

DISPOSITIONAL MIDDLE CONSTRUCTIONS

ON THE COMPLEX EVENTIVE STRUCTURE OF
DISPOSITIONAL MIDDLE CONSTRUCTIONS

BY
OLENA KIT, B.Arts Sc.

A THESIS
SUBMITTED TO THE DEPARTMENT OF LINGUISTICS & LANGUAGES
AND THE SCHOOL OF GRADUATE STUDIES
OF MCMASTER UNIVERSITY
IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF SCIENCE

© Copyright by Olena Kit, July 2014
All Rights Reserved

Master of Science (2014)
(Linguistics & Languages)

McMaster University
Hamilton, Ontario, Canada

TITLE: On the complex eventive structure of dispositional middle constructions

AUTHOR: Olena Kit
B.Arts Sc.(McMaster University)

SUPERVISOR: Dr. Ivona Kučerová

NUMBER OF PAGES: vi, 60

Abstract

This thesis is concerned with the syntactic and semantic properties of a dispositional middle construction. Building on new empirical observations, I argue for a novel derivational account of the middle construction, namely that it has a complex eventive structure. This proposal contrasts with existing analyses that can be divided into syntactically uniform approaches and semantically uniform approaches. Crucially, existing analyses have failed to address the fact that only transitive activity and accomplishment verbs undergo middle formation. I use this observation to argue that an eventive cause, or a CAUSE head, is a defining structural feature of a middle construction. Furthermore, I argue that the middle construction does not project the understood agent in syntax and the understood theme is base-generated in the internal argument position. The desired surface structure arises via movement of the understood theme, which creates a linearizable structure. The complex eventive structure argued for in this thesis not only captures the syntactic properties of a middle construction, but it also serves as the source of a dispositional interpretation, which is one of the characteristic properties of a middle construction.

Acknowledgements

Thank you to my supervisor, Ivona Kučerová, for being patient, sharing her knowledge, inspiring discussions, and teaching me about academic rigour. I would like to express my gratitude to my committee member, Magda Stroinska, for always putting trust in my work and being a source of optimism. I would also like to thank the members of the *Syntax Lab* at McMaster University for all their support: Malaree Baraniuk, Jitka Bartošová, Cassandra Chapman, Diane Doran, and Rachael Hardy.

Contents

Abstract	iii
Acknowledgements	iv
1 What is a dispositional middle construction?	1
1.1 Key properties of middle constructions	2
1.1.1 The understood agent	3
1.1.2 The verb	6
1.1.3 The understood theme	8
1.1.4 Obligatory modification	9
1.1.5 Dispositional interpretation	10
1.2 Summary of the thesis	11
2 Existing analyses of middle constructions	13
2.1 Syntactically uniform approaches	16
2.2 Semantically uniform approaches	22
2.3 Chapter summary	26
3 A new derivational approach	29
3.1 The syntactic structure of accomplishment and activity verbs	31
3.2 The status of CAUSE in middle constructions	32
3.3 Analysis	36
3.3.1 The mechanics of linearization	37
3.3.2 Deriving middle constructions with CAUSE	39
3.3.3 Deriving middle constructions without CAUSE	40

3.4	Modification of the middle construction	41
3.5	Chapter summary	42
4	Consequences of a complex eventive structure	44
4.1	Complex eventive structure	45
4.2	Two propositional levels	46
4.3	Categorical predication	48
4.4	Dispositional ascriptions	49
4.5	Chapter summary	50
5	Conclusions	51

Chapter 1

What is a dispositional middle construction?

The so-called dispositional middle construction is a generic statement as in example (1), where only the understood theme of the verb *read* surfaces. This is in contrast with the transitive sentence in example (2), where the nominal phrase *the book* is the object and surfaces in internal argument position.

- (1) The book reads easily.
- (2) Mary reads the book easily.

Crucially, the understood theme is ascribed a dispositional property (Lekakou, 2005).

The objective of this thesis is to investigate the syntactic and semantic properties of the middle construction. The crucial piece of the puzzle will be the observation that only transitive activity (4) and accomplishment (6) verbs undergo middle formation, whereas transitive state (3) and achievement (5) verbs are illicit (Fagan, 1992).

- (3) *Wine loves easily. *State*
- (4) The car drives easily. *Activity*
- (5) *The painting notices easily. *Achievement*
- (6) Books read easily. *Accomplishment*

Crucially, existing syntactic analyses (Keyser & Roeper, 1984; Roberts, 1987; Fagan, 1992; Stroik, 1992; Hoekstra & Roberts, 1993; Ackema & Schoorlemmer, 1994;

Kempchinsky, 2006; Medová, 2009; Ahn & Sailor, 2010; Jones & Levine, 2010) do not address the fact that only transitive activity and accomplishment verbs can undergo middle formation, whereas transitive state and achievement verbs are unacceptable. Furthermore, current semantic analyses (Massam, 1992; Steinbach, 2002; Lekakou, 2005) also do not contribute to the observation that only activity and accomplishment verbs undergo middle formation. I pursue the idea that the restriction on activity and accomplishment verbs only undergoing middle formation is the key to understanding how middle constructions are derived. I will argue that middle constructions are a passive-like structure in that they lack an external argument. But unlike passives, they form a complex eventive structure. Importantly, I will argue that the complex eventive structure is the source of the attested dispositional ability reading. In particular, I will argue that middle constructions involve movement of the internal argument. But unlike other instances of argument movement, this movement arises for interface requirements, namely to create a structure that is linearizable. In addition, I will argue that the obligatory modification of middle constructions is not a syntactic requirement, but a semantic one.

1.1 Key properties of middle constructions

The purpose of this thesis is to establish the empirical and theoretical generalizations of middle constructions and provide an account of them. I will show that middle constructions can be explained by the empirical observations described in (7).

(7) *Empirical descriptions of middle constructions*

- a. Only transitive activity and accomplishment verbs undergo middle formation (Fagan, 1992).
- b. Middle construction verbs are restricted to the simple present tense or the imperfective aspect (Keyser & Roeper, 1984).¹
- c. Middle constructions are generic sentences that are stative, non-episodic, and express potentiality or capability (Keyser & Roeper, 1984; Fagan,

¹I will illustrate in Section 1.1.2 that this does not always hold true as specific contexts may change the inherent property of the understood theme allowing the middle construction to be formed in the past and future tenses.

1992; Steinbach, 2002; Ackema & Schoorlemmer, 2005).

- d. Middle constructions ascribe a disposition to the understood theme (Lekakou, 2005).

Furthermore, I will argue for the following theoretical claims:

- (8) *Theoretical statements regarding the structure of middle constructions*
- a. The understood agent of the verb is not syntactically present.
 - b. Modification of the middle construction is not syntactically required.

1.1.1 The understood agent

Let us recall example (1), repeated in (9), where only the underlying theme surfaces as the new syntactic subject. The understood agent is not overtly realized.

- (9) The book reads easily.

This raises the question of whether the understood agent is present covertly or not at all in the structure. In order to determine the status of the understood agent, I follow Chomsky (1981), Manzini (1983), and Jaeggli (1986) who argue that we can identify the understood agent using syntactic elements that are uniquely licensed by the understood agent. Such syntactic elements include agentive by-phrases, subject-oriented adverbs, subject control, and purpose clauses. Thus, I use these diagnostics, namely the adjunction of an agentive by-phrase (10), a subject-oriented adverb (11), subject control (12), and control into purpose clauses (13), to determine whether the understood agent is syntactically present.

- (10) *The book reads easily by the students. *Agentive by-phrase*
- (11) *The car drives carefully. *Subject-oriented adverb*
- (12) *The bread cuts easily drunk. (The agent is drunk) *Subject control*
- (13) *Such texts translate easily to win the Translator's Prize. *Purpose clauses*
(Ackema & Schoorlemmer, 2005, p. 185, (159b))

Since all the examples above are illicit, this data provides evidence for the fact that there is no agent syntactically represented in a middle construction, even covertly.² However, note that non-agentive by-phrases, as in example (14), and for-phrases, as in example (15), are permitted.

(14) The book reads easily with glasses. *Non-agentive by-phrase*

(15) The bread cuts easily for John. *For-phrase*

The acceptability of a non-agentive by-phrase or a for-phrase in middle construction shows that adjuncts are restricted by semantics of the adjuncts. I argue that the oblique argument in example (14) is an instrument because when every argument of the verb is syntactically expressed, the non-agentive by-phrase is still grammatical as seen in example (16). In addition, I argue the oblique argument in example (15) is an experiencer because it can be paraphrased as example (17).

(16) Mary read the book easily with glasses.

(17) From John's perspective, the bread cuts easily.

Crucially both the instrument and the experiencer are not actively causing the underlying theme to undergo the event of the verb. Therefore, this data illustrates that middle constructions may combine with prepositional phrases, but only of a certain semantic type.³

Furthermore, the verb that undergoes middle formation never takes a causer as observed by Alexiadou et al. (2006), who illustrate that only a subset of verbs can form middle constructions. Crucially, verbs that do not form anticausatives disallow causers and restrict their subjects to agents and instruments.⁴ Such instances can

²Note that Lekakou (2005) presents data from Continental French that shows middle constructions license an agentive by-phrase as long as the oblique argument is of a specific type. However, this finding is controversial and is not agreed upon by all Continental French speakers. Crucially, Marelj (2004) argues agentive by-phrases are illicit for reflexive passives as well as middle constructions.

³One could argue that semantically distinct prepositional phrases are base-generated in different syntactic positions, but this does not take away from the argument about the impossibility of having an external argument or understood agent in the syntactic structure of a middle construction.

⁴Anticausative sentences are similar to middle construction in that they lack the understood theme. However, they differ in that in anticausatives the implied agent is semantically absent (Ackema & Schoorlemmer, 2005)

be illustrated by comparing anticausative examples (18), with middle constructions (19), which are taken from (Alexiadou et al., 2006, p. 6). As we can see in example (18), the verb *break* selects for an agent (18a), instrument (18b), and causer subject (18c). Thus, it can form an anticausative construction (18d).

- (18) a. The vandals broke the window. *Agent subject*
 b. The rocks broke the window. *Instrument subject*
 c. The storm broke the window. *Causer subject*
 d. The window broke. *Anticausative construction*

These findings are in contrast with the middle construction example (19), where the verb *cut* selects for an agent and instrument subject as we see in examples (19a) and (19b), respectively. Crucially the verb *cut* does not permit a causer subject (19c). Therefore, the verb cannot form an anticausative construction, as we see in example (19d), implying that there is no causer present underlyingly in the syntactic structure. Interestingly such verbs are able to undergo middle formation as seen in example (19e).

- (19) a. The baker cut the bread. *Agent subject*
 b. The knife cut the bread. *Instrument subject*
 c. *The storm cut the bread. *Causer subject*
 d. *The bread cut. *Anticausative construction*
 e. The bread cuts easily. *Middle construction*

Since the verb *cut* does not select for a causer subject, I take this evidence to further support the conclusion that middle constructions do not have a causer syntactically present.

Further evidence for the absence of an agent or causer in syntax can be seen when contrasting anticausative (20) and middle (21) constructions with the phrase *all by itself*:

- (20) The door opened all by itself. *Anticausative construction*
 (21) *The book reads easily all by itself. *Middle construction*

Keyser & Roeper (1984) note that *all by itself* means 'totally without external aid'. Since anticausative constructions are compatible with the phrase, this modifier reflects the presence of a causer (Chierchia, 2004). On the other hand, middle constructions are illicit with *all by itself*. Fagan (1992) as well as Keyser & Roeper (1984) point out that because there is an incompatibility between this phrase and middle constructions, the data asserts an external argument is responsible for bringing about the event. Thus, Fagan (1992) and Ackema & Schoorlemmer (1994) argue an implied agent is present only semantically, which is in line with the results of the syntactic tests I have presented.

1.1.2 The verb

Only transitive verbs can undergo middle formation. Ditransitive verbs are unacceptable as middle constructions as seen in examples (22) and (23) from Fagan (1992):

(22) *Money gives (to) victims of natural disasters easily.

(23) *A cup of coffee offers (to) a guest easily.

Evidently, ditransitive verbs are unable to undergo middle formation. Note that Fagan (1992) argues the second argument in the construction shifts the attention away from the new syntactic subject, which is the main focus of a middle construction. However, I would like to suggest that there is a semantic constraint on the types of verbs that can undergo middle formation.

