

Towards a unified analysis of the syntax and semantics of *get* constructions

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Abstract

This thesis develops a novel, unified, syntactic and semantic analysis for a range of *get* constructions including those with adjectival, prepositional and verbal complements. There are two reasons to believe that such an approach is justified. First, the relevant *get* constructions demonstrate similar semantic characteristics across complement types, e.g. the presence of Cause (in the sense of Pylkkänen 2008), leading to an obligatorily resultative change-of-state interpretation. Second, the range of constructions display syntactic similarities: for each *get* construction with no external argument there is a corresponding construction with an external argument; and all of the relevant *get* constructions take a predicative small clause complement. The approach defended here utilises a formal syntactic and semantic framework to propose an analysis in which *get* is interpreted as a causative functional head which takes a PredP complement whose function is to add a Holder argument to the property expression in its complement (Bowers 1993, Adger and Ramchand 2003). At this point one of two things may occur. Either (i), the Holder argument raises to the sentential subject position, or (ii), it remains in-situ and an argument external to the causative head is introduced, and then raised to subject position. The thesis shows that, contra Pylkkänen 2008, and unlike any other English constructions, *get* constructions may project Cause without necessarily bundling it together with Voice in the syntax. The resulting claims impact on topics in theoretical linguistics as varied as predication, causation, reflexivity and binding, property theory and passivisation, and have consequences for the nature of the syntax semantics interface.

Keywords ‘*get*’, causative head, external arguments, properties

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Contents

Abstract	1
Acknowledgements	2
1 Introduction	6
1.1 The Puzzle	6
1.2 The Proposal	10
1.2.1 The ‘lightness’ of <i>get</i>	12
1.3 Thesis overview	13
1.4 Syntactic and semantic assumptions	13
1.4.1 Argument Introduction	14
1.5 <i>Get</i> constructions for future work	15
1.6 Support for the proposed denotation of <i>get</i>	16
1.6.1 Japanese adversity causatives	18
1.6.2 Finnish desiderative causatives	21
1.6.3 Voice bundling and the English zero-causative	24
2 Adjectival Complementation	26
2.1 Introduction	26
2.2 Support for a bi-eventive analysis	27
2.2.1 The presence of Cause	27
2.2.2 Thematic roles and the possible lack of an external argument	37
2.2.3 No implicit Agent available	42
2.3 Intermediate summary	43
2.4 Adjectival restrictions	44
2.4.1 Attributive and predicative adjectives	44
2.4.2 Stage and individual level adjectives	46
2.4.3 Extensional and Intensional adjectives	51
2.4.4 Comparatives and superlatives	53
2.4.5 Returning to AR	56
2.5 Application of the analysis to <i>get</i> constructions	61
2.5.1 The structure of the complement of an adjectival <i>get</i> construction	61
2.5.2 Merging <i>get</i>	64
2.6 Chapter summary	65
3 Prepositional complementation	68
3.1 Introduction	68
3.2 Introduction to the prepositional domain	68
3.3 Three properties in support of a bi-eventive analysis	71
3.3.1 The presence of Cause	72
3.3.2 Agentivity and the θ -role ambiguity	76
3.3.3 No implicit Agent	78
3.4 A closer look at locative and directional Ps	80

3.4.1	Blurred division lines	80
3.4.2	LocPs or DirPs?	82
3.5	Locational prepositions	83
3.5.1	Merging <i>get</i>	85
3.6	Directional prepositions	87
3.6.1	Paths and prepositional aspect	87
3.6.2	Goal, source and route DirPs	88
3.6.3	Boundedness	90
3.6.4	An algebra of paths	90
3.6.5	Aspectual transfer	92
3.6.6	Diagnosing Paths	93
3.6.7	Semantic prepositional values	95
3.7	Analysis of DirPPs	101
3.7.1	Merging <i>get</i>	110
3.8	The problem with <i>at</i>	112
3.9	DirPPs as copula complements	115
3.10	Chapter summary	117
4	<i>Get</i> and the reflexive anaphor	120
4.1	The Basic Data	120
4.2	Probing the data	122
4.2.1	Introduction to proxy readings	122
4.2.2	Conditions on anaphoric object drop	123
4.3	A look ahead and a look back	128
4.3.1	The analysis in a nutshell	128
4.3.2	Pronominal binding	129
4.3.3	Anaphoric binding	131
4.3.4	Binding through feature transmission	133
4.3.5	Back to proxy readings	141
4.4	The analysis	148
4.4.1	Identity - reflexivisation without binding	148
4.4.2	Anaphoric <i>self</i> - e.g. John saw himself	150
4.5	Intermediate summary	156
4.5.1	Problem 2 concerning the make-up of a <i>self</i> anaphor	156
4.5.2	Problem 3 concerning <i>self</i> and coreferentiality	156
4.5.3	Problem 1 concerning the Proxy Generalisation	156
4.6	IdentN and Possession	157
4.6.1	Possessed <i>self</i> in subject position - e.g. John's very self (is in danger)	160
4.6.2	Possessed <i>self</i> in object position - e.g. John sat his good self down	162
4.7	Returning to <i>get</i>	163
4.8	Chapter summary	165
5	<i>Get</i> and passive complementation	167
5.1	Introduction to passive <i>get</i>	167
5.2	Looking ahead	171
5.3	Three characteristics that demonstrate Cause with no Voice	174
5.3.1	There is a causing event in the structure	174
5.3.2	The matrix subject is not an external argument	176
5.3.3	There is no implicit external argument	179
5.4	The analyses	181
5.4.1	Evidence for the presence of a passive participle	181
5.4.2	Motivating IdentN	182
5.4.3	Merging the passive participle with an event	185
5.4.4	Merging Pred	186
5.4.5	Merging <i>get</i>	188

5.4.6	Evidence for the presence of an adjectival participle	191
5.4.7	Merging the adjectival participle with an event	193
5.4.8	Merging PredP and <i>get</i>	194
5.5	Verbal i-level predicates	196
5.6	Chapter summary	198
6	Conclusion	199

Chapter 1

Introduction

The main aim of this thesis is to provide a unified analysis of the syntax and semantics of a wide range of *get* constructions. In doing so, the analysis highlights and often challenges both conventional and recently established thinking on issues as varied as predication, causation, reflexivity and binding, property theory and passivisation in the English language.

The main aim stated, by way of an introduction, this chapter is set out as follows. I begin by looking at just some of the interesting data connected with *get*. These pockets of information serve merely as an introduction to the complex nature of the verb (particularly when considered in conjunction with its surrounding material) which will be revealed in more detail as the narrative advances. This brief look at some of the relevant data is followed by the syntactic and semantic proposal I will espouse and defend throughout this thesis for *get* and its complement structure. A succinct thesis overview is then followed by a section consisting of the syntactic and semantic framework that the proposed analysis is couched in. The thesis's limitations are then addressed in terms of which constructions I will not be able to consider herein. Finally, in the last section, some time is spent on looking at support for the semantic denotation I believe best characterises the meaning of *get*. Thus, we begin by assembling various pieces of the puzzle.

1.1 The Puzzle

When we scratch the surface, apparently simple sentences such as those in (1) and (2), hide rather more complex issues than might be expected.

