete definition of an opening event. Taking into account these properties, I describe an opening event as the separation of a theme, which has parts that can be removed, in order to create an opening that gives access to the interior part of the theme or the part that is hidden behind it.

5.1 Opening Events

In this section, I study briefly the semantic structures of the five most frequent verbs found in Table 10 for descriptions of opening events. I also study some of the less

frequent verbs that appear in Table 10, whose semantic structures demonstrate different ways of expressing an opening event in the language. I find that opening events are mainly described with the generic verb *anigo* ‘to open,’ a verb that is not shared with events of C&B.

The first most frequent verb shown in Table 10 is the verb *anigo*, defined as ‘to take off or remove the lid, cover or wrap of something, in order to see its contents, to put something in or take something out’³⁰ (Dictionary of Standard Modern Greek, 1998).

Table 10

Verbs and Structures Describing Opening Events

Verbs and structures	Frequency
<i>anigo</i> ‘to open’	78%
<i>vgazo</i> ‘to take off’	6%
Nominalization of opening verbs	4%
Two-action descriptions of taking and opening	2%
<i>afero</i> ‘to remove’	2%
<i>ksekapakono</i> ‘to remove the lid’	2%
<i>klino</i> ‘to close’	1%
Other	5%
Total	100%

We can see that 78% of the participants choose the verb *anigo*, which from now on will be defined with the generic term ‘to open,’ as in (54) and (55). In (54)³¹ there is partial separation of the theme, in order to remove something that blocks a passage, while in (55)³² the separation allows the agent to see the contents of the teapot. In both cases the

³⁰ Author’s translation of the original: “σηκώνω, αφαιρώ κτλ. το σκέπασμα, το κάλυμμα, το περιτύλιγμα κτλ. πράγματος για να δω τι περιέχει, για να βάλω κτ. μέσα ή να βγάλω κτ. έξω.”

³¹ Video No. 60: Open door.

³² Video No. 55: Open teapot/take lid off teapot.

separation can be reversed, since both the door and the teapot's lid can be closed. The participants' responses show that *anigo* is also used for descriptions of actions that have to do with body parts, such as the eyes and hands, as in (56) and (57) respectively.

(54) Η κοπέλα ανοίγει την
 i kopela anigi tin
 ART.SG.DEF.FEM.NOM girl open-3SG.PRS ART.SG.DEF.FEM.ACC

πόρτα.
 porta
 door
 'The girl is opening the door.'

(55) Η κοπέλα ανοίγει την
 i kopela anigi tin
 ART.SG.DEF.FEM.NOM girl open-3SG.PRS ART.SG.DEF.FEM.ACC

τσαγιέρα.
 tsagiera
 teapot
 'The girl is opening the teapot.'

(56) Άνοιξε τα μάτια της.
 anikse ta matia tis
 open-3SG.PST ART.PL.DEF.NEUT.ACC eyes her
 'She opened her eyes.'

(57) Άνοιξε την παλάμη της.
 anikse tin palami tis
 open-3SG.PST ART.SG.DEF.FEM.ACC palm her
 'She opened her palm.'

The verb *anigo* 'to open' does not encode manner or result state. Similar to breaking, cutting and tearing events described in previous chapters, manner and result state can be expressed with the use of adverbs, as in (58), or adjuncts, as in (59).

- (58) H κοπέλα ανοίγει προσεκτικά
 i kopela anigi prosektika
 ART.SG.DEF.FEM.NOM girl open-3SG.PRS carefully
- το ξύλινο κουτί.
 to ksilino kuti
 ART.SG.DEF.NEUT.ACC wooden box
 ‘The girl is opening the wooden box carefully.’
- (59) H γυναίκα ανοίγει το
 i gineka anigi to
 ART.SG.DEF.FEM.NOM woman open-3SG.PRS ART.SG.DEF.NEUT.ACC
- βιβλίο στη μέση.
 vivlio sti mesi
 book at-SG.F middle
 ‘The woman is opening the book in the middle.’