Interestingly, not all transitive verbs can undergo middle formation. Specifically, transitive state (24) and achievement (26) verbs are illicit as a middle construction. This contrasts with transitive activity (25) and accomplishment (27) verbs that form middle constructions.

(24) *Wine loves easily. *State*

(25) The car drives easily. *Activity*

(26) *The painting notices easily. *Achievement*

(27) Books read easily. *Accomplishment*

Note that the aspectual class properties cannot account for the contrast between *buy* and *sell* as illustrated in examples (28) and (29) (Fagan, 1992).

(28) *This book buys easily.

(29) This book sells well.

Both *buy* and *sell* have the same aspectual properties. To account for the distinction, Fagan (1992) proposes that the understood theme must be held responsible for the action that the predicate expresses. For instance, the verb *buy* cannot form a middle construction, because the actions of the buyer, not the theme, are responsible for the action. This is in contrast with the verb *sell* as the theme of the verb is responsible for the act of selling (Fagan, 1992). In other words, *the book* has some properties that make it sell well. Thus, Fagan (1992) argues only transitive activity and accomplishment verbs can undergo middle formation so long as the understood theme has properties which makes it responsible. Though I agree with most of what Fagan (1992) argues for, my account of middle construction is purely syntactic. Furthermore, I am not entirely convinced of the responsibility condition as what it means to be responsible is vague. Notice this is a confound because native speakers of English argue that the verb *buy* is more of an instantaneous event, whereas the verb *sell* is more of a process. If this is true *buy* would be considered an achievement verb, and therefore should not be able to undergo middle formation.

Furthermore, the verbs of middle constructions appear in the simple present tense or the imperfective aspect depending on the language. Crucially, middle constructions are illicit in the simple past tense or progressive tense because they denote events.⁵ Specifically, the following examples, taken from Keyser & Roeper (1984), illustrate that middle constructions is not preferred in the past (30), and cannot appear in imperative (31) or progressive (32) sentences:

(30) ?Yesterday, the mayor bribed easily, according to the newspaper. *Past*

(31) *Bribe easily, bureaucrat! *Imperative*

(32) *Bureaucrats are bribing easily. *Progressive*

This data serves as a diagnostic to show middle constructions are not eventive or episodic as middle construction do not describe events, but rather a property of the

⁵Note that some speakers find the middle constructions to be grammatical with past or progressive tenses. I propose that the speakers are forcing an episodic or habitual interpretation, which is similar to properties seen in reflexive-marked passives as described in Ackema & Schoorlemmer (2005). I leave the contrast between eventive and stative middle constructions for future research.

understood theme.

Interestingly, Magda Strojinska (personal communication, July 14, 2014) points out that with a certain context a dispositional ability reading is available for a middle construction in the past, as in examples (33) and (34), as well as in the future, as in example (35).

(33) Before the scandal, the mayor bribed easily.

(34) The late mayor bribed easily.

(35) When the new law passes, bureaucrats will bribe easily.

Note that a dispositional interpretation describes an inherent property of an argument that typically does not change over time. However, we can see that when we construct a particular context, the inherent property of the argument can change. In example (34) for instance, I argue that the temporal duration of the dispositional ascription is restricted to the life of the understood theme. Thus, a middle construction can be formed in the past or future tense, so long as that explicit context allows the inherent or dispositional property to change.

1.1.3 The understood theme

Many studies (Roberts, 1987; Fagan, 1992; Ackema & Schoorlemmer, 2005, among others) argue that the understood theme or the new syntactic subject of the middle construction must be affected by the action expressed by the verb. We can use Jackendoff's (1990) test to determine whether the theme is affected or not. First, we take a transitive sentence, such as *XP V YP*. If the transitive sentence fits into the frame 'what happened to *YP* was *XP V-ed YP*', the *YP* is an affected theme. For example the verb *iron* (36) undergoes middle formation and has an affected theme. This is in contrast with the verb *know* (37), which cannot undergo middle formation and has a non-affected theme. Therefore, the verb of a middle construction must have a theme that is affected.

(36) a. John irons the shirt.

b. What happened to the shirt was John ironed it.

c. The shirt irons well.

- (37) a. The student knows the answer.
 b. *What happened to the answer was the students knew it.
 c. *The answer knows easily.

Fagan (1992) points out that there are exceptions to this constraint. For example, the verb *read* does not denote an action that may affect the theme, yet it is perfectly acceptable as a middle construction. Similarly the verb *photograph* can form a middle construction, but the inherent properties of the theme are not affected when the theme is photographed.

1.1.4 Obligatory modification

Middle constructions often come with an adverbial modifier like *easily*, as in example (38). Crucially, the middle construction only allows the presence of a manner, which is further supported by the middle constructions in (39) and (40) with *poorly* and *quickly*, respectively.

- (38) Bureaucrats bribe easily.
 (39) This product sells poorly.
 (40) The car drives quickly.

However, only certain manner adverbs can appear in middle constructions. As we previously saw, subject-oriented adverbs are illicit because there is no agent present syntactically. Thus, manner adverbs in middle constructions cannot be associated with the agent and are dependent on a property of the understood theme.

Although the middle construction typically requires an adverb as in example (41), it is not an absolute requirement. As the following examples from Lekakou (2005) show, the middle construction can be saved by a modal (42), negation (43), or focus intonation (44). See also Roberts (1987), Fagan (1992), and Ackema & Schoorlemmer (1995) for a similar observation.

- (41) *Bureaucrats bribe. *No modification*
 (42) Bureaucrats may bribe, but you never know. *Modal*
 (43) The book doesn't read. *Negation*

(44) Pine SAWS after all!

Focus intonation

In addition, Fagan (1992) presents data of middle constructions that do not require any sort of modification:

(45) This dress buttons.

(46) Ce papier se recycle.
This paper REFL recycles
'This paper is recyclable'

French

Interestingly, both examples (45) and (46) assert an ability reading where the understood theme has the ability to undergo the action of the verb. Fagan (1992) concludes that modification of the middle construction is not a syntactic requirement, but one that provides semantic or pragmatic information. This is essentially the line of reasoning I will be adopting in this thesis along with some minor modifications to this proposal. In particular, I propose that the demonstrative *This* restricts the domain in which the event holds in a similar manner that focus intonation restricts a middle construction. An investigation of this observation is beyond the scope of this thesis, but Kuroda (2003) and Cohen (2004) may provide further insight on this topic.

1.1.5 Dispositional interpretation

Descriptively, middle constructions are agreed to be a generic sentence about the understood theme (Keyser & Roeper, 1984; Fagan, 1992; Steinbach, 2002; Lekakou, 2005, among others). Although what it means to be 'generic' has been analyzed in different ways, it is crucial that middle constructions are stative, non-episodic predicates that do not express any kind of eventivity. Evidence for this comes from the fact that middle constructions do not report events and are not bounded by time (Keyser & Roeper, 1984, p. 384). Consequently, middle constructions are stative sentences that express a property.

Ackema & Schoorlemmer (2005) notes that the stative reading is accompanied by potentiality, where the middle construction expresses an understood ability of the understood theme to undergo the action of the predicate. This type of modality ascribes the intrinsic property to the understood theme resulting in the property

reading of middle constructions (Hale & Keyser, 1986). Specifically, Lekakou (2005) argues that middle constructions ascribe a dispositional property to the understood theme. A dispositional ascription is one that reports a generalization, which is true in virtue of some non-accidental property of the referent. Consider example (47):

(47) The book reads easily.

The interpretation of (47) says that *the book* is such that reading it is easy. In other words, *the book* has properties, such as being written with smooth prose or printed with large text, that enables an individual to read it easily. Crucially, it is a generalization that is true in virtue of properties inherent to *the book*, not about the abilities of individuals who read *the book*.

The genericity seen in a dispositional ascription, differs from the genericity in a habitual sentence: an universal generic reading is a habitual sentence, whereas an existential generic reading is a dispositional sentence (Krifka et al., 1995). This implies that a dispositional ascription can still hold true in the absence of any occurrence of the event, but a habitual sentence cannot be true in such an instance. Further, another crucial semantic difference is that habitual sentences generalize over the entire circumstance or event, whereas a dispositional ascription generalizes over the property of the syntactic subject (Lekakou, 2005).

1.2 Summary of the thesis

To summarize this chapter, we have seen that a middle construction is a generic sentence that ascribes a dispositional property to the understood theme. Crucially, only transitive activity and accomplishment verbs can undergo middle formation. The verb often appears in the simple present tense or in the imperfective aspect, although future and past tense can be used in specific contexts. Consequently, middle constructions are said to be stative and non-episodic sentences that express potentiality. Further, the understood agent is not syntactically present and modification of the middle construction is required to provide semantic and pragmatic information.

Ultimately, the purpose of this chapter has been to introduce the key properties of a middle construction. Although these properties are generally agreed upon, there

is debate on how we should derive the middle construction. In this thesis, I propose a novel derivational approach to middle constructions, namely that they form complex eventive structures. Though the structure is transitive-like, it is not a result of two arguments being merged in the structure. Further, I propose that the middle construction arises via movement for linearization purposes.

This paper is organized as follows: in Chapter 2, I will summarize existing analyses of middle constructions. In Chapter 3, I will present my proposal for a new derivational account of middle constructions as well as argue that obligatory modification is semantic requirement. In Chapter 4, I will discuss the consequences of a complex eventive structure. Finally in Chapter 5, I conclude with future research questions.

Chapter 2

Existing analyses of middle constructions

Cross-linguistically, middle constructions exhibit the same pattern: on the surface, transitive verbs exhibit a reduced valency where only the direct object, or the understood theme, of the verb surfaces and the sentence includes the presence of an adverb as we see in Czech (48), Dutch (49), French (50), German (51), Greek (52), Polish (53), Russian (54), Serbo-Croatian (55), Slovenian (56), Spanish (57) and Ukrainian (58).

- (48) Tahle košile se dobře žehlí. *Czech*
this shirt REFL well irons.3.SG
'It is easy to iron the shirt'.
(Medová, 2009, p. 22 (37))
- (49) Dit boek leest makelijk. *Dutch*
this book reads.3.SG easily
'This book reads easily'.
(Lekakou, 2005, p. 10 (1b))
- (50) Ce livre se lit facilement. *French*
this book REFL reads.3.SG easily
'This book reads easily'.
(Lekakou, 2005, p. 10 (1d))

- (51) Dieses Buch liest sich leicht. *German*
 this book reads.3.SG REFL easily
 'This book reads easily'.
 (Lekakou, 2005, p. 10 (1c))
- (52) Afto to vivlio ðiavazeta efkola. *Greek*
 this the book reads.NONACT.3.SG easily
 'This book reads easily'.
 (Lekakou, 2005, p. 10 (1e))
- (53) Książka czyta się przyjemnie. *Polish*
 book reads.3.SG REFL pleasantly
 'The book reads pleasantly'.
 (Lidz, 1996, p. 104 (158))
- (54) Kniga čitaet-sja legko. *Russian*
 book reads.3.SG-REFL easily
 'The book reads easily'.
 (Guhl, 2010, p. 262 (4b))
- (55) Ovaj članak se lako čita. *Serbo-Croatian*
 This article REFL easily reads.3.SG
 'This article reads easily'.
 (Marelj, 2004, p. 3 (6f))
- (56) Ta knjiga se lahko bere. *Slovenian*
 This book REFL easily reads.3.SG
 'The book reads easily'.
 (Rivero & Sheppard, 2003, p. 100 (12b))
- (57) Esta coche se conduce con facilidad. *Spanish*
 This car REFL drives.3.SG with ease
 'This car drives easily'.
 (Kempchinsky, 2006, p. 6 (16b))
- (58) Knyžka lahko čytajet'-sja. *Ukrainian*
 book easily reads.3.SG-REFL
 'The book is easy to read'.

The surface structures for the languages in the examples above can be illustrated in Table 2.1. Notably, majority of the languages have extra linguistic material in their surface structure. Greek exhibits non-active verbal morphology whereas many of the

other languages introduce a reflexive marker. In contrast, English and Dutch lack any sort of morphological marker, which makes the middle construction ambiguous when compared to another syntactic structure with one argument. Furthermore, the linear order of the elements in the surface structure does not pattern uniformly.