- | | | | | | |
|-----|----|-------------------|-----|----|--------------------|
| (1) | a. | The ice melted | (2) | a. | The ice was melted |
| | b. | John tickled Mary | | b. | Mary was tickled |

For example, in (1), why is the relationship that exists between *the ice* and the verb

- (11) a. John got dirty
 b. *John got female!

- (12) a. John was dirty
 b. John was female!

In (12) the complements are both adjectival and fine as the complement of *be*. However, for the same adjectives in the complement of *get* use of ‘female’ is strongly degraded while ‘dirty’ is still felicitous.

Nevertheless, within the analysis to be posited here, *get* and *be* will be shown to be justifiably, intimately related. Indeed, they share at least one very revealing similarity, specifically, their strikingly wide distributions, (13) and (14), and one equally revealing fact about their meanings, namely that most of the examples with *get* entail the corresponding example with *be*, (15):

- | | | | |
|------|---|------|--|
| (13) | a. John got fired
b. John got dirty
c. John got past the barrier
d. John got a doctor
e. John got to fire Mary
f. John got fixing the leak | (14) | a. John was fired
b. John was dirty
c. John was past the barrier
d. John was a doctor
e. John was to fire Mary (but didn't)
f. John was fixing the leak |
|------|---|------|--|

- (15) a. John got fired → John was fired
 b. John got dirty → John was dirty
 c. John got past the barrier → John was past the barrier
 d. John got fixing the leak → John was fixing the leak

Other contrasts will surface during the course of this investigation which, for space reasons, considers only a subset of the uses of *get* shown in (13), more specifically, those set out in (16) and (17).

The data set has been divided here into two broad categories, A-type constructions and B-type constructions. By way of a terminological clarification, *get* constructions with AP complements will often be referred to as adjectival *get* constructions. Likewise, those with PP complements will often be called prepositional *get* constructions and those with PassP complements as passive *get* constructions.

- (16) A-type Get Constructions
 Linear structure: DP1 *get* Predicate
- | | |
|---------------------------------|-------------------------|
| a. John got angry | [AP-complementation] |
| b. John got on the roof | [PP-complementation] |
| c. John got onto the roof | [PP-complementation] |
| d. John got arrested | [PassP-complementation] |
| e. John got washed ¹ | [AP-complementation] |
- (17) B-type Get Constructions
 Linear structure: DP2 *get* DP1 Predicate
- | | |
|--------------------------------|-------------------------|
| a. Mary got John angry | [AP-complementation] |
| b. Mary got John on the roof | [PP-complementation] |
| c. Mary got John onto the roof | [PP-complementation] |
| d. Mary got John arrested | [PassP-complementation] |
| e. Mary got John washed | [AP-complementation] |

Notice that any particular A-type construction has exactly one less nominal argument than its counterpart B-type construction. So, for example, the construction in (16-a), which embeds an adjectival predicate, has one less argument than the construction in (17-a), which embeds the same adjectival predicate, and is thus considered to be its counterpart.

There appears to be a strong relationship between the two types, namely that the nominal in position DP1 in a B-type construction plays a similar thematic role in the given sentence to the role played by the nominal in position DP1 in its A-type counterpart. For instance, in both (16-d) and (17-d), and despite the discrepancy that exists between the linear sentential position of the nominal *John* relative, in particular, to *get*, *John* is the person undergoing arrest. He is the so-called Theme of the arresting event. This speaks to an analysis in which the two types are closely related, with one type possibly deriving from the other.

Another feature of all these *get* constructions is that they are resultative. This is shown by the fact that each one denotes a result state which cannot be contradicted:

- (18) a. *John got angry but he wasn't angry
 b. *John got on the roof but he wasn't on the roof
 c. *John got arrested but he wasn't arrested

This contrasts with other bi-clausal verbs that clearly do not give rise to a result state:

¹ *Washed*, both here and in (17-e), is to be thought of as a resultative adjectival participle. Evidence in support of the existence of this construction is provided in chapter 5

- (19) a. Mary asked/begged John to help but he didn't help
 b. John asked/begged to help but he didn't help

It is possible to draw out many more features and properties of *get* constructions, both in and of themselves, and in comparison to similar *be* constructions but, I will let this occur naturally through the discussion as it moves forward. The facts and contrasts already made and drawn above serve as a sufficient window into the complexity of the verb in question, and remind us that any successful analysis will need to be able to explain all of these nuances.

1.2 The Proposal

In a nutshell, I will argue that despite appearances, the syntax and semantics of *get* is consistent across the constructions outlined in (16) and (17).

Semantically, *get*'s function is to let the hearer know that some unspecified event has caused the state described in its complement to hold of some particular individual or set of individuals. Thus, it means something like (but not exactly) the English word 'cause' and it signals to the hearer the onset of a new state. Its semantic value is formally expressed in (20)².

$$(20) \quad \llbracket \text{get} \rrbracket = \lambda f_{\langle s,t \rangle} . \lambda e . \exists e' . [f(e') \ \& \ \text{CAUSE}(e, e')]$$

In words, (20) says that for some eventuality e , there exists an eventuality e' , characterised by the complement of *get*, such that e causes e' .

Syntactically, *get* takes a small clause (SC) complement, and an optional external argument may be added (hence the difference between A-type and B-type *get* constructions), see (23) and (24). The small clause complement will necessarily contain both a predicative³ element and a Holder subject introduced by the head of the SC, namely by Pred (Bowers 1993, Bowers 2001, Adger and Ramchand 2003). The semantic value of Pred is shown in (21).

$$(21) \quad \llbracket \text{Pred} \rrbracket = \lambda \pi . \lambda x . \lambda e . [\text{holds}(\pi, e) \ \& \ \text{Holder}(e, x)]$$

(Adger and Ramchand 2003)

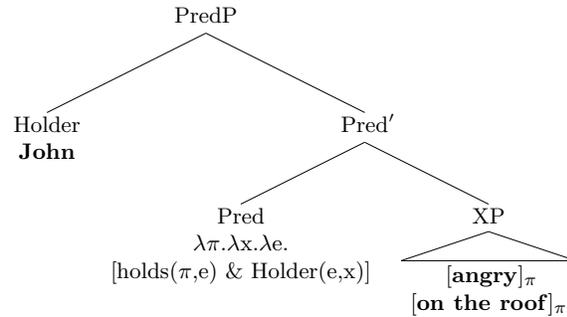
The function of Pred is to turn the property expression in its complement into a propositional function with an unsaturated argument. It does so by expressing that the property holds of some eventuality and that this eventuality has a Holder argument. Thus, if the property is, for example, the property of anger, Pred will allow the

²I will explain and defend my reasons for assigning this particular value for *get* in section 1.6 at the end of this chapter.

³The necessity holds because of the semantic 'lightness' of *get* - see section 1.2.1

grammar to take that property and express that it holds of a particular eventuality, returning an eventuality of being angry, of which a particular individual may then be deemed the Holder⁴.

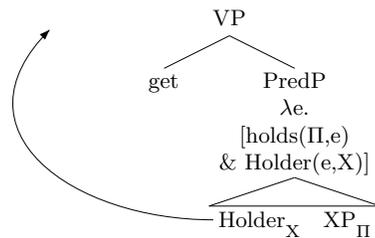
(22) Small clause structure



It is worth re-emphasising this point. The properties (of being angry, on the roof etc.) do not hold directly of an individual, but rather, they hold of an eventuality of which an individual is the Holder. There is a principled reason, to do with the stage/individual level distinction (Carlson 1977), as to why it is desirable to have Pred work in this way for *get* constructions, and it will be argued for in detail, in sections 2.4.2 and 2.4.5.