As shown in Table 10, the second most frequent verb found in opening events is the verb *vgazo* ‘to move something from a closed space to an open one, or to move something from one position to another’³³ (Dictionary of Standard Modern Greek, 1998) used by 6% of the participants. Even though in its original sense *vgazo* is defined as ‘to move,’ it has multiple senses such as ‘to remove,’³⁴ ‘to exclude’³⁵ or ‘to detach’³⁶ (Dictionary of Standard Modern Greek, 1998). As a result, it can also acquire the meaning ‘to remove,’ despite the fact that the meanings of ‘move’ and ‘remove’ are different in English. Although the verb *vgazo* does not denote an opening event, it does imply a separation of things that are close together. For example, in the action of taking the top off a canister or a teapot, the top is seen as being a movable part whose

³³ Author’s translation of the original: “μετακινώ κτ. από κλειστό, εσωτερικό χώρο σε ανοιχτό, εξωτερικό / μετακινώ κτ. από μια θέση σε μια άλλη.”

³⁴ Author’s translation of the original: “αφαιρώ.”

³⁵ Author’s translation of the original: “εξαιρώ, ξεχωρίζω.”

³⁶ Author’s translation of the original: “αποσπώ.”

displacement allows access to the content inside the canister or teapot, as seen in (60).

Moreover, the action is reversible.

(60) Βγάζει το καπάκι μιας
vgazi to karaki mias
take.off-3SG.PRS ART.SG.DEF.NEUT.ACC lid ART.SG.INDF.F.GEN

τσαγιέρας.
tsagieras
teapot
'(He/she) is taking off the lid of a teapot.'

Nominalization structures are found in 4% of the responses, as Table 10 illustrates.

As noted in previous sections, the methodology used for the study of these structures in this thesis does not provide much information on the reason why participants use them so often. Similar to previous findings, nominalizations used for descriptions of opening events do not show any correlation to semantic features such as manner, instrument or change of state of the theme. However, no other study on separation events describes findings on similar structures. Nominalization for opening events is formed in the same way as found in previous sections, as (61) shows.

(61) Άνοιγμα κουτιού.
anigma kutiu
opening box-SG.GEN
'(The) opening (of the) box.'

Two-action descriptions of opening verbs are found in 2% of the data, as seen in Table 10. These structures are formed with the use of two verbs representing two actions taking place one after the other. The first action involves the action of taking or touching the semantic theme and the second shows the action of opening, as in (62). No correlation

is found between the use of two-action descriptions and semantic features such as instrument, manner or change of state of the semantic theme.

- (62) Παίρνει το ψαλίδι και
 pernei to psalidi ke
 take-3SG.PRS ART.SG.DEF.NEUT.ACC scissor and
- το ανοίγει.
 to anigi
 ART.SG.DEF.NEUT.ACC open-3SG.PRS
 ‘(He/she) is taking the scissor and he/she is opening it.’

The fifth most frequent verb, as Table 10 shows, is *afero*, ‘to take off or remove something from somewhere’³⁷ (Dictionary of Standard Modern Greek, 1998). It is found in 2% of the participants’ responses. The sense of the verb *afero* entails the existence of a theme whose part(s) can be partially or completely removed by an agent. It denotes a separation that reveals some part of the theme or gives access to a part of the theme. Participants use the verb *afero* for descriptions of actions that include the removal of a lid or cover from a theme, as in (63).

- (63) Αφαιρεί το καπάκι από
 aferi to karaki apo
 remove-3SG.PRS ART.SG.DEF.NEUT.ACC lid from
- ένα κουτί.
 ena kuti
 ART.SG.INDF.NEUT.ACC box
 ‘(He/she) is removing the lid from a box.’

Apart from the five most frequent verbs in Table 10, the verb *ksekapakono* ‘to take lid off’ presents an interesting semantic structure. It is used by 2% of the participants to

³⁷ Author’s translation of the original: “βγάζω, παίρνω κτ. από κάπου.”

describe exclusively actions of removal of a lid. The verb *ksekapakono* is formed with the addition of the prefix *kse-*, which adds the sense of reversal of the action, to the verb *kapakono* ‘to cover something with a lid’³⁸ (Dictionary of Standard Modern Greek, 1998). The addition of the prefix *kse-* changes the sense of the verb *kapakono* ‘to cover with a lid’ to *ksekapakono* ‘to take the lid off,’ as in (64).