Table 2.1: Middle constructions across languages

Surface Structure	Language(s)
IA V ADV	English, Dutch
IA V.NONACT ADV	Greek
IA V-REFL ADV	Russian
IA ADV V-REFL	Ukrainian
IA REFL V ADV	French
IA REFL ADV V	Czech, Serbo-Croatian, Slovenian
IA V REFL ADV	German, Polish

A question that arises is whether different surface structures lead to different derivational approaches for middle constructions. A potential answer to this question is argued for in existing analyses of middle constructions. Specifically, syntactically uniform approaches (Keyser & Roeper, 1984; Roberts, 1987; Fagan, 1992; Stroik, 1992; Hoekstra & Roberts, 1993; Ackema & Schoorlemmer, 1994; Kempchinsky, 2006; Medová, 2009; Ahn & Sailor, 2010; Jones & Levine, 2010) argue for an analysis that derives middle constructions in all languages using the same syntactic mechanisms. This is in contrast with semantically uniform approaches (Massam, 1992; Steinbach, 2002; Lekakou, 2005) that argue middle constructions cross linguistically only share their semantic meaning and differ in how the middle construction is syntactically derived. In this chapter, I will illustrate the crucial elements of the families of analyses as well as identify any problematic areas. Recall, a middle construction in this thesis is defined to be a dispositional, stative sentence with no understood agent present syntactically. Further, the verb employs the present or imperfective aspect and is either a transitive activity or accomplishment verb. Finally, modification of the middle construction is required for semantic or pragmatic reasons.

2.1 Syntactically uniform approaches

The first family of derivational approaches to middle constructions is the syntactically uniform approaches, which argues middle constructions are syntactically the same cross-linguistically. These approaches differ in where the understood theme is first projected: either VP-internally (Keyser & Roeper, 1984; Roberts, 1987; Stroik, 1992; Hoekstra & Roberts, 1993; Kempchinsky, 2006; Medová, 2009; Ahn & Sailor, 2010) or in the syntactic subject position (Fagan, 1992; Ackema & Schoorlemmer, 1994; Jones & Levine, 2010).

For instance, Keyser & Roeper (1984) argue that middle constructions are derived via movement, like passives or unaccusatives where the understood theme is base-generated VP-internally and moves to the subject position. By comparing middle constructions to ergative constructions, they establish that middle constructions are lexically transitive and parallel passive constructions in how the moved noun phrase receives nominative case and the verb no longer assigns accusative case. The crucial difference is that middle constructions in English do not overtly express morphology that absorbs the accusative case or the agent theta-role, thus a null element must be employed.

An example of this type of approach to middle constructions is argued for by Roberts (1987), who assumes Baker's (1988) Uniformity of Theta Assignment Hypothesis (UTAH), given in (59).

(59) *Uniformity of Theta Assignment Hypothesis*

Identical thematic relations between items are represented by identical structural relationships between those items at the level of D-structure.

Roberts (1987) argues that if UTAH holds, middle constructions must involve syntactic derivation. In particular, middle constructions manifest thematic constancy, which allows only transitive verbs to become a middle construction. This process only allows the understood theme of the transitive verb, which is a thematically assigned argument, to move to the subject position (Roberts, 1987). Thus, the understood agent is suppressed. In particular, middle constructions do not assign an agent theta-role in syntax, rather it is present throughout the derivation semantically (Roberts, 1987). Furthermore, Roberts (1987) claims the presence of an adverb is obligatory

for the middle construction because it identifies the suppressed argument.

Both Stroik (1992) and Hoekstra & Roberts (1993) argue that the understood agent of a middle verb is present syntactically as a null element in a middle construction. Specifically, Stroik (1992) investigates middle constructions in English and Dutch. An arbitrary PRO is argued to adjoin to the VP where it is assigned the agent theta-role as seen in example (60).

(60) [$_{IP}$ bureaucrats $_i$ [$_{I'$ I [$_{VP}$ [$_{VP}$ [$_{V'}$ bribe t_i easily]] PRO]]]

As evidence for this construction, Stroik (1992) uses for-phrases (61) as well as control of embedded PRO (62).

(61) Bureaucrats bribe easily for Sam.

(62) Letters to oneself compose quickly.

Stroik (1992) argues that the understood agent can appear as PRO or as an overt argument within the for-phrase. However, recall I have argued for an analysis of the middle construction that lacks the syntactic presence of the understood agent. Furthermore, in example (62), Stroik (1992) argues that the anaphor within the syntactic subject is bound by PRO. Ackema & Schoorlemmer (1995) argue that this data is not convincing as there is not structural binding and instead it represents a case of logophoricity. Further evidence against this analysis comes from the fact that an anaphor can appear without its antecedent in non-middle constructions, such as *Letters to oneself usually stink* (Ackema & Schoorlemmer, 1995). Therefore, there is no reason to have a null element present syntactically.

Similar to Stroik (1992), Hoekstra & Roberts (1993) argue that the understood agent can be syntactically realized as *pro*, an empty category that occupies Spec-VP, as in example (63):

(63) [$_{IP}$ bureaucrats $_i$ [$_{VP}$ *pro* [$_{V'}$ bribe t_i easily]]]

The syntactic representation above shows that understood theme is base-generated in the internal argument position and is thus assigned a theta-role before moving to the subject position. Hoekstra & Roberts (1993) claim that the process of theta-identification permits the adverb to license *pro* in the middle construction. Ackema &

Schoorlemmer (1995) point out that the understood agent, or *pro*, does not manifest itself syntactically since agentive adverbs and by-phrases are illicit. Further, Hoekstra & Roberts's (1993) proposal depends on the fact that an adverb is present, yet I have previously shown that an adverb is not obligatory as the middle construction can be saved by negation, a modal, or focus intonation. Finally, arguments should be able to raise under middle formation if they lack a theta relation to the verb. As Lekakou (2005) illustrates, this syntactic account fails with Exceptional Case Marking (ECM) verbs as their middle formation is illicit. This is seen when comparing examples (64) and (65) from Roberts (1987):

- (64) These problems are considered easy at MIT. *Passive construction*
 (65) *These problems consider easy at MIT. *Middle construction*

More recently, Kempchinsky (2006) proposes that the reflexive clitic in Spanish middle constructions merges in the head of little-*v*, which is in contrast with passive sentences where the reflexive clitic appears in Spec-*v*P, following Kempchinsky (2004). The reflexive clitic in the middle construction absorbs a thematic role and consequently suspends the understood agent from projecting in syntax. Further, the understood theme, which is base-generated in the internal argument position, raises to Spec-TP (Kempchinsky, 2006). Since there is only one argument of the verb present in a middle construction, Kempchinsky (2006) argues that the generic operator, or Gen, is not able to access the understood agent, which results in a generic characterizing sentence.

Medová (2009) analyses middle constructions in Czech (66) and argues that the understood agent surfaces as the reflexive clitic in the sentence.

- (66) Tahle košile se dobře žehlí. *Czech*
 this shirt REFL well irons.3.SG
 'It is easy to iron the shirt'.
 (Medová, 2009, p. 22 (37))

In order to derive the middle construction, she follows Starke's 2005 Peeling Theory of Case (PTC). Although the middle construction pattern is captured in Czech, I argue that this proposal falls short as it cannot be extended cross-linguistically (Kit, 2013). Specifically, Medová (2009) argues for an analysis of middle constructions for Czech

where the reflexive clitic, which appears before the verb, serves as a subject that acts as the agent of the verb. Notably, her analysis fails to account for languages that have reflexive markers after the verb as a clitic or a verbal suffix. Furthermore, I have argued for an analysis of middle constructions that does not have the understood agent present in syntax. Thus, the proposal argued for by Medová (2009) cannot successfully derive a middle construction either.

Ahn & Sailor (2010) offer a syntactic analysis of middle constructions similar to analyses of passives in the sense of Collins (2005). They introduce a Voice head with a [Middle] flavour, which lacks a feature to select the understood agent of a middle construction. Specifically, Ahn & Sailor (2010) argue that the Voice head triggers the raising of *v*P to the specifier of VoiceP. After this predicate fronting, the understood theme raises to Spec-TP, or undergoes a smuggling movement (Collins, 2005). Thus, this approach utilizes two movements, differing from other movement-based approaches to middle constructions.

In contrast with A-movement approaches to middle constructions, Fagan (1992) argues that the understood agent is not syntactically present in middle constructions because agentive by-phrases and subject-oriented adverbs are prohibited. She proposes an analysis based on lexical rules where *arb*, an arbitrary operator exists in the lexicon to saturate the understood agent. This in turn, allows the understood theme to be externalized or base-generated in the subject position (Fagan, 1992). Furthermore, Fagan (1992) illustrates that there is cross-linguistic variation in regards to adverbial modification. Crucially, in English and German, modification is required for the middle construction, whereas in French an adverbial modifier is infrequent. However, there exist exceptions to this generalization as seen in examples (67) and (68).

(67) The dress buttons.

(68) This silk washes.

(McConnell-Ginet, 1994)

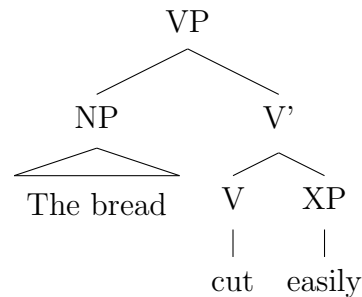
Ackema & Schoorlemmer (1994) also argue against an A-movement approach to middle constructions and in favour of a pre-syntactic derivation. They argue that the understood agent is present semantically as an implied agent. As such, *arb* saturates

the understood agent in the lexicon and the understood theme is base-generated in the subject position, resulting in no movement (Ackema & Schoorlemmer, 1994). Thus, middle constructions are said to be parasitic on unergative sentences. In addition, Ackema & Schoorlemmer (1994) state, "in a language where a middle construction is not morphologically marked it is derived presyntactically" (p. 69). In other words, a morphologically marked middle construction should have the understood agent realized in syntax. This is simply not true as there is ample evidence showing the understood agent is not present cross-linguistically. For example, a German middle construction is morphologically marked with the reflexive marker *sich*. Thus, according to Ackema & Schoorlemmer (1994), the understood agent should be present syntactically. However this is not true as a subject-oriented adverb as in example (69) cannot be licensed. In addition, we see a similar pattern in French, which has the reflexive clitic *se* before the verb in a middle construction. Crucially, when we add a purpose clause to the middle construction as in example (70), the sentence is ungrammatical. Finally, Ukrainian exhibits a reflexive verbal suffix, which means the understood agent should be present syntactically. However, as we see in example (71), the adjunction of an agentive by-phrase is illicit.

- (69) *Das Buch liest sich vorsichtig *German*
 this books reads.3.SG REFL carefully
 'The book reads carefully'.
 (Lekakou, 2005, p. 39 (78a))
- (70) *Ces racines se mangent pour maigrir. *French*
 these roots REFL eat.3.PL for lose.weight.INFIN
 'These roots are edible in order to lose weight'.
 (Lekakou, 2005, p. 26 (35))
- (71) *Knyžka lehko čytajet'-sja studentamy *Ukrainian*
 book easily read.3.SG-REFL students.INST
 'The book reads easily by the students'.

Finally, Jones & Levine (2010) analyze middle constructions and ergative constructions in English and Russian. They show that Ackema & Schoorlemmer (2005) do not correctly predict the structure of Russian middle constructions. As a solution, they propose the following syntactic structure and semantic representation for middle constructions (Jones & Levine, 2010, p. 323, (55)):

(72)

(73) $\lambda e[\text{CUT}(b)(e) \& \text{EASY}(b)(e)]$

Crucially, the syntax of a middle construction is driven by Merge of the understood theme in Spec-VP. Further, the adverb serves as a property operator, which is accessible to the understood theme. The adjunction of the adverbial to the verb generates the specifier position for the understood theme. Thus, the understood agent cannot be expressed in the middle construction as there is no need to introduce a new argument into the semantics (Jones & Levine, 2010).

In summary, syntactically uniform approaches argue that middle constructions are derived using the same syntactic mechanisms across languages. However, none of these approaches capture all the key properties of middle constructions discussed in Chapter 1. For instance, only Fagan (1992) acknowledges only transitive activity and accomplishment verbs can undergo middle formation. However, how we can restrict this observation is not discussed. Keyser & Roeper (1984) identify the middle constructions are restricted to the simple present tense as they are illicit in past, imperative or progressive sentences. Middle constructions are argued to be stative sentences (Fagan, 1992; Ackema & Schoorlemmer, 2005), and more specifically generic non-episodic sentences (Kempchinsky, 2006). Interestingly, there is debate within the family of syntactically uniform approaches about whether the understood agent is projected in syntax. Specifically, Stroik (1992), Hoekstra & Roberts (1993), and Medová (2009) argue that the understood agent is projected in syntax either as a null element or as a reflexive clitic. This is in contrast with proposals that either suppress the understood agent in the lexicon (Fagan, 1992; Ackema & Schoorlemmer, 1994) or do not project the understood agent in syntax at all (Roberts, 1987; Kempchinsky, 2006; Ahn & Sailor, 2010; Jones & Levine, 2010). Finally, Roberts (1987), Hoekstra & Roberts (1993), and Jones & Levine (2010) individually argue for an analysis where modification of the middle construction is syntactically required. This is in contrast

with Fagan (1992), who argues adverbial modification is only needed for semantic and pragmatic reasons.