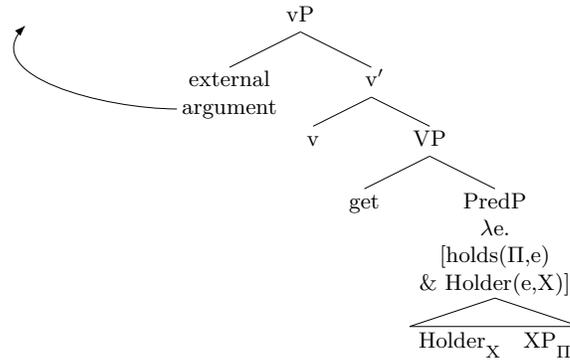
The trees below summarise the analysis, as presented thus far, for both A-type and B-type *get* constructions.

(23) *Get* construction, no external argument (A-type)



⁴I will say a bit more about the holds and Holder relations in section 2.5.1.

(24) *Get* construction with external argument (B-type)



In non-agentive structures, (23), the Holder argument is forced to raise for nominative Case marking. However, for agentive variants, (24), the Holder argument is Case marked in-situ by little *v*, while the external argument raises for nominative Case marking.

Finally, there is one more side to *get* that is worth highlighting before moving on, which is the notion of ‘lightness’, or ‘light’ as opposed to ‘main’ verbs. It is worth mentioning because from time to time it will crop up, and it relates generally to the semantics of *get*, (20), and to its pervasiveness in the English language. The following section is dedicated to a definition of what ‘lightness’ is taken to mean within the context of this thesis.

1.2.1 The ‘lightness’ of *get*

For the constructions under consideration, it is clear that *get* requires a complement of more complexity than just a simple nominal argument⁵. The reason for this is now clear. *Get*, rather than adding propositional weight to the sentence, merely allows the user to add in an extra unspecified causing event. This is reflected in its logical representation in (20), which licenses no arguments and simply asserts a causal relationship between two eventualities. Of the two, the caused one’s characterisation is dependent on the phrase in *get*’s complement, while the causing one is underspecified and therefore unattached to any particular kind of cause.

The following is what I mean by ‘lightness’: *get* is a ‘light’ verb in that no logical proposition is put forward by its use, no ‘complete’ concept over which it is possible to form a truth judgement. *Get* is verbal in that it may be tensed, but unlike most other verbs in that it is not predicative. For this reason a more complex complement

⁵This is also true for nominal complement *get* constructions like *John got a present*. I will not be analysing these constructions, except to point out that superficially, they appear to consist minimally of just a nominal argument complement. In fact, however, these constructions also include a possession side to their meanings which indicates that an analysis of them as containing purely nominal complements is too simple.

is required, namely one that can add propositional weight, i.e., a predicate of some description.

With this small matter cleared up, and the proposal set out, we will now take a brief look at an overview of the thesis as a whole.

1.3 Thesis overview

The thesis will take on the following form. In the rest of this introductory chapter, we will first briefly run through some of the more important syntactic and semantic theoretical assumptions that I adopt, and then look at some support found elsewhere in the literature for the meaning of *get* that I will be defending throughout.

In chapters 2 and 3 it will be shown that the analysis set out in section 1.2 is able to cope with both adjectival and prepositional *get* constructions, respectively, and will be shown to be able to handle difficulties in relation to the stage-level/individual-level contrast, modification with *more*, and the distinction between locational and directional prepositions.

Then, in chapter 4, greater attention will be paid to the importance of the reflexive anaphor in all of the relevant constructions, and a novel analysis of reflexive anaphor binding will be attempted as a way of explaining some of the θ -role assignment patterns we see. This analysis of reflexive anaphors will play a particularly crucial role in the evaluation of passive *get* constructions conducted in the final analytical chapter of the thesis, of which there are two types, pure passives and adjectival passives. Finally, a thesis conclusion is offered in chapter 6.

1.4 Syntactic and semantic assumptions

This thesis assumes Chomsky's (1995, and subsequent work) principles and parameters theory within a Y-model of grammar commonly called the *Minimalist Program* (MP).

Furthermore, I will assume that syntactic structures licensed within MP may be mapped in a tight, one-to-one fashion with the semantics such that they may be 'read' directly off of the syntactic structure.

I will employ a type-driven truth conditional semantics, adopting the general approach and framework espoused in Heim and Kratzer (1998), but with two additions to the set of basic types, namely that in addition to entities of type e and truth values of type t , there exist eventualities of type s (a cover type for both states and events (Bach 1986)) and properties of type π (Chierchia 1985, Bowers 1993). π , like s , may be considered a cover type for various properties that will be motivated through

the course of the analysis. These include properties of locations i , times t and spatiotemporal intervals Δ . Denotations of individual lexical items will be either that of entities, truth values, eventualities, properties or functions built up from these basic types (e.g. $\langle e, \langle s, t \rangle \rangle$, $\langle e, \pi \rangle$, $\langle s, t \rangle$ etc.). I assume that the interpretation of a syntactic tree proceeds compositionally, through the processes of *functional application* (FA), and *event(uality) identification* (Ev.Id.) (used here almost exclusively for addition of the external argument (Agent)):

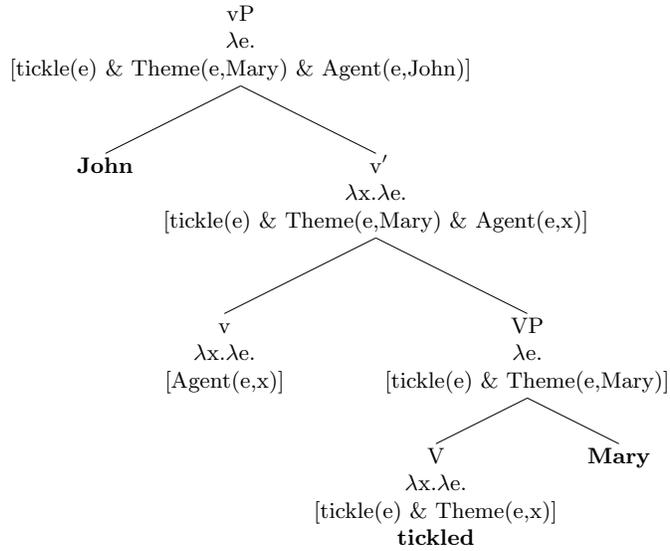
- (25) a. Functional Application
 If α is a branching node, $\{\beta, \gamma\}$ is the set of α 's daughter's, and $[\beta]$ is a function whose domain contains $[\gamma]$, then $[\alpha] = [\beta]([\gamma])$.
 (Heim and Kratzer 1998, p.44)
- b. Event Identification
 A function of type $\langle e, \langle s, t \rangle \rangle$ may be event identified with a function of type $\langle s, t \rangle$ to produce a function of type $\langle e, \langle s, t \rangle \rangle$:
 $\langle e, \langle s, t \rangle \rangle \quad \langle s, t \rangle \quad \longrightarrow \quad \langle e, \langle s, t \rangle \rangle$.
 (Kratzer 1996, p.122)

Argument introduction, to which we turn next, takes a prominent role in the characterisation of *get*, and for this reason it receives a section all to itself.