- (64) Ξεκαπακώνει την τσαγιέρα.
 ksekapakoni tin tsagiera.
 take.lid.off-3SG.PRS ART.SG.DEF.F.ACC teapot
 ‘(He/she) is taking the lid off of the teapot.’

In this section, I study the semantic structures of the five most frequent verbs and structures for opening events, as found in the data shown in Table 10. The generic verb *anigo* ‘to open’ is found in the majority of the responses. The verb *vgazo* ‘to move, to remove’ can be used for descriptions of opening events that express the separation of things which are close together. The verb *afero* ‘to remove’ is mainly used for the removal of a lid or cover, while the verb *ksekapakono* ‘to take lid off’ can only be used for actions depicting the separation of a lid, since the prefix *kse-* entails the reversal of the action of covering something with the lid.

5.2 Peeling Events

In this section, I look into the five most frequent verbs and structures describing actions of peeling as presented in Table 11. I reach the conclusion that native speakers describe actions of peeling with the verb *ksefludizo* ‘to peel’ which is not found in other types of events. However, the verb *vgazo* ‘to move, to remove’ appears not only in

³⁸ Author’s translation of the original: “σκεπάζω κτ. με καπάκι.”

descriptions of opening events as previously discussed, but also in descriptions of peeling events.

Since no definition is provided by Majid et al. for a peeling event, I define it as the separation of an object’s outer layer or cover from its main body. The object retains its original shape or form after the separation has taken place. Table 11 presents verbs and structures used to describe actions of peeling.

Table 11

Verbs and Structures Describing Peeling Events

Verbs and structures	Frequency
<i>ksefludizo</i> ‘to peel’	57%
<i>katharizo</i> ‘to clean’	25%
Nominalization of peeling verbs	6%
<i>vgazo</i> ‘to remove’	4%
<i>apofliono</i> ‘to remove the skin’	4%
<i>afero</i> ‘to remove’	3%
Other	1%
Total	100%

A peeling event in Modern Greek is mainly expressed with the verb *ksefludizo* ‘to remove, to take the skin off of something, usually without the use of a tool or other instrument’³⁹ (Dictionary of Standard Modern Greek, 1998). As seen in Table 11, 56% of the participants describe the actions with the verb *ksefludizo*. By its definition, the sense of *ksefludizo*, which from now on will be defined with the generic term ‘to peel,’ entails the hands as the instrument. The separation could be partial or complete, but not reversible, while the theme maintains its initial form in both cases. The verb derived from

³⁹ Author’s translation of the original: “αφαιρώ, βγάζω τη φλούδα από κτ., συνήθ. χωρίς τη χρήση μαχαιριού ή άλλου εργαλείου.”

by washing, rubbing, shaking or sweeping⁴⁰ (Dictionary of Standard Modern Greek, 1998). Its secondary sense is defined as ‘to remove unwanted matter/substances from something⁴¹’ (Dictionary of Standard Modern Greek, 1998). In everyday language, it is typical for a Greek native speaker to describe an action of peeling fruit or vegetables using the verb *katharizo* instead of *ksefludizo*, as seen in (68) and (69). The outer layer/skin of a fruit is seen as an unnecessary part that needs to be removed, in order to reach the edible part. The type of skin and how easy it is to remove does not affect the choice of the verb. For example, a banana is easier to peel than an orange. However, the verb *katharizo* is found in responses for both fruit. The videos do not depict actions of peeling fruit or vegetables with harder-to-remove skin. Nevertheless, *katharizo* is used in cases which the action of peeling cannot be performed by hands and a tool is required, such as with an apple or a potato. Furthermore, with fruit such as a melon or watermelon whose skin is hard to remove, the verb *kovo* ‘to cut’ is preferred.

(68) Καθαρίζει το πορτοκάλι.
katharizi to portokali
clean-3SG.PRS ART.SG.DEF.NEUT.ACC orange
‘(He/she) is peeling the orange.’

(69) Καθαρίζει την μπανάνα.
katharizi tin banana
clean-3SG.PRS ART.SG.DEF.F.ACC banana
‘(He/she) is peeling the banana.’