2.2 Semantically uniform approaches

The second family of derivational approaches for middle constructions is the semantically uniform approaches. Specifically, Massam (1992), Steinbach (2002), and Lekakou (2005) all stress the fact that semantic properties of middle constructions are paramount to a successful derivational approach. Further, they argue in favour of middle constructions being syntactically diverse across languages.

Massam (1992) argues that the a null modal element, which appears in the inflectional projection, defines a middle construction in English and gives the sentence a generic interpretation. This modality can be spelled out overtly with an adverbial or modal element. Further, Massam (1992) proposes that English middle constructions have the understood theme base-generated in the subject position where it binds to a null reflexive element in the internal argument position. This chain linking is licensed by the presence of the modal element and consequently, the understood theme is assigned its theta role in situ.⁶ However, Lekakou (2005) points out that this proposal cannot hold cross-linguistically as middle constructions in Greek, as in example (74), do not express reflexive morphology, but rather non-active morphology. Lekakou (2005) also notes that examples in English provide an argument against Massam (1992). For instance, inherent reflexivity can be expressed with an anaphor in non-volitional readings, as seen in (75). This is in contrast with an anaphor included in a middle construction, which is illicit (76) (Lekakou, 2005, p. 49).

- (74) Afto to vivlio *diavazeta* efkola. *Greek*
 this the book reads.NONACT.3.SG easily
 'This book reads easily'.
 (Lekakou, 2005, p. 10 (1e))

⁶Notably, Iwata (1999) has challenged Massam's (1992) analysis, arguing that the defining feature of middle constructions is the semantic presence of the implicit argument. However, this argument is based on the fact that middle constructions can express events in the progressive or the past tense, which allows the modality reading to disappear. I argue that this analysis may be correct for an eventive middle construction, however this thesis focuses on non-eventive, dispositional middle constructions and therefore will not be further addressed.

- (75) John hurt himself.
 (76) *This book reads itself easily.

Following Massam (1992), Steinbach (2002) argues middle constructions are parasitic on inherent reflexives of the language in question. This implies that inherent reflexives, and therefore middle constructions, are syntactically heterogeneous. Crucially, Steinbach (2002) argues middle constructions in German, as in example (77), are syntactically transitive.

- (77) Dieses buch liest sich leicht. *German*
 this book reads.3.SG REFL easily
 'This book reads easily'.
 (Lekakou, 2005, p. 10 (1c))

Like Massam (1992), he argues that the understood theme is base-generated in the subject position and the reflexive marker *sich* fills the internal argument position. However, Steinbach (2002) departs from Massam (1992) by introducing a dyadic generic operator, Gen, in the sense of Krifka et al. (1995). Gen saturates the understood agent by binding to the argument and thus inhibits its presence in syntax. Crucially, the generic interpretation is a defining feature of the middle construction and the semantics comes from the syntactic structure. (Steinbach, 2002).

Likewise, Lekakou (2005) defines middle construction based on their semantics rather than the notion that there is a uniform syntactic structure for middle constructions cross-linguistically. The following properties are attributed to middle constructions:

- (78) The core components of the middle interpretation:
- a. The understood theme is ascribed a dispositional property.
 - b. An otherwise eventive verb becomes a derived stative and, more precisely, receives a generic interpretation.
 - c. The agent is syntactically suppressed and receives an arbitrary interpretation
- (Lekakou, 2005, p. 99)

Specifically, dispositional ascriptions “express in virtue of generalizations; employ a VP-level Gen, and are subject-oriented” (Lekakou, 2005, p. 68). Furthermore,

dispositional ascription can be classified as a type of generic sentence. As such, Lekakou (2005) introduces the generic operator, Gen, which semantically selects the understood theme of the verb to be projected in the subject position. Interestingly, Lekakou (2005) argues that Gen is either realized in the lexicon or in the syntax of middle constructions depending on the properties of the language. In particular, if a middle construction uses imperfective aspect morphology, then Gen is said to be encoded syntactically. For instance, French and Greek use imperfective aspect in middle constructions, which means Gen is realized in syntax allowing the understood agent to be covertly manifested in the structure. Therefore a middle construction in French and Greek are parasitic on a passive construction that is derived via movement (Lekakou, 2005). This is in contrast with English, Dutch, and German that do not use imperfective aspect, but rather simple present tense. Consequently, Gen is realized at the lexicon level, which enables the understood agent to be saturated pre-syntactically. As such, the understood theme is base-generated in the subject position similar to unergative sentences (Lekakou, 2005).

Interestingly, Lekakou's (2005) analysis does not hold when we try extend it to Slavic languages, such as Russian (79) and Ukrainian (80), which use imperfective morphology in middle constructions.

- (79) Kniga čitaet-sja legko. *Russian*
 book reads.3.SG-REFL easily
 'The book reads easily'.
 (Guhl, 2010, p. 262 (4b))
- (80) Knyžka lehko čytajet'-sja. *Ukrainian*
 book easily reads.3.SG-REFL
 'The book reads easily'.

Following Lekakou (2005), if the middle construction uses imperfective morphology, the structure should be parasitic on passive sentences. However, this prediction is not borne out as Slavic middle constructions do not allow the licensing of subject-oriented adverbs (81) or agentive by-phrases (82). Thus, I conclude that we cannot determine the syntactic structure of a middle construction based upon aspectual morphology.

- (81) *Kust podrezal-sja tščatel'no. *Russian*
 hedge cut.3.SG-REFL carefully
 'The hedge trimmed carefully'.
 (Jones & Levine, 2010, p. 302 (24a))
- (82) *Knyžka lehko čytajet'-sja studentamy. *Ukrainian*
 book easily reads.3.SG-REFL students.INST
 'The book is easy to read by the students'.

Building on the fact that activity and accomplishment verbs can undergo middle formation, Lekakou (2005) argues that state and achievement verbs are acceptable in French and Greek. For example, in French, state verbs (83) and achievement verbs (84) are acceptable.

- (83) La Tour Eiffel se voit de loin *French: State*
 the tower Eiffel REFL see.3.SG from afar
 'The Eiffel Tower can be seen from afar'.
 (Lekakou, 2005, p. 45 (100a))
- (84) Pierre se reconnaît à son nez rouge *French: Achievement*
 Peter REFL recognize.3.SG by his nose red
 'Pierre can be recognized by his red nose'.
 (Fagan, 1992, p. 94 (98))

Notice here that the interpretation is not a typical dispositional reading, where the understood theme is ascribed a dispositional property. Crucially, these sentences are translated as a passive with a possibility reading. I claim that although these sentences are argued to be grammatical, they are not dispositional middle constructions of the type described in this thesis.

In summary, semantically uniform approaches argue that middle constructions share the same semantic properties, but are syntactically diverse across languages. Crucially, this family of approaches also does not capture all the key properties of middle constructions. Lekakou (2005) argues that some languages allow for achievement and state verbs to undergo middle formation. However, I argued in this section that this analysis is incorrect. Furthermore, Lekakou (2005) recognizes that middle constructions are restricted to simple present tense or imperfective aspect. However, she does not account for the fact that middle constructions are also able to

appear in the past and future tense when a particular context is given. Specifically, Lekakou (2005) argues that if imperfective morphology is present, then Gen is encoded in syntax. Gen represents a generic operator that both Steinbach (2002) and Lekakou (2005) argue to be a defining feature of middle constructions. In regards to the syntactic presence of the understood agent, Massam (1992) and Steinbach (2002) argue that the understood agent does not surface in syntax. In contrast, Lekakou (2005) argues the understood agent is syntactically present in some languages and is saturated in the lexicon in others. Finally, Massam (1992) argues that modification of the middle construction is syntactically required in order to express modality, which is encoded in syntax. On the other hand, Lekakou (2005) argues modification is only required if the understood agent is syntactically absent.

2.3 Chapter summary

In this chapter, we have seen that there exist two families of derivational approaches to middle constructions: syntactically uniform approaches and semantically uniform approaches. To recapitulate, syntactically uniform approaches capture middle constructions using the same syntactic mechanisms cross-linguistically. Such accounts come in two varieties: the understood theme is base-generated in either the internal argument position or the external argument position. In particular, Keyser & Roeper (1984), Roberts (1987), Stroik (1992), Hoekstra & Roberts (1993), Kempchinsky (2006), Medová (2009), and Ahn & Sailor (2010) argue that the understood theme is projected first in the internal argument position and then undergoes movement, much like the derivation of passive sentences. Furthermore, Fagan (1992), Ackema & Schoorlemmer (1994), and Jones & Levine (2010) argue that the understood theme is base-generated in the subject position. Specifically, Fagan (1992) and Ackema & Schoorlemmer (1994) both introduce *arb*, which saturates the understood agent in the lexicon and externalizes the understood theme. Jones & Levine (2010), on the other hand, argue that the understood agent plays no part in the middle construction and the adjunction of the adverb to the verb generates a position for the understood theme.

In contrast, Massam (1992), Steinbach (2002), and Lekakou (2005) endorse a

semantically uniform approach to deriving middle constructions. In particular, Massam (1992) argues for an analysis based on modality. A modal element licenses the binding of the understood theme in the subject position to a null reflexive element in the internal argument position. Steinbach (2002) follows Massam (1992) and proposes middle constructions are parasitic on inherent reflexives. Crucially a generic operator, Gen, saturates the understood agent in the lexicon and the understood theme is base-generated in the subject position. Finally, Lekakou (2005) argues that Gen selects the understood theme as the new syntactic subject. If Gen is realized in syntax rather than the lexicon then it is encoded in the imperfective morphology and the understood agent will be projected in syntax.

To reiterate, middle constructions can be explained by the empirical observations described in (85).

(85) *Empirical descriptions of middle constructions*

- a. Only transitive activity and accomplishment verbs undergo middle formation (Fagan, 1992).
- b. Middle construction verbs are restricted to the simple present tense or the imperfective aspect (Keyser & Roeper, 1984).
- c. Middle constructions are generic sentences that are stative, non-episodic, and express potentiality or capability (Keyser & Roeper, 1984; Fagan, 1992; Steinbach, 2002; Ackema & Schoorlemmer, 2005).
- d. Middle constructions ascribe a disposition to the understood theme (Lekakou, 2005).

Furthermore, I make the following theoretical claims about the syntactic structure of middle constructions:

(86) *Theoretical statements regarding the structure of middle constructions*

- a. The understood agent of the verb is not syntactically present.
- b. Modification of the middle construction is not syntactically required.

As we have seen, no prior analysis of middle constructions addresses the fact that middle constructions can only be formed with transitive activity and accomplishment verbs. Thus, there is a need for a new derivational approach to middle constructions.

In the next chapter, I motivate a syntactic analysis that does not involve any lexical rules, but preserves the intuition that there is no external argument present. Further, I integrate the ideas of movement based approaches that argue the middle construction is derived entirely in syntax. Crucially, I will argue that movement occurs for linearization reasons within a complex eventive structure.

Chapter 3

A new derivational approach

In Chapter 1, I introduced empirical and theoretical generalizations of a middle construction. I showed that middle constructions are dispositional sentences that lack an understood agent in the syntactic structure. The verb employs the simple present tense or imperfective aspect, which results in a stative, non-episodic sentence. In addition, only transitive activity and accomplishment verbs can undergo middle formation. Finally, the middle construction must be modified by an adverb, modal, negation or focus intonation to fulfill semantic or pragmatic requirements. In the previous chapter, I investigated existing analyses of middle constructions and considered two families of approaches: syntactically uniform approaches and semantically uniform approaches. Crucially, none of these approaches offer an explanation for the observation that only transitive activity and accomplishment verbs undergo middle formation. The aim of this chapter is to propose a novel derivational approach to middle constructions. I argue that the inherently complex structure of activity and accomplishment verbs will be at the core of the proposal because it will lend itself to a linearizable structure, unlike its counterparts - state and achievement verbs. Specifically, I argue that middle constructions form complex eventive structures that have one argument merged in the structure. The correct structure arises from movement for linearization purposes.