1.4.1 Argument Introduction

I will assume that argument introduction proceeds in a neo-Davidsonian way for the addition of non-core verbal arguments such as Agent and Holder (Kratzer 1996). Core arguments may or may not be reflected in the text in a neo-Davidsonian format with no resulting consequence, e.g. the necessary need for neo-Davidsonian representation in the syntax. Thus, a sentence like *John tickled Mary* will have the following syntactic and semantic structure (ignoring tense)⁶:

⁶As a word of caution, Voice and little v will be used interchangeably in the discourse and are assumed to perform the same grammatical functions.



Partially following Bowers (1993), I will assume that the phrases of categories that may denote properties are restricted to the set $\{A, P, N, Res, Pass-v^7\}$, i.e., most of the set of predicational categories that may be considered unsaturated in the ‘Fregean’ sense. The category V, conspicuous by its absence, is not included as it will be assumed that VP cannot have a Holder argument and that for all agentive constructions, the external argument is added via event identification with VP. The ‘special’ status of all of these categories as predicates of language is due to what Chomsky (1986) has called a *Complete Functional Complex* (CFC), that is, once they are saturated (mediated by a Pred or little v head), each one can “stand on its own as a complete thought or information unit” (Bowers 1993, p.649).

A final comment is in order. It will be taken as fact that there exist various types of *by* phrases: those that name implicit Agents and those that describe a cause are the ones most used herein, although others do exist (e.g. *by himself* = ‘alone’). Although I have not differentiated between them in the analysis using special terms, I have tried to refer to which one is in use at any given time.

Next, I will simply provide examples for all of the *get* constructions that are not under consideration in this work.

1.5 *Get* constructions for future work

I will not be analysing the following host of *get* constructions, but my hope is that the analysis will be, at least in the main part, not too difficult to extend to these structures. The most obvious are those with DP, particle and infinitival VP comple-

⁷Res and Pass-v will be defined properly in chapter 5, but are essentially an A and defective v, respectively.

ments:

- (26) a. John got (Mary) the doctor/a new bike
b. John got (Mary) out/off/in/on
c. John got (Mary) to fire Peter
d. John got (Mary) fixing the car

Other constructions outside the remit of this thesis include the following:

- (27) a. I get that you like her but why?: *Get* = ‘understand’
b. I got you = I understood/beat/tricked you etc.

Finally, and less obviously, the Experiencer constructions, which are so-called because the matrix subject receives an Experiencer θ -role. These are briefly considered in section 2.2.2, but no fully worked out analysis is provided for them:

- (28) a. John got his car stolen
b. John got Mary’s car stolen on him

We turn now finally to a discussion consisting mainly of a review of a subpart of Pylkkänen 2008, in which strong motivation for the proposed value of *get*, as given in (20), is to be found.

1.6 Support for the proposed denotation of *get*

The semantic value assigned to *get* in (20), repeated in (29), is posited elsewhere in the literature as the “universal causative element” *Cause* (Pylkkänen 2008, p.84). According to Pylkkänen, *Cause* is, in principle, available to all languages as a way to introduce a causing event into the semantics of a non-causative predicate. So, just as Kratzer (1996), Bowers (1993), (2001) and indeed Pylkkänen (2008), among others, use functional heads to introduce event arguments, Pylkkänen also uses a functional head, namely *Cause*, to introduce an event proper.

$$(29) \quad \llbracket \text{get} \rrbracket = \lambda f_{\langle s,t \rangle} . \lambda e . \exists e' [f(e') \ \& \ \text{CAUSE}(e,e')] = \text{Cause}$$

The denotation in (29) says that, given some set of eventualities f , and some eventuality e , there exists an eventuality e' such that e causes e' and e' is characterised as the eventuality in the complement of *Cause* (or *get*). Crucially, the given entry does not relate a participant to the causing event, although there is also nothing to stop one being added on separately by Voice (Kratzer 1996).

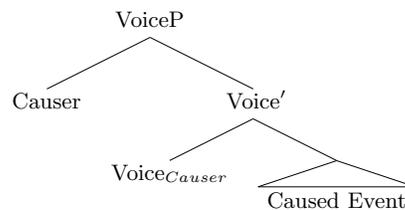
Pylkkänen’s (2008) claim competes with an alternative stance positing that causativity is simply the result of the use of a Kratzerian style argument introducing functional

head as illustrated in (30) (Doron 1999).

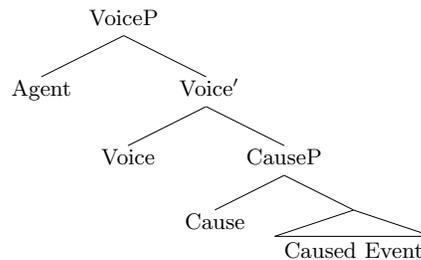
$$(30) \quad \lambda f_{\langle s,t \rangle} . \lambda x . \lambda e . [f(e) \ \& \ \text{Causer}(e,x)]$$

As Pylkkänen states, these two opposing theories make different predictions about what causative sentences mean, and therefore about what their possible semantic structures are. More specifically, for any event of (for example) a vase breaking, if John broke the vase then, assuming a θ -role analysis as in Doron 1999, John was the Causer of a breaking of the vase. However, assuming a bi-eventive analysis as in Pylkkänen 2008, John was an Agent of some event where that event caused a breaking of the vase. Syntactically, the two structures look as follows:

(31) The θ -role analysis

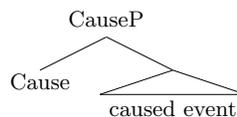


(32) The bi-eventive analysis



These two meanings are significantly different in that only the second allows for the possibility of a causative construction without the necessity of an external argument, (33), i.e., the possibility of a sentence with the meaning some event caused a breaking of the vase. It is exactly this kind of meaning that I am claiming is encoded in (A-type) *get* constructions. Thus, in so far as this claim is shown to be correct, it will provide strong empirical support for Pylkkänen 2008.

(33)



(34) The vase got broken \equiv ‘some event caused a breaking of the vase’

For Doron 1999, to introduce an external argument as a Causer is to introduce causativity into the semantics of the relevant sentence, and consequently there is no way to achieve this without an external argument. Therefore, crucial evidence both in support of the bi-eventive analysis, and against the θ -role analysis, will come in the form of causative constructions which demonstrate no discernible Agent. Pykkänen 2008 describes two such cases; the Japanese adversity causative and the Finnish desiderative causative. In the next two sections I will run through the relevant data.

1.6.1 Japanese adversity causatives

The Japanese adversity causative is used by speakers to express that the nominative argument has somehow been adversely affected by some caused event. The basic example is a causativised unaccusative as follows:

- (35) Taroo-ga musuko-o korob-ase-ta
 Taroo-NOM son-ACC fall.down-CAUSE-PAST
 a. ‘Taroo caused his son to fall down’
 b. ‘Taroo was adversely affected by his son falling down’
 (from Pykkänen 1999b)

We know that (35) is causativised because it has the causative marker ‘sase’. The meaning of (35) is ambiguous between a standard causative, in which the nominative argument is interpreted as the Agent of the causing event, (35-a), and an interpretation in which it can be read as an affected argument of the caused event, (35-b).