⁴⁰ Author’s translation of the original: “κάνω κτ. καθαρό, βγάζω τη βρομιά ή απομακρύνω ό,τι άχρηστο υπάρχει με πλύσιμο, τρίψιμο, τίνιγμα ή σκούπισμα.”

⁴¹ Author’s translation of the original: “αφαιρώ από κτ. τις ξένες ή τις άχρηστες ουσίες.”

The verb *vgazo* ‘to move something from a closed space to an open one, or to move something from one position to another’⁴² (Dictionary of Standard Modern Greek, 1998), as previously noted, has multiple senses and is widely used in the Greek language. Apart from its use with actions of opening, as discussed in Section 5.1, it is the fourth most frequent verb found in 4% of the responses for the description of actions of peeling, as Table 11 demonstrates. In this case, it expresses the removal of the skin of the fruit, and it denotes the separation of an outer layer from the theme, as seen in (70).

(70)	Βγάζει	τη	φλούδα	από
	vgazi	ti	fluda	apo
	remove-3SG.PRS	ART.SG.DEF.F.ACC	skin	of
	το		πορτοκάλι.	
	to		portokali	
	ART.SG.DEF.NEUT.ACC		orange	
	‘(He/she) removes the skin of the orange.’			

The fifth most frequent verb found in Table 11 is the verb *apofliono* ‘to remove the skin of a fruit/vegetable with a tool’⁴³ (Dictionary of Standard Modern Greek, 1998) found in 4% of the data, as in (71). The verb derives from the noun *fluda* ‘fruit’s skin or outer layer’ and the addition of the prefix *apo-*. It encodes the result state and nature of the theme. *Apofliono* can only be used for an action of peeling that involves fruit or vegetables. It is ungrammatical to use it with themes such as a person’s skin or a wall.

⁴² Author’s translation of the original: “μετακινώ κτ. από κλειστό, εσωτερικό χώρο σε ανοιχτό, εξωτερικό / μετακινώ κτ. από μια θέση σε μια άλλη.”

⁴³ Author’s translation from the original definition, which was as follows “αφαιρώ με μηχανικά μέσα τη φλούδα φυτού ή καρπού.”

- (71) Αποφλοιώνω.
 apofliono
 take.skin.off-1SG.PRS
 ‘(I) am taking the skin off.’

Nominalization structures are third in preference in the participants’ responses. They are found in descriptions of peeling events in 6% of the data, as seen in Table 11. No correlation exists between their use in peeling events and semantic features such as manner, instrument or result state of the semantic theme. As discussed in previous sections, a study focused on the use of nominalizations could shed more light on the reasons behind the participants’ preference for such structures. Nominalizations for peeling events are formed in the same way as seen in previous sections, as in (72).

- (72) Ξεφλούδισμα μπανάνας.
 ksefludisma bananas
 peeling banana-SG.GEN
 ‘(The) peeling (of the) banana.’

In this section, I show that in Modern Greek, peeling events are described mainly with the verb *ksefludizo* ‘to peel.’ However, the verb *vgazo* ‘to remove’ shows up both in peeling and opening events. Even though it is found in small percentages of responses in both cases, 6% in opening and 4% in peeling actions, we can assume that there is a tendency among Greek native speakers to group actions of peeling and opening together. The verb *katharizo* is mostly preferred in everyday language usage and in cases which the use of tool is necessary for the removal of the skin. The verb *apofliono* is specifically used for actions of peeling fruit or vegetables, but cannot be used for the peeling of skin or the wall.

5.3 Events of Pulling Apart

In this section, I study the semantic structures of events of pulling apart as found in the participants' responses. I conclude that the verb *vgazo* 'to move, to remove,' found previously in descriptions of opening and peeling events, is the verb mainly used in the majority of the data. The rest of the verbs describing these actions have similar senses, and therefore, cause ambiguity in the participants' choice of verbs. Majid et al. (2008) do not provide a definition of a pulling apart event, so I define pulling apart actions as the separation of a theme by hands. The theme is usually made of material that can be easily separated in this way. The action can include more than one theme which are connected or stuck together, in which case the application of force is required in order to separate them. Actions of pulling apart describe a reversible separation during which the theme does not always lose its initial form after the separation has taken place, or if it does, it can still be identified by its parts. Table 12 shows the verbs that participants have used for the description of pulling apart actions.