First, recall only certain verbs can undergo middle formation. State (87) and achievement (89) verbs are unacceptable as a middle construction, which is in contrast with activity (88) and accomplishment (90) verbs that can undergo middle formation.

- | | | |
|------|---------------------------|-----------------------|
| (87) | *The answer knows easily. | <i>State</i> |
| (88) | The cart pushes easily. | <i>Activity</i> |
| (89) | *Awards win easily. | <i>Achievement</i> |
| (90) | Bread cuts easily. | <i>Accomplishment</i> |

To determine the differences between the four aspectual classes of verbs, I follow Rothstein's (2008) analysis of aspectual properties. According to Rothstein (2008), a state is non-dynamic situation, an activity is an open-ended process, an achievement is an instantaneous event, where the action is over as soon as it has begun, and finally an accomplishment is a process that has a natural end point. The significant aspectual properties that distinguish the four verb classes is illustrated in (91) (Rothstein, 2008, p. 12, (15)).

- (91) States: [-telic, -stages]
 Activities: [-telic, +stages]
 Achievements: [+telic, -stages]
 Accomplishments: [+telic, +stages]

The relevant property that distinguishes which aspectual verb classes can undergo middle formation is the [+/- stage] feature. Crucially, state and achievement verbs are illicit as middle constructions and they both share the [-stage] property, indicating these verbs do not extend over time. This is in contrast with activity and accomplishment verbs that can undergo middle formation. Both activity and accomplishment verbs share the [+stage] property, which means these verbs are durative and undergo a process.

In the rest of this chapter, I will determine whether there are any interesting syntactic similarities between activity and accomplishment verbs that distinguish them from state and achievement verbs. I will use the findings to further determine the internal structure of middle constructions. Finally, I will provide an analysis for a novel derivational approach to middle constructions.

3.1 The syntactic structure of accomplishment and activity verbs

Travis (2010) argues activity and accomplishment verbs should have the same syntactic structure as it should allow for the necessary flexibility where activity verbs can become accomplishment verbs (92) and accomplishment verbs can become activity verbs (93) (Travis, 2010, p. 121,(52)).

(92) *Activity to Accomplishment*

a. Mary pushed a cart down the road (*in 3 hours/ \checkmark for 3 hours). *Activity*

b. Mary pushed a cart into the garage (\checkmark in 3 hours/ *for 3 hours).

Accomplishment

(93) *Accomplishment to Activity*

a. Mary built a cart (\checkmark in 3 hours / *for 3 hours).

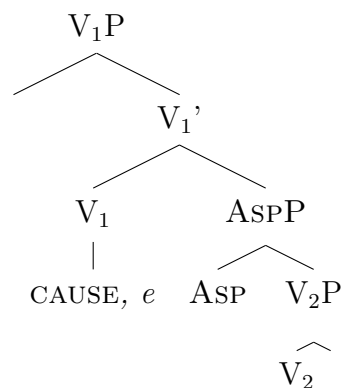
Accomplishment

b. Mary built carts (* in 3 hours / \checkmark for 3 hours).

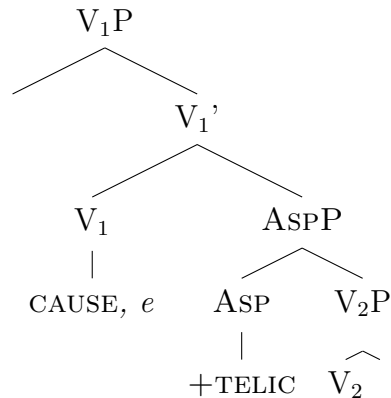
Activity

To determine the syntactic structure of activity and accomplishment verbs, I follow Travis (2010) in that activity and accomplishment verbs have the same syntactic structure, namely the structures seen in (94) for activity verbs and (95) for accomplishment verbs.

(94) *Activity verbs*



(95) *Accomplishment verbs*



The lower VP shell or V_2P encodes the consequent state between the verb and the internal argument, whereas V_1P encodes a dynamic process. Telicity is a computed feature that appears in the ASP head. Crucially for both activity and accomplishment verbs, the V_1 head has a *CAUSE, e* property, which indicates an eventive cause that is dynamic. This *CAUSE, e* is a defining feature of activity and accomplishment verbs, which can undergo middle formation. This is in contrast with state and achievements that do not undergo middle formation as there is no realization of an eventive cause in the syntactic structure. Note that in the structural representations given by Travis (2010), activity and accomplishment verbs have two VP shells, which is in contrast with views in which activity verbs do not have a V_2P (Erteschik-Shir & Rapoport, 1997).

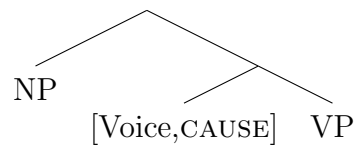
3.2 The status of CAUSE in middle constructions

Pylkkänen (2008) argues that a causing event or eventive cause must be introduced by a causative head, *CAUSE*. The causative head does not introduce an external argument or theta role, as the external argument is always introduced by a Voice head via Event Identification (Kratzer, 1996).

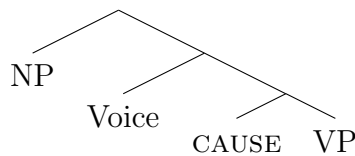
Some languages, such as English, are considered Voice-bundling in that they bundle Voice and *CAUSE* together, whereas languages such as Japanese or Finnish are non-Voice-bundling and thus Voice and *CAUSE* appear separately (Pylkkänen, 2008). The syntactic representation for Voice-bundling (96) and non-Voice-bundling

(97) structures as proposed by Pylkkänen (2008) are shown below:

(96) *Voice-bundling*



(97) *Non-Voice-bundling*



In the instance of Voice-bundling, a single complex head has two interpretable features, but the CAUSE head must be processed first before the external argument can be introduced by Voice. This is in contrast with a non-Voice-bundling representation that has CAUSE and Voice as separate heads that introduce two separate arguments (Pylkkänen, 2008).

Following, Kratzer (1996), Voice is responsible for the introduction of the external argument and bears features relating to agentivity. Specifically, if the Voice head is active, then the external argument or agent is realized in the specifier of VoiceP. However, if the Voice head is inactive, as in a passive construction, the external argument is realized as an implicit agent. The question that arises now is whether Voice is totally absent in a middle construction or whether Voice is inactive with an implicit agent. I propose the first option is available for middle constructions. Recall, middle constructions do not permit the understood agent to be in the syntactic structure as seen with the adjunction of an agentive by-phrase in example (98a). An implicit agent is also ruled out since subject-oriented adverbs are illicit in middle constructions as seen in example (98b). In contrast, passive sentences do have an implicit agent as they allow agentive by-phrases (99a) and subject-oriented adverbs (99b).

(98) *Middle constructions*

- a. *The book reads easily by the students. *Agentive by-phrase*
 b. *The car drives carefully. *Subject-oriented adverb*

(99) *Passive constructions*

- a. The book was read easily by the students. *Agentive by-phrase*
 b. The car was driven carefully. *Subject-oriented adverb*

Therefore, I argue Voice is not present in the syntactic representation of a middle construction since the external argument or agent cannot be introduced overtly or covertly.

Furthermore, CAUSE introduces an implicit event argument that holds a causal relation with the resultant state denoted by the verb and its complement (Pylkkänen, 2008). Verbs that undergo middle formation, such as *read*, require external causation because the modifier *all by itself* is impossible as seen in middle constructions, as seen in example (100) from (Keyser & Roeper, 1984), and passive constructions, as in example (101).

(100) *The book reads easily all by itself. *Middle construction*

(101) *The book was read easily all by itself. *Passive construction*

Crucially, the unacceptability of the modifier *all by itself* in a middle construction means that external aid is required for the verb *read*. Therefore, we must have a CAUSE present to indicate this property.

Notably, verbs that undergo middle formation do not select a causer subject (102a), but allow agent subjects (102b) and instrument subjects (102c) (Alexiadou et al., 2006, p. 6). Therefore, it is expected that a causer cannot modify a middle construction. This prediction is borne out as seen in example (103a), which is modeled after Pylkkänen (2008).

(102) *Subjects of verb 'cut'*

- a. *The storm cut the bread. *Causer subject*
 b. The students cut the bread. *Agent subject*
 c. The knife cut the bread. *Instrument subject*

(103) *Middle construction with subject modifier*

- a. *The bread cuts easily by the storm. *Causer modifier*
 b. The bread cuts easily with a knife. *Instrument modifier*

As we have already established, there is no external argument or agent syntactically present and therefore no Voice head is projected. I further argue that CAUSE must remain in the syntactic structure because middle constructions are able to introduce an indirect causer, as in example (103b) with an instrument modifier. In such instances, the instrument indirectly facilitates the action of the verb and the consequent state of the understood theme. The status of the instrument can be explained by the distinction between pure instruments and instrument causers as proposed by Kamp & Rossdeutscher (1994). Specifically, I argue middle constructions exhibit instrument causers, which are "Instruments which can be conceived as acting on their own, once the agent has applied or introduced them" (Kamp & Rossdeutscher, 1994, p. 144). Furthermore, Alexiadou et al. (2006) argue instrument causers are licensed by the CAUSE head. Therefore, a middle construction must have a CAUSE head present.

Interestingly, the internal structure of middle constructions is reminiscent of Japanese adversity causatives (104) and Finnish desiderative causative (105), which allow for the existence of a CAUSE head without an external argument. These structures are accounted for by Pykkänen (2008) under a bieventive analysis.

(104) Taroo-ga musuko-o sin-ase-ta. *Japanese*
 Taro-NOM son-ACC die-CAUSE-PAST
 'Taro's son died on him'.

(Pykkänen, 2008, p. 81 (155))

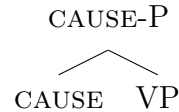
(105) Marija-a laula-tta-a. *Finnish*
 Marija-PART sing-CAUSE-3SG
 'Marija feels like singing'.

(Pykkänen, 2008, p. 86 (168a))

Pykkänen (2008) argues that CAUSE and Voice are independent of each other in Japanese and Finnish as they are non-Voice-bundling languages. She argues that the syntactic representation of Japanese adversity causatives and Finnish desiderative

causatives never introduce an external argument so there is no Voice head projected, as in example (106) (Pylkkänen, 2008, p. 90, (176b)).

(106)



However, since English is a Voice-bundling language, CAUSE and Voice are packaged together into one syntactic head (Pylkkänen, 2008). Though they are seen in syntax as one unit, they cannot combine semantically with each other. Consequently, the structure must partake in a two step process where the semantics of CAUSE is applied first then the semantics of the Voice head is applied. Therefore, in Voice-bundling languages, middle constructions only exhibit the first step where CAUSE merges with the VP. The second step, where Voice introduces an external argument, cannot occur as there is no external argument for the Voice head to introduce in the syntactic structure of a middle construction.

3.3 Analysis

As illustrated in Section 3.1, only transitive accomplishment verbs undergo middle formation. Following, Travis (2010), I argue activity and accomplishment verbs are structurally complex with two VP shells. A defining feature of verbs that can undergo middle formation is the presence of CAUSE in the syntactic structure, which encodes an eventive cause. Furthermore in Section 3.2, I investigated the properties of the CAUSE head in the internal structure of a middle construction as well as the status of the Voice head. I argued that there is no Voice head projected because the external argument is syntactically absent in a middle construction. The CAUSE head, on the other hand, is present in syntax because external causation is required. CAUSE also licenses the instrument causer that can appear as an oblique argument in a middle construction. Crucially, the specifier of CAUSE-P is empty as there is no direct causer in the syntactic representation of a middle construction. In what follows, I will propose a novel derivational approach to middle constructions.

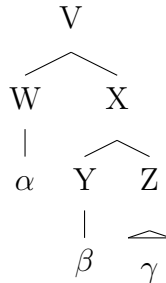
Building on the insights of Kratzer (1996), Pylkkänen (2008), and Travis (2010), I argue that the understood theme of a middle construction is base-generated in the internal argument position. Second, there is movement of the understood theme due to interface requirements, namely a requirement on what structures can be linearizable. Crucially, the requirement is a result of Linear Correspondence Axiom (Kayne, 1994) used in Bare Phrase Structure (Chomsky, 1995) where a phrasal head and an atomic structure must be in an asymmetric c-command relationship to be linearizable. Finally, in order to ensure that the middle construction is indeed linearizable, I propose that a higher phase projection is required.