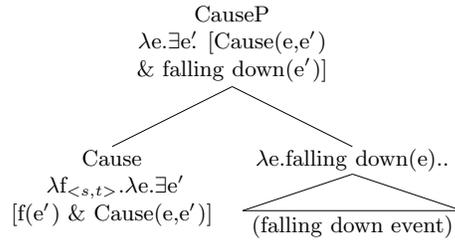
A similar construction with a similar meaning exists in Japanese, namely the adversity passive:

- (36) Taroo-ga musuko-ni korob-are-ta
 Taroo-NOM son-DAT fall.down-PASS-PAST
 ‘Taroo was adversely affected by his son falling down’

Leaving Case to one side, the only surface difference in this construction, as compared to (35), is the use of the passive marker ‘rare’ in place of the causative marker. However, as will be seen, other differences do exist.

For now, the important case to consider is (35-b), which is predicted to have the following structure, and a causative interpretation in which the causing event has no related participant:

(37) = structure of (35-b)



To show that this is a possible structure for (35-b), Pylkkänen demonstrates three properties of the sentence. She gives evidence that:

1. The nominative argument ‘Taroo’ is not an external argument.
2. There is a causing event in the structure.
3. There is no implicit external argument.

Passivisation facts demonstrate that the nominative argument is not an external argument. The adversity causative, (35-b), patterns like both unaccusatives and adversity passives in that it does not passivise:

Adversity Causative:

- (38) Musuko-ga korob-ase-rare-ta
 son-NOM fall.down-CAUSE-PASS-PAST
 a. ‘The son was caused to fall down’
 b. *‘Somebody was adversely affected by their son falling down’

Adversity Passive:

- (39) *Musuko-ga korob-are-rare-ta
 son-NOM fall.down-PASS-PASS-PAST
 ‘Somebody was adversely affected by their son falling down’

Unaccusative:

- (40) *Korob-are-ta
 falling.down-PASS-PAST
 ‘There was falling down going on’

To show that there is a causing event, but no implicit argument present in the adversity causative, Pylkkänen compares how it and the passive combine with *by*-phrases.

In Japanese, like in English, a *by*-phrase may either modify an event argument or specify an event participant. The Japanese *by*-phrase is *ni-yotte*:

By-phrase modifying event:

- (41) Taro-wa kawa-wo oyogu koto ni-yotte mukougisi-ni watatta
Taro-TOP river-ACC swim C BY the-other-side-DAT got
'Taro got to the other side by swimming across the river'

By-phrase specifying implicit Agent event participant in passive:

- (42) a. Nikki-ga Hanako-ni-yotte yom-are-ta
diary-NOM Hanako-BY read-PASS-PAST
'The diary was read by Hanako'

The unaccusative does not have an implicit argument and as such will not combine with a *by*-phrase:

By-phrase not able to specify event participant:

- (43) *Yasai-ga Hanako-ni-yotte kusa-tta
Vegetable-NOM Hanako-BY rot-PAST
'*The vegetable rotted by Hanako'

If the adversity causative names a causing event but has no implicit argument it is predicted to be able to take a *ni-yotte* phrase naming this causing event, but not one naming an implicit Agent. The converse should be true for passives. These predictions are borne out:

Adversity causative:

- (44) a. Taroo-ga sensoo-ni-yotte musuko-o sin-ase-ta
Taroo-NOM war-BY son-ACC die-CAUSE-PAST
'Taroo's son was caused to die on him by the war'
b. *Taroo-ga Hanako-ni-yotte musuko-o sin-ase-ta
Taroo-NOM Hanako-BY son-ACC die-CAUSE-PAST
'Taroo's son was caused to die on him by Hanako'

Passive:

- (45) a. *Taroo-ga sensoo-ni-yotte musuko-ni sin-are-ta
Taroo-NOM war-BY son-DAT die-PASS-PAST
'Taroo's son died on him by the war'
b. Taroo-ga Hanako-ni-yotte korob-ase-rare-ta
Taroo-NOM Hanako-BY fall.down-CAUSE-PASS-PAST
'Taroo was caused to fall down by Hanako'

Thus, Pykkänen successfully shows that there is at least one construction in Japanese in which Cause is introduced without also having to merge Voice above it. A second construction of this type is the so-called Finnish desiderative causative, 'desiderative' in that the construction expresses a desire on the part of the subject to do the event

in question.

1.6.2 Finnish desiderative causatives

The Finnish desiderative causative is essentially a causativised unergative. It is so called by Pylkkänen because it denotes a desire and contains a causative marker ‘-tta-’⁸:

- (46) Maija-a laula-tta-a
Maija-PAR sing-CAUSE-3SG
‘Maija feels like singing’

To show that this truly has a causative meaning, but no Causer external argument, as Pylkkänen claims, she again demonstrates that the construction conforms to the following three properties:

1. The pre-verbal (partitive) argument is not an external argument.
2. There is a causing event in the structure
3. There is no implicit external argument

Taking these in turn, the first is relatively easy to show. In Finnish, partitive Case, and not accusative Case, always marks the object when the event described by the verb is atelic. Thus, to show the first property, Pylkkänen need only show that the sentence is atelic. In fact it is stative (and therefore atelic) which can be established through comparison of how statives in Finnish work in contrast to eventives. In the present tense, Finnish eventives, like English eventives, have only a habitual interpretation, (47-a). Statives, on the other hand, have a ‘true’ present tense meaning, (47-b). Desideratives pattern with stative verbs, (47-c):

- (47) a. Maija aja-a avoauto-a
Maija-NOM drive-SG convertible-PAR
‘Maija drives a convertible (habitually)’
b. Jussi osa-a ranska-a
Jussi-NOM know-3SG French-PAR
‘Jussi knows French (at present)’
c. Maija-a laula-tta-a
Maija-PAR sing-CAUSE-3SG
‘Maija feels like singing (at present)’

Note that the stative in (47-b) has its (post-verbal) object marked with partitive case, whereas the desiderative has the (pre-verbal) subject marked with partitive case. This is not a problem as derived subjects always retain partitive case:

⁸I leave to one side, as irrelevant for my purposes here, how Pylkkänen accounts for the desiderative part of the meaning

- (48) Pekka-a rakaste-ta-an
 Pekka-PAR love-PASS-AGR
 ‘Pekka is loved’

Pylkkänen concludes, then, that the subject of a desiderative is like a derived subject of a passivised stative verb, and crucially not an external argument⁹.

The second task is to establish that the desiderative is semantically causative. To do this, Pylkkänen compares the construction with a standard non-causative expression of desire such as (49).

- (49) Halua-isi-n laula-a
 want-COND-1SG sing-INF
 ‘I would like to sing’

The desiderative causative contains causative morphology pointing towards the existence of a causing event. (49), however, contains no causative morphology and as such should show no causative component in its interpretation. This seems to be the correct prediction, as (50) and (51) illustrate. In the former, the causative desiderative, the causative event may be questioned. In the latter, the non-causative desiderative, it may not:

- (50) Minu-a laula-tta-a mutt-en tiedä mikä
 I-PAR sing-CAUSE-3SG but-not.1SG know what-NOM
 ‘Something makes me feel like singing but I don’t know what (makes me feel like singing)’
- (51) *Halua-isi-n laulaa mutt-en tiedä mikä
 want-COND-1SG sing but-not.1SG know what.NOM
 ‘I would like to sing but I don’t know what (makes me want to sing)’

The final property that needs to be established is that the causative desiderative construction contains no implicit external argument. To do this, Pylkkänen applies *by*-phrases and purpose phrases to the construction, phrases normally employed to refer to the implicit external argument in passives.