Table 12

Verbs Describing Pulling Apart Events

Verbs	Frequency
<i>vgazo</i> 'to remove'	39%
<i>diaxorizo</i> 'to separate'	29%
<i>ksexorizo</i> 'to separate'	23%
<i>xorizo</i> 'to separate'	9%
Total	100%

As Table 12 shows, no verb is used by the overwhelming majority of participants for an action of pulling apart. Therefore, we can assume that no specific verb expresses a

The verb *ksexorizo* encodes a separation that sets apart the part of theme that is separated, as in (75). The verb *xorizo* denotes an action of removing a part from a whole or removing a theme stuck on another theme, as (76) demonstrates.

(74) Διαχωρίζει τα ποτήρια.
 diaxorizi ta potiria
 separate-3SG.PRS ART.PL.DEF.NEUT.ACC glasses
 ‘(He/she) is pulling the glasses apart.’ (lit. he/she is separating the glasses.)

(75) Η κοπέλα ξεχωρίζει
 i kopela ksexorizi
 ART.SG.DEF.FEM.NOM girl set.apart-3SG.PRS

 τα ποτήρια.
 ta potiria
 ART.PL.DEF.NEUT.ACC glasses
 ‘The girl is separating the glasses.’

(76) Χωρίζει δύο κύπελλα.
 xorizi dio kipela
 separate-3SG.PRS two cups
 ‘(He/she) is pulling apart two cups.’ (lit. he/she is separating two cups.)

Through the study of pulling apart events, I show that actions of pulling apart in Modern Greek are mainly described with the verb *vgazo* ‘to remove,’ which is also found in descriptions of actions of opening and peeling. The three verbs *ksexorizo*, *diaxorizo*, and *xorizo* found in the data have similar senses, so we cannot be certain whether the choice of verb is random or is based on the participants’ knowledge of the exact meaning of the verbs. Due to the fact that these findings are based on data gathered from only one video, we cannot make broader generalizations for tendencies on pulling apart events.

In Section 5, I study opening, tearing and pulling apart events. Each event is mainly described with one verb, *anigo* ‘to open’ in opening events, *ksefludizo* ‘to peel’ in peeling events, and *vgazo* ‘to move, to remove’ in pulling apart events. However, *vgazo* is found

in descriptions of all three types of events, which is attributed to the multiple senses the verb can acquire. Even though there are data from only one video on pulling events, we could assume that the verb *vgazo* shared among the three types of events shows a tendency for Greek speakers to group together opening, tearing and pulling apart events. Further studies on the three events will offer a concrete conclusion on the way Modern Greek groups these types of actions.

6. Spontaneous Events of Separation

A separation of a theme that takes place without an agent, who is causing the theme to change its state, is a spontaneous separation. The agent causing the separation is unknown or not mentioned. Majid et al. (2008) include four videos of spontaneous actions in their cross-linguistic study. In video 8 a piece of cloth tears spontaneously into two pieces, in video 16 a forking branch of twig snaps spontaneously off, in video 17 a carrot snaps spontaneously, and in video 46 a rope parts spontaneously. Nevertheless, they do not provide much information in their study regarding general tendencies among different languages for these types of separation. A more detailed analysis for spontaneous actions is found in individual studies of the languages participating in Majid et al.'s study. In this section, I take a brief look into spontaneous actions of separation in Modern Greek as found in the data. I conclude that word order affects the meaning of verbs that are not inflected for middle voice.

As previously discussed, middle voice is used for actions that do not include an agent. As described in Section 1.2, in Modern Greek most verbs are inflected for middle voice in the intransitive form. The intransitive use of the verb *spao* 'to break' requires an entity, usually a theme, as an undergoer which loses its structural integrity with the application of force. The responsible agent that causes this change of state is either not mentioned explicitly or is unknown. Verbs such as *spao* maintain the active voice inflection in both transitive and intransitive forms. The use of middle voice inflection with *spao* or similar verbs such as *anigo* 'to open' is ungrammatical. This means that in the third person singular *spao* becomes *spai* not only in the transitive, but also in the intransitive form.