The remaining parts of this section will develop this proposal by deriving the middle construction, while taking into account the structure of activity and accomplishment verbs proposed in Travis (2010). I will combine Travis (2010) with Richards (2003), who argues that the specifier of a phase head must be overtly filled in order for a structure to be linearizable.

3.3.1 The mechanics of linearization

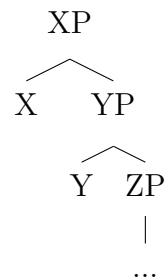
The system that orders elements in a linear order from left-to-right can be defined as linearization. Kayne (1994) first introduced the Linear Correspondence Axiom, which states that terminal nodes must be dominated by non-terminal nodes in a asymmetric c-command relation. If we look at the structure in (107) we can determine that α is dominated by W and β is dominated by Y. Thus, we can conclude W asymmetrically c-commands Y and W will precede Y. Another example is the instances where W dominates α and Z dominates γ . Therefore, W asymmetrically c-commands Z and Z will follow W.

(107)



Richards (2003) uses this notion of asymmetric *c*-command to determine why the specifier of a phase must always be filled. Crucially, he is focused more so on the language design, rather than the mechanism that trigger an argument to fill the specifier position, such as the Extended Projection Principle (EPP) or Case. He also assumes derivation of a construction proceeds by phases, as in Chomsky (2001). Following Legate (2003), Richards (2003) assumes that *v*P is a phase that is sent to PF or spell-out once completed. Once it is sent to spell-out, the internal structure becomes invisible to any higher syntactic structure. In other words, the phase will be treated as an atom or head once it is spelled-out. Richards (2003) argues that a phrase must be the complement of a head that has a specifier. If the specifier is not filled, linearization will fail. A representation of a non-linearizable structure is shown in example (108).

(108)



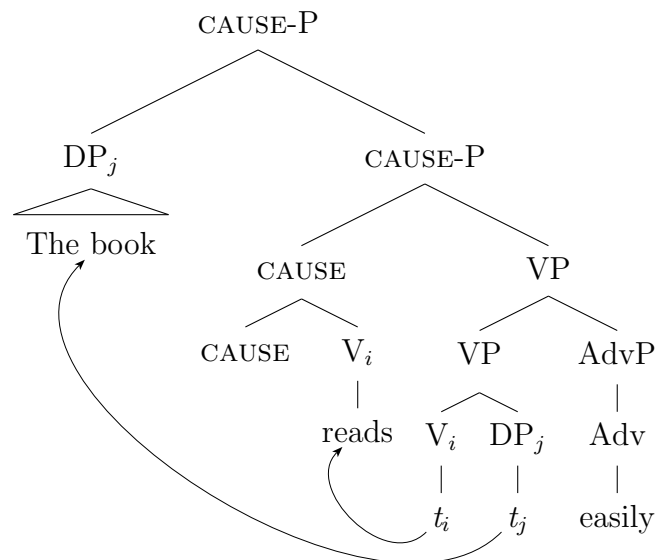
Consider the case that *X* is the head of a phase that takes *YP* as its complement. If we try to send *XP* to spell-out, linearization will not succeed because the specifier of the phase is not filled. To ensure the linearization of the structure is successful,

an argument must either be merged or undergo movement to the specifier position of XP.

3.3.2 Deriving middle constructions with CAUSE

Let us now turn to the syntactic derivation of middle constructions with a CAUSE-P. In order to successfully derive a middle construction, I propose the following account which is illustrated in the tree in example (109).

(109) *Successful derivation of a middle construction*

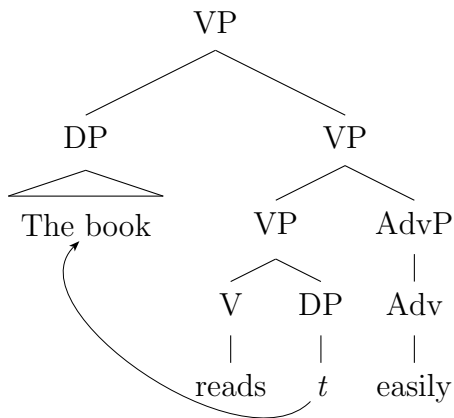


First, the understood theme DP is merged as the internal argument to satisfy the selection requirement of the verb head. Next, the verb phrase merge with a causative projection or CAUSE that introduces an eventive cause as this is a defining feature of verbs that can undergo middle formation. The verb of the middle construction can then move to the verb head of CAUSE. With the merger of the causative projection, the construction can now be sent to spell-out, but fails because the structure is not linearizable. Following Richards (2003), a specifier of a phase head must be filled with phonologically overt material for the structure to be linearizable. Therefore, we must move the understood theme to the specifier of CAUSE. This account successfully derives the syntactic structure of a middle construction by ensuring the understood theme precedes the verb.

3.3.3 Deriving middle constructions without CAUSE

Now let us look at a derivational account without a causative projection. Recall I am following Travis (2010) in that activity and accomplishment verbs, which can undergo middle formation, must encode an eventive cause in the syntactic structure. This is in contrast with state and achievement verbs that do not have a causative projection. Furthermore, state and achievement verbs do not undergo middle formation, therefore a structure without CAUSE present in syntax should not be derivable. This prediction is in fact borne out.

(110) *Unsuccessful derivation of a middle construction*



In order to derive a middle construction without a CAUSE head as in example (110), we must first merge the understood theme with the verb head to satisfy the verb's selectional requirements. If we tried to send this construction to spell-out, the structure will crash because it is not linearizable. This is similar to the issue we saw in the previous derivation with CAUSE. To save the structure, we can try to move the understood theme to the specifier of a higher phase. Thus, we will need to move the understood theme to the specifier of VP. However, this movement violates an independent restriction on movement, namely the movement is too local in the sense of Abels (2003). Abels (2003) proposes an Anti-Locality Hypothesis, which constraints movement of a complement to a specifier of the same phase projection. As a result, the derivational middle construction without a causative projection crashes. Therefore, we can form the preliminary conclusion that an eventive cause or CAUSE must be syntactically present when deriving a middle construction, otherwise the

structure is not linearizable.

3.4 Modification of the middle construction

Up to this point my analysis has included a derivational account of middle constructions with only adverbial modification, such as example (111). Recall, I argued in Chapter 1 that modification of the middle construction is obligatory as we cannot have a sentence without modification as in example (112). Notably, the middle construction can be saved by adjoining a modal (113), negation (114), or focus intonation (115) (Lekakou, 2005).

- | | | |
|-------|--|-------------------------|
| (111) | The book reads easily. | <i>Adverb</i> |
| (112) | *Bureaucrats bribe. | <i>No modification</i> |
| (113) | Bureaucrats may bribe, but you never know. | <i>Modal</i> |
| (114) | The book doesn't read. | <i>Negation</i> |
| (115) | Pine SAWS after all! | <i>Focus intonation</i> |

I argue that modification of the middle construction is needed for purely semantic reasons, otherwise our semantics will predict the middle construction to be trivial. Crucially, with the absence of the understood agent in construction, there is nothing available to existentially close the event. In other words, the middle construction will hold true in all possible worlds in which an event instantiates, leading to trivial truth conditions. Notably, it has been independently argued that trivial truth conditions are ungrammatical (Gajewski, 2002; von Stechow, 2004). Therefore, to avoid the illicit interpretation, I propose that modification of the middle construction is obligatory in order to restrict the possible worlds in which the event holds. Crucially, modification is necessary in order to satisfy semantic requirements, not syntactic ones.

In addition, Fagan (1992) presents data of middle constructions without any overt modifier as seen in examples (116) and (117).

- | | | |
|-------|---|---------------|
| (116) | This dress buttons. | |
| (117) | Ce papier se recycle.
This paper REFL recycles
'This paper is recyclable' | <i>French</i> |

In such instances, I argue that the demonstrative *this* restricts that middle construction by distinguishing the understood theme among potential candidates as in the sentence *This dress buttons, while the other one does not*. Therefore, trivial truth conditions and the consequent ungrammatical interpretation are avoided when a middle construction is obligatorily modified.

An important observation to make is that modals and negation are projected higher in syntax. In order to account for these modifiers in my novel derivational account, I stress the importance of the complex eventive structure. Specifically, I have argued for a complexive eventive structure that has a lower VP shell and a higher causative projection. A strong phase is created when the understood theme moves to the specifier of the causative projection so the structure can be sent to spell-out. We can then build a higher structure with a modal or negation projected. The understood theme that is at the phase edge will then be attracted to a higher specifier position by an EPP-feature.

3.5 Chapter summary

In this chapter, I have argued for a novel derivational approach to middle constructions. First, I illustrated that only activity and accomplishment verbs can undergo middle formation. Specifically, both of these aspectual classes share the [+stage] property as described by Rothstein (2008). I also determined activity and accomplishment verbs are syntactically similar as Travis (2010) argues these aspectual classes of verbs are both structurally complex. In particular, the higher VP shell has a CAUSE, *e* property that indicates an eventive cause. Crucially, CAUSE is a defining feature of verbs that can undergo middle formation, as state and achievement verbs, which are illicit in middle constructions, do not encode an eventive cause in syntax. I further investigated the status of CAUSE according to Pykkänen (2008). She argues that an eventive cause is introduced by a causative head and is distinct from a Voice head that introduces an external argument via Event Identification (Kratzer, 1996). I demonstrated that an external argument is not projected in syntax, thus I argue there is no Voice head in a middle construction. I also illustrated that a CAUSE head must be syntactically present as external causation is required and because it is able

to license an instrument causer that appears as an oblique argument in a middle construction.

With these findings in mind, I proposed that a middle construction is a complex eventive structure with a causative projection or CAUSE-P. I argued that the understood theme undergoes movement from the internal argument position due to a linearization effect. Without CAUSE present syntactically, I illustrated that the syntactic structure of the middle construction crashes because the movement is too local. Therefore, the causative projection is required to encode an eventive cause as well as to ensure the understood theme of the middle construction is linearizable without a violation of locality.

Finally, I argued that modification of the middle construction is not a syntactic requirement, but a semantic one. Modification is obligatory in order to avoid the unacceptability of the sentence that comes with trivial truth conditions. To save the middle construction, more semantic information must be provided. Thus, we must modify the construction in order to restrict the domain of the event.

Chapter 4

Consequences of a complex eventive structure

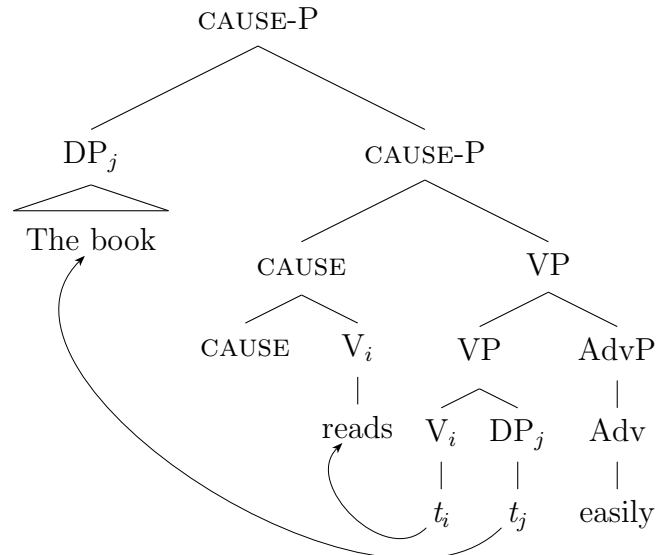
In the previous chapter, I concluded that middle constructions form complex eventive structures that have one argument merged in the structure. The complex eventive structure arises from the fact that CAUSE must be projected in syntax as it is a defining feature of activity and accomplishment verbs. Since the understood agent of the middle verb is syntactically absent, the specifier of CAUSE-P is empty. I follow Richards (2003) in that the specifier must be overtly filled in order for the structure to be linearizable. Therefore, the understood object moves to the specifier position of CAUSE and consequently the structure can be successfully sent to spell-out. State and achievement verbs, on the other hand, do not have a causative projection. First, the structure will crash because the structure is not linearizable, thus we must move the understood theme to the specifier position. Second, the only movement that can save the structure is illicit because the movement is too local since the CAUSE projection is missing. Thus, state and achievement verbs cannot undergo middle formation because CAUSE is absent. Interestingly, the causative projection is not only important for linearization, but also for the dispositional property that is ascribed to the middle construction. In this chapter, I will illustrate the consequences of a complex eventive structure and explain that a complex eventive structure is the desired structure of a middle construction.