By-phrases in Finnish come in two types; *toime-sta* = ‘action-ELA’ and *taho-lta* = ‘direction-ABL’¹⁰. When used, the former refers to an implicit Agentive argument and the latter to an implicit non-Agentive argument.

⁹Partitive case may occur on external arguments but only with plural and mass nouns. The fact that the singular is grammatical in a desiderative environment indicates again that the subject is not an external argument.

¹⁰Strictly speaking these are not *by*-phrases, but rather periphrastic equivalents to the kind of *by*-phrases used in English and Japanese.

Passives :

- (52) a. Rakennus pure-tti-in kaupungi-n toime-sta
building tear-PASS-AGR city-GEN action-ELA
'The building was torn down by the city'
b. Ministeri-ä viha-ta-an työväenluoka-n taho-lta
minister-PAR hate-PASS-AGR working.class-GEN direction-ABL
'The minister is hated by the working class'

When no implicit argument is available, as is the case with unaccusatives and non-causative psych predicates, they are ungrammatical:

***Unaccusative with by-phrase**

- (53) *Laiva upposi vihollise-n toime-sta
ship-NOM sank_{INTR} enemy action-ELA
'*The ship sank by the enemy'

***Non-causative psych predicate**

- (54) *Minna viha-stu-i Liisa-n taho-lta
Minna-NOM angry-BECOME-PAST Liisa-GEN direction-ABL
'*Minna became angry by Liisa'

As well as *by* phrases, passives will also accept purpose clauses:

- (55) Maija-a laula-te-ta-an tarkoituksella
Maija-PAR sing-CAUSE-PASS-AGR on.purpose
'Maija is caused to sing on purpose'

Crucially, however, neither a *by*-phrase nor a purpose clause may be used with the causative desiderative:

- (56) a. *Maija-a laula-ttta-a Liisa-n toime-sta/taho-lta
Maija-PAR sing-CAUSE-3SG Liisa-GEN action-ELA/direction-ABL
'Maija is caused to feel like singing by Liisa'
b. *Maija-a laula-tta-a tarkoituksella
Maija-PAR sing-CAUSE-3SG on.purpose
'something causes Maija to feel like singing on purpose'

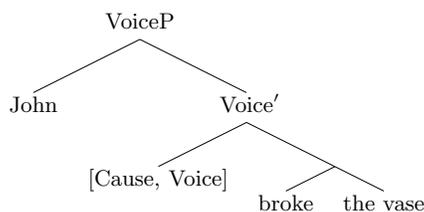
Pylkkänen successfully shows, then, that for the Finnish causative desiderative there is indeed a causing event, but no external argument, and therefore that the Cause head is independent of the external argument.

In contrast to Finnish and Japanese, English has no causative morpheme. In the next section I will go through Pylkkänen's (2008) analysis for English zero-causatives.

1.6.3 Voice bundling and the English zero-causative

As has been seen, Cause may be realised separately from Voice, effectively leading to the possibility of a causativised unaccusative. However, in English no such sentences are attested. This is explained by appeal to a system that accounts for cross-linguistic variation. The idea is that, as opposed to Japanese and Finnish, English realises Voice and Cause in one (zero) morpheme. This phenomenon is called bundling, and produces syntactic structures of the following form:

(57) Voice/Cause Bundling



With no way to realise Cause and Voice separately, there is no possibility of a causativised unaccusative and the syntax looks like the syntax of a θ -role analysis. The bi-eventive semantics, however, are maintained. Cause and Voice cannot semantically combine with each other,¹¹ so functional application with the complement is assumed to apply in which ever order possible. Here this means that Cause will take the embedded event, followed by Voice taking the result of the first operation, (58). The opposite order again results in a type mis-match, (59):

(58) Cause followed by Voice

- a. Functional Application: Cause, of type $\langle\langle s,t \rangle, \langle s,t \rangle\rangle$, takes the embedded event, of type $\langle s,t \rangle$, and spits out something of type $\langle s,t \rangle$
- b. Event Identification: Voice, of type $\langle e, \langle s,t \rangle \rangle$, conjoins with the result of step (58-a), and spits out something of type $\langle e, \langle s,t \rangle \rangle$, which is then free to functionally apply with the Agent

(59) *Voice followed by Cause

- a. Event Identification: Voice, of type $\langle e, \langle s,t \rangle \rangle$, conjoins with the embedded event, of type $\langle s,t \rangle$, and spits out something of type $\langle e, \langle s,t \rangle \rangle$
- b. *Functional Application: Cause, of type $\langle\langle s,t \rangle, \langle s,t \rangle\rangle$, cannot take the result of step (59-a) due to a type mis-match, and the derivation crashes.

While it is true that there are no attested zero-causative, causativised, unaccusative sentences in English, the reader may have already noticed that

¹¹Cause is of type $\langle\langle s,t \rangle, \langle s,t \rangle\rangle$ and Voice is of type $\langle e, \langle s,t \rangle \rangle$.

what I am proposing for the *get* constructions under consideration is a kind of overtly causativised, unaccusative construction, leading to an interesting question about parameterisation. Clearly, Cause and Voice in English causative verb constructions are bundled but, assuming robustness of the analysis to be outlined, Voice/Cause bundling cannot be a parameter of English. Rather, it must be merely a parameter of some sub-section of the grammar, perhaps characterisable as consisting of all ‘main’ verb and ‘light’ verb causative constructions except *get*¹². Although an interesting problem, due to space restrictions I will not be able to provide any further analysis of this.

In the next chapter, I will investigate to what extent a bi-eventive, non-bundled analysis for adjectival *get* constructions is successful at handling the relevant data.

¹²None of the other plausibly ‘light’ causative verbs seem to have non-agentive variants:

- (60) a. John caused Mary to cry
b. *Mary caused to cry
- (61) a. John made Mary cry
b. *Mary made cry
- (62) a. John had Mary cry
b. *Mary had cry

Chapter 2

Adjectival Complementation

2.1 Introduction

There will be just two constructions under consideration in this chapter: A-type adjectival *get* constructions, of which (1-a) is an example, and their counterpart B-type adjectival *get* constructions, of which (1-b) is an example.

- (1) a. John got angry
b. Mary got John angry

As the semantic value of *get* that I am proposing is equivalent to Cause, and *get* is universally present in the constructions under consideration, I will begin in section 2.2.1 by testing for the presence of Cause, and then, preempting later discussion on external and implicit arguments, I will continue by teasing apart the thematic roles of the arguments in each of the two structures (section 2.2.2). In sections 2.2.2 and 2.2.3, I will go on to consider how feasible it is to treat the constructions as demonstrative of a bi-eventive analysis rather than a θ -role analysis, that is, evaluate whether they project Cause and Voice separately by testing whether either one of them plausibly projects Cause but no Voice.

To do this will involve showing that the same three properties true of Japanese Adversity Causatives and Finnish Desiderative Causatives are also true for the constructions in hand, namely that:

1. There is a causing event in the structure.
2. The matrix subject is not an external argument.
3. There is no implicit external argument.

Having established an answer to this I will then, in section 2.4, consider what restrictions there are on the type of adjective that may appear in an adjectival *get*

construction and investigate whether the proposed analysis can account for these absences or whether more must be said to capture the data.