- (80) Κόπηκε το σκοινί.
 kopike to skini
 cut-MID.3SG.PST ART.SG.DEF.NEUT.NOM rope
 ‘The rope snapped.’
- (81) Το ύφασμα σκίζεται.
 to ifasma skizete
 ART.SG.DEF.NEUT.NOM cloth tear-MID.3SG.PRS
 ‘The cloth is being torn.’
- (82) Σκίζεται ένα ύφασμα.
 skizete ena ifasma
 tear-MID.3SG.PRS ART.SG.INDF.NEUT.ACC cloth
 ‘A cloth is being torn.’

From the study of spontaneous events of separation, I conclude that word order affects the meaning of the verbs when the middle voice inflection on the verbs is absent. Therefore, syntax plays an important role in the expression of spontaneous events in Modern Greek. Since the current thesis does not examine syntactic structures of separation events, further studies might help in providing more detailed information on how syntactic structures interact with the semantic structures of separation verbs.

7. Conclusion

To reiterate, in this thesis I study the semantic structures of four main types of events in Modern Greek based on a cross-linguistic study on separation events conducted by Majid et al. (2008). More specifically, I look into breaking, cutting, tearing and opening events, while taking a brief look into peeling, pulling apart and spontaneous events. This is the first study on separation events with a large number of participants among the ones that have been part of Majid et al.'s cross-linguistic study. As a result, enough data are gathered from Modern Greek to offer more concrete observations and insights into the semantic structures of separation verbs for this language compared to similar studies. Verbs of separation in Modern Greek encode manner, instrument, change of state and result state, either as part of their sense or with the addition of adverbs and adjuncts. More specifically, breaking verbs encode mainly manner/intensity, change of state and result state of the theme, while cutting verbs encode instrument (either a tool or the hands) and result state. Thus, C&B verbs in Modern Greek express semantic features similar to the ones found in the languages studied so far. In addition, the material of the theme seems to play an important role in the choice of the verb, as the separation of a cloth is only described with *tearing* and *cutting* verbs, but not with *breaking* verbs.

However, despite the shared semantic features discussed above, there are some interesting deviations from Majid et al.'s cross-linguistic tendencies. I demonstrate that Modern Greek does not distinguish between actions of snapping and smashing, a rare tendency also found in Hindi and Tamil (Narasimhan, 2007). Therefore, it does not comply with features of Majid et al.'s Dimension 3, since the same verb *spao* 'to break'

can be used to describe both types of actions. This semantic feature shared with only two South Asian languages shows the complexity with which C&B events are expressed in Modern Greek. In addition, even though the generic verb *sxizo* ‘to tear’ is mainly used for the description of actions of tearing, Greek native speakers use *kovo* ‘to cut’ and *sxizo* ‘to tear’ interchangeably for both types of actions when the theme being separated is a cloth. A slightly similar feature is found in a study of Yeli Dnye (Levinson, 2007), in which the a verb is used for both tearing and carrot-cutting actions. This makes Modern Greek one of a few languages studied so far that present such a rare distinction.

Furthermore, I show that Greek native speakers use the verb *vgazo* ‘to move, to remove’ for events of opening, peeling and pulling apart, and therefore, group together these events. In addition, word order in combination with morphology seems to play an important role in distinguishing between induced and spontaneous events. The middle voice affix indicates the verb’s intransitive form in spontaneous events. However, specific verbs, such as *spao* ‘to break’ do not carry this affix in the intransitive form. Therefore, middle voice constructions can cause ambiguity, unless a S-V word order is used. Moreover, nominalization structures are found often among the five most frequent structures in the data for almost all types of events. However, they do not demonstrate any correlation with semantic features discussed in the study.

Although the large amount of data for this study allows for a detailed analysis of separation events in Modern Greek, further research would shed more light on specific semantic and syntactic structures of the language. The Greek language has been studied mainly for its morphological and syntactic structures. This is one of the few studies on

the verbs' semantic structures, and the first detailed study of separation events in Modern Greek. Yet, more research on the semantic features of Greek verbs is needed in order to acquire a better understanding on how these semantic structures interact with the morphology and syntax of the language.