4.1 Complex eventive structure

Chomsky (2001) proposes a phase theory which illustrates which categories create phase boundaries. Although CP is generally agreed upon to be a phase boundary, the status of *v*P is more controversial. Specifically, Chomsky (2001) argues that a *v*P phase boundary only occurs with transitive verbs as the *v*P is defective in passives, unaccusatives, and raising verbs. In contrast, Legate (2003) argues that all *v*P are phasal and therefore pattern like transitive verbs. I follow the analysis proposed by Legate (2003), but slightly depart from her analysis and consider *v*P to be a CAUSE-P.⁷

Although middle constructions only have one argument in syntax like intransitive sentences, I argue they are distinct from intransitive constructions. Importantly, the presence of the causative projection or CAUSE-P followed by head movement is sufficient to be a strong phase as argued for in Kučerová (2011) and can therefore trigger spell-out. By introducing CAUSE as a strong phase boundary, I argue that the middle construction is a complex eventive structure or a bi-partitioning structure, as illustrated in the following representation:

(118)



⁷Note that there is debate about whether *v* and Voice are the same or different heads. Following Chomsky (1995) and Marantz (1997) they are the same head. However, more recent investigations have argued for an analysis where Voice and *v* are distinct (Cuervo, 2003; Legate, 2010; Harley, 2013). In addition, *v* is considered to be CAUSE by Alexiadou et al. (2006) and Pykkänen (2008).

Therefore, the lower VP is considered to be one level while the higher CAUSE-P is the second level in the syntactic structure of a middle construction.

4.2 Two propositional levels

Bale (2007) observes an interesting correlation between the propositional complexity of a VP and its internal structure. He argues non-stative transitive verbs are fundamentally different from stative transitive verbs and intransitive verbs. Specifically, non-stative transitive verbs allow *again* to introduce presuppositions that do not involve the verb's subject, whereas stative transitive verbs and intransitive verbs require the subject to be present (Bale, 2007). For example, let us look at the interaction of *again* with a non-stative verb, such as *drive* in example (119), which is based on (Bale, 2007, p. 483, (28)):

- (119) Context: John drove the car quickly, but then he sold it. Assuming Mary buys the car for its rapid acceleration, it is safe to say that
- a. Mary drives the car quickly again.
 - b. # Again Mary drives the car quickly.
 - c. The car was driven quickly again.
 - d. The car drives quickly again.
 - e. Again the car drives quickly.

(120) [Mary [[drives the car quickly] again]] *Syntax for (119a)*

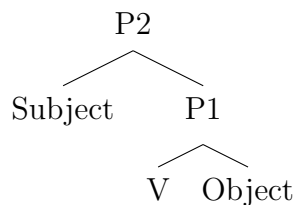
(121) # [[Mary drives the car quickly] again] *Syntax for (119a)*

(122) [Again [Mary drives the car quickly]] *Syntax for (119b)*

In example, (119a), there is ambiguity as *again* is either adjoined to the VP or the entire sentence as in the following syntactic representations: (120) and (121) respectively. Based on the context provided the presupposition that Mary need not have been the person who drove the car before holds only for the syntactic representation, thus only (120) is supported by the context. As we see in example (119b), it presupposes that Mary was the one who drove the car before and this is incorrect given the context. Thus, the presupposition necessarily includes the subject

as well as the verb and object when *again* is adjoined to the left, as in the syntactic representation in example (122). Crucially, a subjectless presupposition, as in the passive sentence (119c) or middle constructions (119d) and (119e), is satisfied by the information given in the context. These findings imply that the subject is not a functional argument of the verb and only relates to the verb by theta roles (Bale, 2007). Therefore, Bale (2007) argues that the paradigm in (119) illustrates that the non-stative transitive verb *drive* is a function that takes the object as an argument, not the subject. Therefore, there is a need for two propositional levels as in the following syntactic structure:

(123)



Bale (2007) describes the structure in (123) as propositionally complex as there are two propositional levels. The object and the verb form one propositional level or P1. The subject is not a functional argument of the verb so it merges with P1 to form the second propositional level or P2. These findings are in contrast with stative transitive and intransitive verbs that do not allow for subjectless presuppositions (Bale, 2007). In other words, the event described by the verb must involve the participation of the subject. Therefore, these verbs are considered propositionally simple with only one propositional level (Bale, 2007).

Bale's (2007) proposal is significant for my analysis of middle constructions as I argue middle constructions have a complex eventive structure. Transitive activity and accomplishment verbs, which can undergo middle formation, are considered to be non-stative transitive verbs according to Bale (2007). Thus, we can predict that these verbs will form propositionally complex structures with two propositional levels. In fact this is what we see in middle constructions as the verb and object form one propositional level: VP. Middle constructions also require a CAUSE head, thus the CAUSE-P forms the second propositional level. Furthermore, the second propositional

level normally introduces a subject as its specifier, but the understood agent is not present in a middle construction. I argue that it is important to preserve the second propositional level as it introduces an eventive cause of the verb, which serves as a defining feature of verbs that can undergo middle formation.

4.3 Categorical predication

I argue that the two propositional structure discussed in Bale (2007) is reminiscent of the structure and properties of small clauses in Basilico (2003). Basilico (2003) investigates the syntactic asymmetry between adjectival small clauses (124) and verbal small clauses (125).

(124) We consider the guard intelligent. *Adjectival small clause*

(125) We saw the guard leave. *Verbal small clause*

Crucially, Basilico (2003) argues that the difference between adjectival and verbal small clauses is in predication: verbal small clauses involvethetic predication, whereas adjectival small clauses involve categorical predication. Thetic predication involves one judgment, which is a description of an abstract or concrete situation. This is in contrast with categorical predication that involves two judgments: an argument being singled out from the event and the predicate ascribing a property to the argument (Kuroda, 2003). Kuroda (2003) argues the distinction between the two types of judgments is evident in Japanese. Sentences with regular case morphology expresses athetic predication as in example (126). Such a sentence would be used to report the event or situation, affirming the existence of an eventuality.

(126) Inu ga neko o oikakete iru *Thetic predication*
 dog NOM cat ACC chase is
 'The/a dog is chasing cats'.

(Kuroda, 2003, p. 205 (2))

(127) Inu wa neko o oikakete iru *Categorical predication*
 dog TOP cat ACC chase is
 'The dog is chasing cats'.

(Kuroda, 2003, p. 205 (4))

On the other hand, example (127) is a sentence where the subject is marked by a topicalizing *wa* marker. *Wa* marked sentences express categorical judgments as it first draws attention to the subject *Inu - dog*, and then says of the dog that it is chasing cats. Crucially, the noun that is marked by *wa* must be specific and definite. Kuroda (2003) says this follows from the presuppositional nature of the subject of a categorical judgment.

Furthermore, Basilico (2003) argues that the difference in predication results in a difference in the position of the subject. Namely, the subject of a verbal small clause does not move out of the domain of the verb. In contrast, the subject of an adjectival small clause moves into a higher functional projection from the domain where it is assigned a theta-role (Basilico, 2003). The movement to a higher functional projection from a lower domain is essentially movement from one propositional level to a second propositional level as seen in Bale (2007). Therefore, adjectival small clauses arguably have two propositional levels.

Interestingly, the movement in adjectival small clauses is similar to the movement seen in middle constructions. I argue that the understood theme in middle constructions move out of the domain of the verb where it is assigned its theta-role and moves into a higher functional projection or CAUSE-P. Thus, middle constructions, like adjectival small clauses, involve categorical predication.

4.4 Dispositional ascriptions

Finally, I argue that middle constructions are a type of categorical predication, specifically a dispositional ascription. For example, if we take the sentence in example (128), the interpretation we receive is that the book is such that reading it is easy.

(128) The book reads easily.

In other words, *The book* has certain properties, pertaining to the language used or the story line is easy to follow, that enables an individual to read it easily. Crucially, we single out the argument from the event of the verb and then ascribe the argument a property.

The analysis the middle constructions are a type of categorical predication supports Lekakou (2005) who argues middle constructions are descriptive generic

sentences that ascribe a disposition to the understood theme. Notably, dispositional readings are distinct from habitual readings, which are also generic. Specifically, a habitual sentence must always hold true and will become false if there is one occurrence where the sentence is not true. Dispositional sentences, on the other hand, may hold true even if the manifestation of the disposition is absent.

4.5 Chapter summary

To summarize this chapter, I argued that a complex eventive structure with a causative projection is the desired construction of a middle construction not only for linearization requirements, but also for the dispositional interpretation. Without the causative projection, we will not be able to derive a middle construction successfully and we will not have a propositionally complex structure or categorical predication.

Specifically, the complex eventive structure of a middle construction is a two propositional structure. Furthermore, a two propositional structure or bi-partitioning structure leads to a categorical predication, which involves an argument being singled out from the event and the predicate ascribed a property to the argument. In fact, categorical predications are a type of dispositional ascription, which Lekakou (2005) argues is a defining property of middle constructions. Therefore, it is not coincidental that middle constructions have a complex eventive structure in order to be linearizable. Such a structure is desired in order to obtain the dispositional reading required of middle constructions.

Chapter 5

Conclusions

Though the linguistic properties of middle constructions have been extensively studied, the syntactic structure remains debated. Ultimately, the question that arises is: What are the syntactic and semantic properties of middle constructions that can be accounted for cross-linguistically? In this thesis, I developed and supported the hypothesis about the structural complexity of middle constructions.

In Chapter 1, I presented key properties of middle constructions that are empirical observations as well as theoretical statements about the syntactic structure. Crucially a middle construction can be defined as a generic sentence that ascribes a dispositional property to the understood theme. A middle construction is therefore a stative and non-episodic sentence that expresses potentiality or ability. Furthermore, the verb can only appear in the simple present tense or imperfective aspect. More specifically, only transitive activity and accomplishment verbs can undergo middle formation. Finally, the understood agent is not syntactically present and the entire middle construction requires modification.

In Chapter 2, I investigated existing analyses of middle constructions that can be divided into two families of derivational approaches: syntactically uniform approaches and semantically uniform approaches. Syntactically uniform approaches treat middle constructions as syntactically equivalent across languages. The approaches within this family differ with respect to where the understood theme is generated. Some analyses argue that the understood theme is base-generated in the internal argument position and undergoes A-movement. This is in contrast with lexically based approaches

that argue the understood theme is base-generated in the external argument position because the understood agent is saturated in the lexicon by an operator. The second family of derivational approaches to middle constructions is semantically uniform approaches, which argue that the semantic properties of middle constructions should unify middle constructions. This implies that the syntactic structures of middle constructions would be cross-linguistically diverse. The analyses in this family are based on either modality or genericity. Crucially, I show that no prior derivational account of middle constructions addresses the fact that only transitive activity and accomplishment verbs can undergo middle formation.

In Chapter 3, I proposed a novel derivational account of middle constructions, with a particular focus on the observation that middle constructions can only be formed with activity and accomplishment verbs. Following Travis (2010), I argue middle constructions require the presence of an eventive cause or CAUSE head in the syntactic structure. I also argue that the Voice head is not projected because there is no external argument or understood agent for it to introduce. I proposed that a middle construction is a complex eventive structure with the understood theme base-generated in the internal argument position. The understood theme undergoes movement due to linearization requirements. I also illustrated the unsuccessful derivation of a middle construction when the syntactic structure does not have CAUSE present. Finally, I argued that modification of the middle construction is obligatory for semantic reasons. Specifically, the domain of the event must be restricted in order to avoid trivial truth conditions.

In Chapter 4, I illustrated the consequences of a complex eventive structure. As we saw in Chapter 3, the addition of causative projection or CAUSE-P results in a complex eventive structure. This is important in order to make the structure linearizable. However, the complex eventive structure is also important for the dispositional property that is ascribed to the understood theme of a middle construction. I argued that the complex eventive structure is the desired construction as there are two propositional levels present. This structure lends itself to a categorical predication, which can be further extended to dispositional readings.

The analysis argued for in this thesis provides a novel derivational account of middle constructions. It is able to capture key properties of middle constructions,

namely the absence of the understood agent, the obligatory modification of the construction, the dispositional interpretation that is also generic and stative, as well as the fact that only activity and accomplishment verbs undergo middle formation. Therefore, I conclude that middle constructions have a complex eventive structure and the construction arises via movement for linearization purposes. In order to provide direction from future work, I will outline some puzzles that this thesis does not answer.