Finally, the chapter will be rounded off with a look at how the analysis works when applied to an actual adjectival *get* construction (section 2.5).

2.2 Support for a bi-eventive analysis

2.2.1 The presence of Cause

To test for the presence of Cause is relatively straightforward. The fact that I am positing that *get* is a causing event of some sort, entails that it is, at the very least, eventive (rather than stative). Therefore, testing for eventivity is the logical place to begin and, to this end, there are several tests in the literature that probe this distinction (e.g., Dowty 1979, Harley 1998). Three such tests are listed in (2):

- (2) a. Pseudoclefting, or the ‘What happened was..’ test
- b. The Progressive test
- c. The True Present Tense (TPT) test

Considering each in turn, pseudoclefting imposes on the utterance that whatever the eventuality described in its complement be, it had better be of a type which accurately fits the description of some sort of ‘happening’, i.e., it better be an event. Hence, the ungrammaticality of its use with a stative verb like *know*, (3-b):

- (3) a. What **happened** was John gave up French
- b. *What **happened** was John knew French

By converting the aspect of a sentence into the progressive we impose the restriction that the predicate must be able to describe an eventuality that is true at speech time. Statives are true independent of time and are therefore incompatible with progressive structures, (4-b):

- (4) a. John is giving up French
- b. *John is knowing French

The English present tense conveys at least two readings, one for statives and one for eventives. For the former, the interpretation is what I have called (after Harley 1998) the true present tense (TPT), and for the latter, an habitual or generic reading is returned, in other words, what we might call the habitual present tense (HPT). Thus, both stative and eventive predicates are felicitous:

- (5) a. John gives up French (regularly) HPT
 b. (Look...!) John knows French TPT

However, eventives are incompatible with the TPT and likewise, statives with HPT readings. Thus, the forcing out of one or other of the two interpretations constitutes a possible diagnostic test for eventivity/stativity, and this is what the TPT test does:

- (6) *Look...! John gives up French TPT mis-match

The HPT can be problematic as a test¹, so in what follows, along with the other two tests described above, of the two present tense oriented tests, I will use only the TPT one on *get*.

- (8) Pseudoclefting
 a. What happened was John got angry
 b. What happened was Mary got John angry
- (9) Progressive
 a. John is getting angry
 b. Mary is getting John angry
- (10) True Present Tense
 a. *Look...! John gets angry
 b. *Look...! Mary gets John angry

Judgements are as expected and, without doubt, both A-type and B-type adjectival *get* constructions denote an event. There are several reasons why it is unlikely that this event is associated with the embedded adjectival predicate. Firstly, adjectives are inherently stative (Chierchia 1995, Saeed 1997, Levin and Rappaport Hovav 1995), and secondly, even disregarding their intrinsic stativity, comparison with similar stative *be* and *have* constructions show that for these cases there is no event argument despite the presence of the adjective and its predication over the same entity:

- (11) a. *What happened was John was angry
 b. *John is being angry
 c. Look...! John is angry

¹Below, the grammaticality judgements with eventive *get* constructions will be shown to pattern conversely with grammaticality judgements for equivalent stative *be* constructions. Testing with the HPT, however, leads to grammaticality with both *be* and *get*:

- (7) a. John regularly gets angry
 b. John is regularly angry

The unexpected grammaticality of (7-b) occurs because *regularly*, aside from modifying an event to mark it as habitual, may also modify a state so long as it is s-level, not i-level; **John is regularly tall*. The test is, therefore, partly flawed, so is avoided on that basis.

- (12) a. *What happened was Mary had John angry
 b. *Mary is having John angry
 c. Look...! Mary has John angry

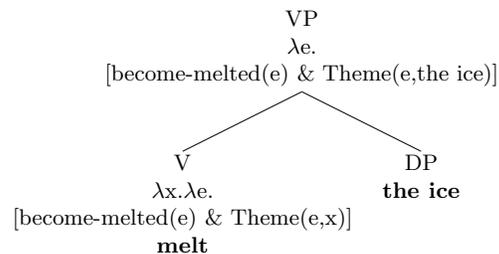
A second way to show that *get* constructions are eventive is to demonstrate that they denote a change of state. To this end, consider (13):

- (13) a. John got angry at 7 pm
 b. John was angry at 7 pm

The stative *be* construction is silent about John's situation before, and indeed after, 7 pm. All that is conveyed is John's state with respect to anger at 7 pm, and no more. In contrast, the corresponding *get* construction clearly conveys information not only about John's situation at 7 pm, but also, before. Specifically, before 7 pm, John's state was one of anything but anger. In other words there is a change of state from one of John not being angry, to one of him being angry, and that change of state occurred at 7 pm.

While changes of state are always indicative of the presence of an event in the semantic structure, the event may or may not be causative in the sense intended in this thesis, i.e., where a Cause head is present. This is arguably true of the intransitive forms of the inchoative/causative alternation verbs whose non-causative incarnations, as suggested by the label non-causative, do not contain Cause. The causative incarnation does, however (Pylkkänen 1999a). Given bi-eventivity and Voice/Cause bundling, Pylkkänen's (1999a) semantics for each alternant follow:

- (14) The ice melted (Inchoative (non-causative) variant)



of-state as simply internal and external change of state (internal CoS and external CoS, respectively).

Intuitively, internal CoS verbs are verbs for which the means of bringing about the CoS event is conceptualised as in some way residing *in* the characteristics of the entity undergoing the change. This class consists of verbs whose denotations assert the existence of a natural phenomenon involving a change of state inherent to the ‘life’ of the event participant, such as is characterised by *bloom* for certain plant life. Flowers bloom as a result of something inherent in the make-up of flowers, and in that sense internal to flowers. Some more examples follow:

- (18) Internal CoS verbs
Bloom, flower, blossom, germinate, sprout

In contrast, external CoS verbs describe events in which the CoS is deemed to take place as a result of some force external to the event participant, and is characterised by verbs such as *break*. Thus, if a vase breaks it is not the vase itself that is responsible, but rather, something external to the vase. Given what we know about the world, this is deemed true even in the intransitive variant where the external cause is not named. (19) gives more examples.

- (19) External CoS verbs
Break, melt, freeze, open

Taken together, the two types provide arguments for showing that *get* means Cause.

Firstly, for internal CoS verbs the argument proceeds as follows: Internal CoS verbs may not be externally caused, (20), but nevertheless demonstrate a CoS. On the other hand, external CoS verbs may be externally caused, (21). This difference provides a good diagnostic for determining that *get* means Cause.

- (20) a. *The gardener bloomed the flowers
b. *The spring weather bloomed the flowers

- (21) a. The gardener broke the vase
b. The storm broke the window

Just as we may say that the vase broke, we can state that the flowers bloomed. Given, however, that blooming events may not be externally caused, and if *get* denotes Cause, we would expect *bloomed* to be ungrammatical as a verbal element in *get*'s complement. The opposite is predicted to be the case for *broken*. The predictions are correct:

- (22) a. The vase got broken
 b. *The flowers got bloomed

These judgments would be hard to explain if *get* were the spellout of, say, a ‘becoming’ event².