References

- Alexiadou, A. (2009). On the role of syntactic locality in morphological processes: The case of (Greek) derived nominals. *Quantification, Definiteness and Nominalization*, 253-280. Oxford University Press.
- Ameke, F. K., & Essegbey, J. (2007). Cut and break verbs in Ewe and the causative alternation construction. *Cognitive Linguistics*, 18(2), 241-250.
- Dictionary of Standard Modern Greek (1998) Retrieved from http://www.greek-language.gr/greekLang/modern_greek/tools/lexica/triantafyllides/index.html
- Bohnemeyer, J., Bowerman, M., & Brown, P. (2001). Cut and break clips. In S. C. Levinson, & N. J. Enfield (Eds.), *Manual for the field season 2001*, 90-96. Nijmegen: Max Planck Institute for Psycholinguistics. doi:10.17617/2.874626
- Bohnemeyer, J. (2007). Morpholexical transparency and the argument structure of verbs of cutting and breaking. *Cognitive Linguistics*, 18(2), 153-177. Linguistics and Language Behavior Abstracts (LLBA)
- Bowerman, M. (2005). Why can't you "open" a nut or "break" a cooked noodle? Learning covert object categories in action word meanings. In *Building object categories in developmental time*, 227-262. Psychology Press.
- Brown, P. (2007). 'She had just cut/broken off her head': Cutting and breaking verbs in Tzeltal. *Cognitive Linguistics*, 18(2), 319-330. doi.org/10.1515/COG.2007.019
- Efthymiou, A. (2011). The semantics of verb-forming suffixes in Modern Greek. *Selected Papers on Theoretical and Applied Linguistics*, 19, 175-184. Retrieved from <http://ejournals.lib.auth.gr/thal/article/view/5495>
- Fillmore, C.J. (1970) The grammar of hitting and breaking. In R.A. Jacobs and P.S. Rosenbaum (Eds.), *Readings in English Transformational Grammar* (pp. 120-133). Waltham, MA: Ginn-Blaisdell.
- Hale, K., & Keyser, S. J. (1987). A view from the middle. *Lexicon Project Working papers 10*. Center for Cognitive Science, Cambridge, MA: MIT Press.
- Hale, K., & Keyser, S. J. (1988). Explaining and constraining the English middle. In *Studies in Generative Approach to Aspect, Lexicon Project Working Papers 10. MIT Working Papers in Linguistics*.
- Kroeger, P. (2010). The grammar of hitting, breaking, and cutting in Kimaragang Dusun. *Oceanic Linguistics*, 49(1), 1-20.

- Levin, B. (1993). *English verb classes and alternations: A preliminary investigation*. University of Chicago Press.
- Levin, B., & Hovav, M. R. (1995). *Unaccusativity: At the syntax-lexical semantics interface* (Vol. 26). MIT Press.
- Levinson, S. C. (2007). Cut and break verbs in Yéli Dnye, the Papuan language of Rossel Island. *Cognitive Linguistics*, 18(2), 207-218.
- Lüpke, F. (2007). ‘Smash it again, Sam’: Verbs of cutting and breaking in Jalonke. *Cognitive Linguistics*, 18(2), 251-261.
- Majid, A., Gullberg, M., Van Staden, M., & Bowerman, M. (2007). How similar are semantic categories in closely related languages? A comparison of cutting and breaking in four Germanic languages. *Cognitive Linguistics*, 18(2), 179-194. doi.org/10.1515/COG.2007.007
- Majid, A., Boster, J. S., & Bowerman, M. (2008). The cross-linguistic categorization of everyday events: A study of cutting and breaking. *Cognition*, 109(2), 235-250. doi.org/10.1016/j.cognition.2008.08.009
- Manney, L. (1993). *Middle voice in modern Greek*. Retrieved from ProQuest Dissertations & Theses Global: The Humanities and Social Sciences Collection. (304056166).
- Narasimhan, B. (2007). Cutting, breaking, and tearing verbs in Hindi and Tamil. *Cognitive Linguistics*, 18(2), 195-205.
- Pye, C. (1993). Breaking concepts: Constraining predicate argument structure. In *Kansas Linguistics Workshop, Lawrence, Kansas, USA*.
- Pye, C., Loeb, D. F., & Pao, Y. Y. (1996). The acquisition of breaking and cutting. In *The proceedings of the twenty-seventh annual child language research forum*, 227-236. Stanford, CA: Center for the Study of Language and Information.
- Pye, C. (1996). K’iche’ Maya verbs of breaking and cutting. In Goodell, Melissa and Dong Ik Choi (eds.), *Kansas Working Papers in Linguistics 21*. Lawrence, KS: University of Kansas, 87–98.
- Simons, Gary F., & Charles D. Fennig (eds.). 2018. *Ethnologue: languages of the world, Twenty-first edition*. Dallas, Texas: SIL International.