The analysis of middle constructions in this thesis only takes into account transitive verbs. Intransitive verbs cannot undergo middle formation because there is no demotion or suppression of an argument. In other words, middle formation always reduces the valency of the verb by one, and we cannot do so with intransitive verbs. In regards to ditransitive verbs, it has been observed that ditransitive verbs cannot undergo middle formation as discussed in Section 1.1.2. The proposal formulated in Chapter 3 predicts that ditransitive verbs should be linearizable. I invite the reader to confirm the prediction herself. I do not have a principal answer to this puzzle, but I would like to suggest that the constraint on the type of verb that undergoes middle formation has to do with semantics. For example if we take the sentence (129a), from Fagan (1992), it can be paraphrased as in (129b). Crucially, the understood theme receives volitional or agent-like properties, which makes the sentence ungrammatical. We can compare this observation to a transitive verb that undergoes middle formation as in (130a) and its paraphrase (130b).

(129) *Ditransitive verb*

- a. *Money gives (to) victims of natural disasters easily.
- b. There is money and money has the ability to be given to victims of natural disasters easily.

(130) *Transitive verb*

- a. The book reads easily.
- b. There is a book and the book has the ability to be read easily.

In addition, in this thesis I treat middle constructions as a non-eventive, non-episodic, stative sentence that are marked with the simple present tense of

imperfective aspect. Interestingly, some speakers find middle constructions to be acceptable when marked with past (131), progressive (132), or future (133) tenses.

- (131) *The mayor bribed easily. *Past*
 (132) *Bureaucrats are bribing easily. *Progressive*
 (133) *The professor will bribe easily. *Future*

In such instances, I propose that the middle construction is interpreted as eventive, similar to a verbal passive construction in that it describes an event rather than a state. For some speakers, an eventive middle may also receive a habitual interpretation. Also, I illustrated in Section 1.1.2 that middle constructions can be formed with the past and future tense in some instances because the context allows the inherent dispositional property of the argument to change. I suggest that further investigation of an episodic or eventive reading of middle constructions is required. Crucially, a closer look at middle constructions and the similarities with reflexive passives, verbal passives, adjectival passives, as well as habitual sentences may provide further insight on what it means to be an eventive middle construction.

Furthermore, the novel derivational account proposed in this thesis focuses only on English middle constructions. A next step would be to extend my analysis to other Germanic languages, as well as other linguistic families including Romance and Slavic languages. However, extending my analysis to other languages is not straightforward since middle constructions in several languages have extra linguistic material surfacing in the structure, as we saw in Chapter 2. For instance, many languages exhibit a reflexive marker in the structure of a middle construction, but the source and purpose of a reflexive marker in syntax is debated in literature (Chomsky, 1981; Reinhart & Reuland, 1993; Safir, 2004; Reinhart & Siloni, 2005; Dechaine & Wiltschko, 2011). Therefore, an exploration on the status of reflexive markers is paramount before one is able to extend my analysis of middle constructions to other languages.

Finally, it is important to note that middle constructions in many languages can exhibit a tough-construction interpretation. For example, this is shown in Czech (134), French (135), Greek (136), and Ukrainian (137).

- (134) Tahle košile se dobře žehlí. *Czech*
 this shirt REFL well irons.3.SG
 'It is easy to iron the shirt'.
 (Medová, 2009, p. 22 (37))
- (135) Le français s' acquiert facilement. *French*
 the French REFL acquire.3.SG easily
 'French is easy to acquire'.
 (Lekakou, 2005, p. 182 (369c))
- (136) Tetia sfalmata den anagnorizonde efkola. *Greek*
 such mistakes not recognize.3.PL.NONACT.IMPERF easily
 'Such mistakes are not easy to recognize'.
 (Lekakou, 2005, p. 182 (370a))
- (137) Knyžka lahko čytajet'-sja. *Ukrainian*
 book easily reads.3.SG-REFL
 'The book is easy to read'.
- (138) [The book]_{*i*} is easy to read *e_i*.

A tough-construction can be defined as a construction where the matrix subject is coreferent with the gap in the object position of the embedded infinitival clause, as in example (138) (Rosenbaum, 1967; Postal, 1974; Chomsky, 1977). Interestingly, the surface structure of a middle construction differs in the syntactic structure of the tough-construction translation, yet their semantics seem to be equivalent as a middle construction and tough construction translation can be used interchangeably. Furthermore, Lekakou (2005) argues a dispositional ascription differs from a habitual sentence in that a dispositional ascription generalizes over the property of the syntactic subject. If this is correct, we would expect middle constructions to always be like tough-constructions, which ascribe a property to the argument in the syntactic subject position. Why there is this parallel between middle constructions and tough-constructions is an intriguing question that I will leave open for future investigation.

References

- Abels, K. (2003). *Successive cyclicity, anti-locality, and adposition stranding* (Doctoral dissertation). University of Connecticut.
- Ackema, P., & Schoorlemmer, M. (1994). The middle construction and the syntax-semantics interface. *Lingua*, 93(1), 59–90.
- Ackema, P., & Schoorlemmer, M. (1995). Middles and nonmovement. *Linguistic Inquiry*, 173–197.
- Ackema, P., & Schoorlemmer, M. (2005). Middles. *The Blackwell companion to Syntax*, 3, 131–203.
- Ahn, B., & Sailor, C. (2010). The Emerging Middle Class. *Proceedings of CLS 46*.
- Alexiadou, A., Anagnostopoulou, E., & Schäfer, F. (2006). The properties of anticausatives crosslinguistically. *Phases of interpretation*, 91, 187–211.
- Baker, M. (1988). *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.
- Bale, A. (2007). Quantifiers and verb phrases: An exploration of propositional complexity. *Natural Language & Linguistic Theory*, 25(3), 447–483.
- Basilico, D. (2003). The topic of small clauses. *Linguistic Inquiry*, 34(1), 1–35.
- Chierchia, G. (2004). A semantics for unaccusatives and its syntactic consequences. *The unaccusativity puzzle: explorations of the syntax-lexicon interface*, 22–59.
- Chomsky, N. (1977). On wh-movement. *Formal Syntax*, 71–132.

- Chomsky, N. (1981). Lectures on government and binding. *Foris, Dordrecht*.
- Chomsky, N. (1995). *The minimalist program*. Cambridge, MA: MIT Press.
- Chomsky, N. (2001). Derivation by phase. *Ken Hale: A life in language*, 1–52.
- Cohen, A. (2004). Existential generics. *Linguistics and philosophy*, 27(2), 137–168.
- Collins, C. (2005). A smuggling approach to the passive in English. *Syntax*, 81–120.
- Cuervo, M. (2003). *Datives at large* (Doctoral dissertation). Massachusetts Institute of Technology.
- Dechaine, R., & Wiltschko, M. (2011). The Heterogeneity of Reflexives.. *The World of Reflexives Workshop, Utrecht Institute of Linguistics OTS, Utrecht University*.
- Erteschik-Shir, N., & Rapoport, T. (1997). A theory of verbal projection. *Interfaces in Linguistic Theory*, 129–148.
- Fagan, S. (1992). *The syntax and semantics of middle constructions: A study with special reference to German*. Cambridge University Press.
- Gajewski, J. (2002). L-analyticity and natural language. *Manuscript, MIT*.
- Guhl, M. (2010). Towards a syntactic analysis of Russian-sja. *Russian linguistics*, 34(3), 261–283.
- Hale, K., & Keyser, J. (1986). Some transitivity alternations in English. *MIT Working Papers in Linguistics 7*.
- Harley, H. (2013). External arguments and the Mirror Principle: On the distinctness of Voice and v. *Lingua*, 125(2013), 34–57.
- Hoekstra, T., & Roberts, I. (1993). Middle constructions in Dutch and English. *Knowledge and language*, 183–220.
- Iwata, S. (1999). On the status of an implicit arguments in middles. *Journal of linguistics*, 527–553.

- Jackendoff, R. (1990). On Larson's treatment of the double object construction. *Linguistic Inquiry*, 427–456.
- Jaeggli, O. (1986). Passive. *Linguistic inquiry*, 17, 587–622.
- Jones, C., & Levine, J. (2010). Conditions on the Formation of Middles in Russian. *Journal of Slavic Linguistics*, 18(2), 291–335.
- Kamp, H., & Rossdeutscher, A. (1994). Remarks on lexical structure and DRS construction. *Theoretical linguistics*, 20(2-3), 97–164.
- Kayne, R. (1994). *The antisymmetry of syntax*. Cambridge, MA: MIT Press.
- Kempchinsky, P. (2004). Romance se as an aspectual element. *AMSTERDAM STUDIES IN THE THEORY AND HISTORY OF LINGUISTIC SCIENCE SERIES 4*, 258, 239–256.
- Kempchinsky, P. (2006). Teasing Apart the Middle. In I. Laka & B. Fernandez (Eds.), *Andolin gogoan/homenaje a andolin eguzkitza* (pp. 537–547). University of Basque Country Press.
- Keyser, S. J., & Roeper, T. (1984). On the Middle and Ergative Constructions in English. *Linguistic Inquiry*, 15(3), 381–416.
- Kit, O. (2013). Extending the generic middle analysis to Slavic languages. *McGill Working Papers in Linguistics*, 23(1).
- Kratzer, A. (1996). Severing the external argument from its verb. *Phrase structure and the lexicon*, 109–137.
- Krifka, M., Pelletier, F., & Carlson, G. (1995). Genericity: an introduction. *The Generic Book*, 1–124.
- Kuroda, S. (2003). Milsark's generalization and categorical judgments. *Proceedings of SALT*, 13, 204–221.
- Kučerová, I. (2011). Perfect Dependent Case. *Formal Approaches to Slavic Linguistics 20 meeting at MIT*.

- Legate, J. (2003). Some interface properties of the phase. *Linguistic Inquiry*, 34(3), 506–515.
- Legate, J. (2010). The Structure of Implicit Agents in Passives. *Paper presents at NELS 41, University of Pennsylvania, 22-24 October*.
- Lekakou, M. (2005). *In the middle, somewhat elevated* (Doctoral dissertation). University of London.
- Lidz, J. (1996). *Dimensions of reflexivity* (Doctoral dissertation). University of Delaware.
- Manzini, M. (1983). *Restructuring and reanalysis* (Unpublished doctoral dissertation). Cambridge, MIT.
- Marantz, A. (1997). No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. *University of Pennsylvania working papers in linguistics*, 4(2), 14.
- Marelj, M. (2004). *Middles and argument structure across languages* (Doctoral dissertation). University of Utrecht.
- Massam, D. (1992). Null objects and non-thematic subjects. *Journal of Linguistics*, 28(1), 115–137.
- McConnell-Ginet, S. (1994). On the non-optionality of certain modifiers. *Proceedings of SALT*.
- Medová, L. (2009). *Reflexive Clitics in the Slavic and Romance Languages. A Comparative View from an Antipassive Perspective*. Ann Arbor: ProQuest LLC.
- Postal, P. (1974). *On raising: One rule of English grammar and its theoretical implications*. Cambridge, MA: MIT Press.
- Pylkkänen, L. (2008). *Introducing arguments* (Vol. 49). Cambridge, MA: MIT Press.
- Reinhart, T., & Reuland, E. (1993). Reflexivity. *Linguistic inquiry*, 657–720.

- Reinhart, T., & Siloni, T. (2005). The lexicon-syntax parameter: Reflexivization and other arity operations. *Linguistic inquiry*, 36(3), 389–436.
- Richards, N. (2003). Why there is an EPP. *Gengo Kenkyu*, 123, 221–256.
- Rivero, M., & Sheppard, M. (2003). Indefinite reflexive clitics in Slavic: Polish and Slovenian. *Natural Language & Linguistic Theory*, 21(1), 89–155.
- Roberts, I. (1987). *The representation of implicit and dethematized subjects*. Foris.
- Rosenbaum, P. (1967). The grammar of English predicate complement constructions. Research monograph 47.
- Rothstein, S. (2008). *Structuring events: A study in the semantics of aspect*. John Wiley & Sons.
- Safir, K. (2004). *The syntax of anaphora*. Oxford: Oxford University Press.
- Starke, M. (2005). Nanosyntax class lectures. Spring 2005. *University of Tromsø*.
- Steinbach, M. (2002). *Middle voice: A comparative study in the syntax-semantics interface of German*. John Benjamins Publishing.
- Stroik, T. (1992). Middles and movement. *Linguistic Inquiry*, 127–137.
- Travis, L. (2010). *Inner aspect: The articulation of VP*. Springer.
- von Stechow, K. (2004). Would you believe it? The king of France is back! Presuppositions and truth-value intuitions. *Descriptions and beyond*, 269–296.