APPENDIX A

In this appendix are listed the descriptions of the 61 videos as found in Majid et al. (2008) cross-linguistic study. The videos were used for the elicitation of the data for the current thesis. The videos are available for download on the Max Planck Institute for Psycholinguistics website. They are listed as Cut and break clips, in S. C. Levinson, & N. J. Enfield (Eds.) in the Manual for the field season (2001), by Bohnermeyer, J., Bowerman, M., & Brown, P. (2001)

1. Tear cloth into two pieces by hand.
2. Cut rope stretched between two tables with single downward blow of chisel.
3. Hack branch off tree with machete.
4. Chop cloth stretched between two tables with repeated intense knife blows.
5. Break stick over knee several times with intensity.
6. Chop multiple carrots crossways with big knife with intensity.
7. Push chair back from table.
8. Piece of cloth tears spontaneously into two pieces.
9. Slice carrot lengthwise with knife into two pieces.
10. Slice carrot across into multiple pieces with knife.
11. Pull two paper cups apart by hand.
12. Cut strip of cloth stretched between two people's hands in two.
13. Cut rope stretched between two tables with blow of axe.
14. Make single incision in melon with knife.
15. Saw stick propped between two tables in half.
16. Forking branch of twig snaps spontaneously off.
17. Carrot snaps spontaneously.
18. Cut finger accidentally while cutting orange.
19. Snap twig with two hands.
20. Cut single branch off twig with sawing motion of knife.
21. Smash carrot into several fragments with hammer.
22. Take top off pen.
23. Chop cloth stretched between two tables into two pieces with two blows of hammer.
24. Cut rope in two with scissors.
25. Snap twig with two hands, but it doesn't come apart.
26. Cut carrot crossways into two pieces with a couple of sawing motions with knife.
27. Cut hair with scissors.
28. Cut fish into three pieces with sawing motion of knife.
29. Peel an orange almost completely by hand.
30. Peel a banana completely by hand.
31. Smash a stick into several fragments with single blow of hammer.
32. Cut carrot in half crossways with single karate-chop of hand.
33. Open a book.
34. Chop cloth stretched between two tables with single karate-chop of hand.
35. Break yarn into many pieces with fury.

36. Tear cloth about half-way through with two hands.
37. Cut carrot in half lengthwise with single blow of axe.
38. Break single piece of yarn by hand.
39. Smash flower pot with single blow of hammer.
40. Smash plate with single blow of hammer.
41. Open a hinged box.
42. Break vertically-held stick with single karate-chop of hand.
43. Cut carrot crossways into two pieces with single blow of chisel.
44. Open cannister by twisting top slightly and lifting it off.
45. Poke hole in cloth stretched between two tables with a twig.
46. Rope parts spontaneously, sound of a single chop.
47. Open hand.
48. Chop branch repeatedly with axe, both lengthwise and crosswise, until a piece comes off.
49. Cut rope in two with knife.
50. Chop rope stretched between two tables in two with repeated blows of hammer.
51. Split melon in two with single knife blow, followed by pushing halves apart by hand.
52. Open mouth.
53. Break stick in two with single downward blow of chisel.
54. Cut carrot in half crosswise with single blow of axe.
55. Open teapot/take lid off teapot.
56. Cut cloth stretched between two tables in two with scissors.
57. Snap carrot with two hands.
58. Open eyes.
59. Open scissors.
60. Open door.
61. Break rope stretched between two tables with single karate-chop of hand.