Secondly, if the semantics in (14) and (15) are correct then there is one eventuality in *The ice melted*, but two eventualities in *John melted the ice*. This conclusion is backed up by evidence from *again* modification (von Stechow 1996). Von Stechow argues that modification possibilities using *again* help determine the number and type of events in a structure. This is argued to be the case because the use of *again* returns two possible interpretations, namely a repetitive reading and a restitutive reading, where each reading is the result of modification of a different type of eventuality. The former is the one in which a causing event is deemed to have occurred again. The latter reading is the one in which a result state is restored. The difference is illustrated here with the verb *catch*:

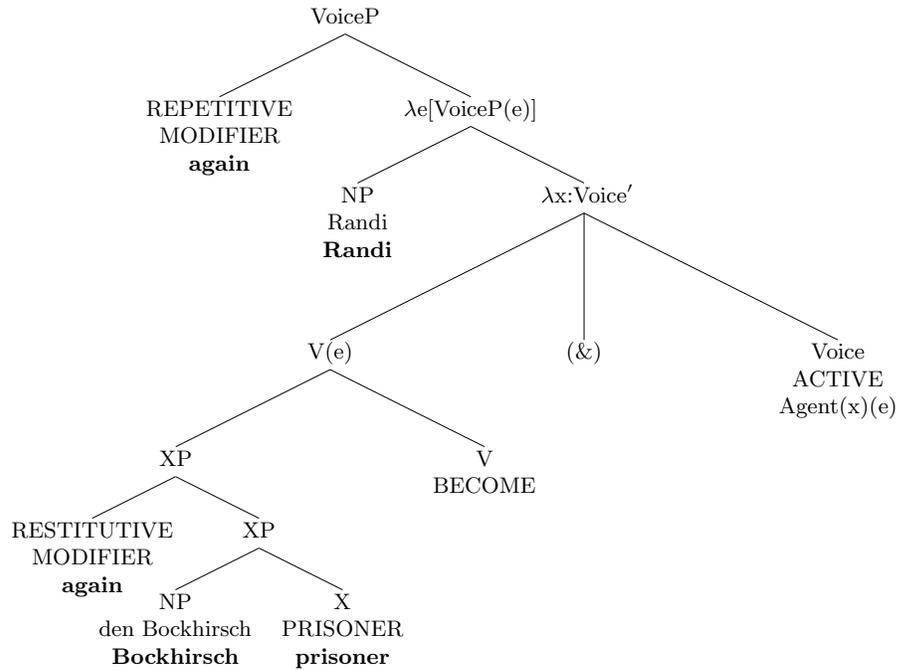
- (23) a. John caught the cat then he caught him again
 [Repetitive or Restitutive]
 b. Someone caught the cat then John caught him again
 [Restitutive only]
 (Example taken from Marantz 1997 and modified.)

The restitutive reading presupposes that the cat had already been caught at sometime in the past but, although possible, it is not required that John himself had caught it before. The repetitive reading presupposes that John himself had caught the cat before.

For reasons of strict compositionality von Stechow provides the following syntactic tree structure as representative of the sentence in (24).

²By ‘becoming’ event, I mean a purely inchoative event, not an event where simply the English word *become* may be used. *The flowers bloomed* is often postulated to contain an abstract BECOME operator (Levin and Rappaport Hovav 1995, among others), but this does not mean that the phrase **The flowers became bloomed* should therefore, necessarily be grammatical.

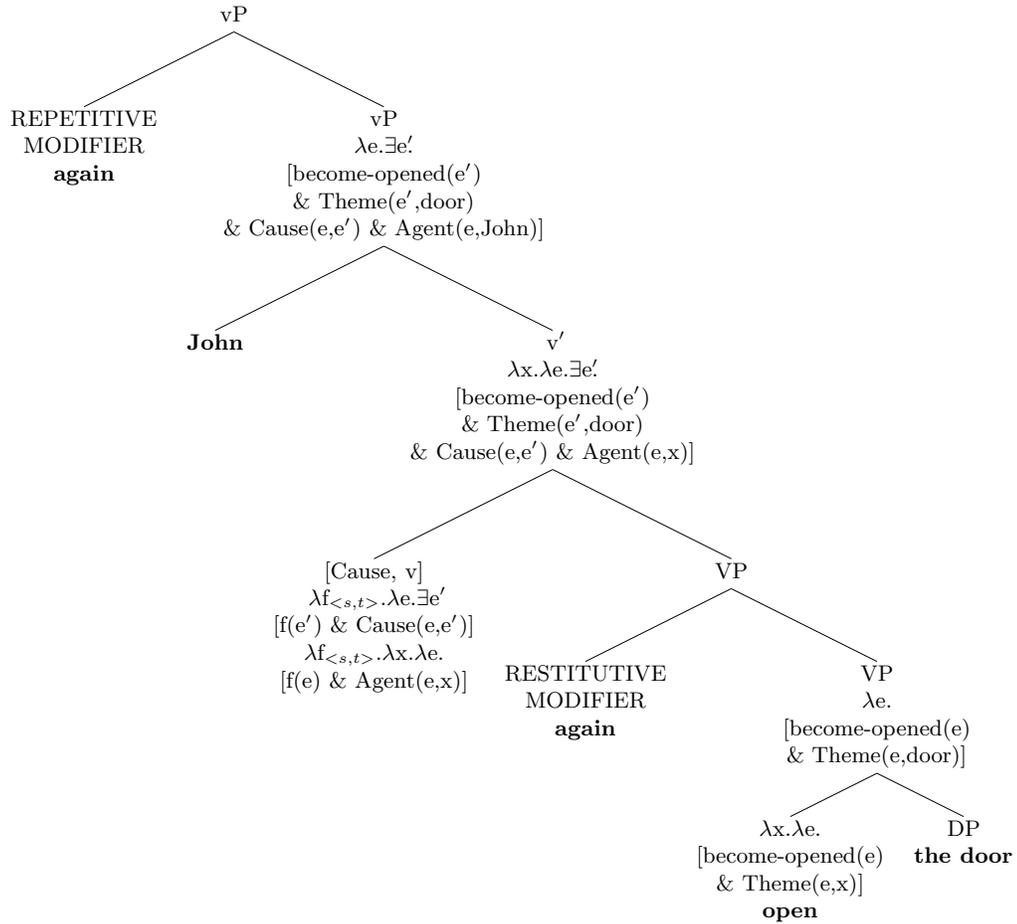
(24) Randi caught the cat again



The verb *caught* has been decomposed into [(Cause) [x BECOME prisoner]] (to allow for adjunction in the syntax of restitutive *again* with appropriate semantic scope) and Bockhirsch is the name of the cat. As is evident, there exist two available positions for *again* to attach, each corresponding to the semantic scope of the desired reading. Restitutive *again* scopes low down above the result state level while repetitive *again* scopes above VoiceP, the level at which the external argument is introduced (from Kratzer 1996).

Translating this into the semantics we are using for CoS verbs, the insertion positions look as follows:

(25) John opened the door



The restitutive position must scope below Cause but above the caused eventuality (the result state), while the repetitive position must scope above Cause, which, because of bundling, results in a position above the external argument too.

As the tree structure indicates, we predict just one reading for (26), namely the one in which the result state is restored. The contextualised story in (27) helps to show that this is the case:

(26) The door opened again

(27) John assembled a single-door cupboard leaving the job of hanging the door until last. He attached it in an open position and therefore, although open, the door had never actually been through a process of opening before. He then proceeded to close the door, but as he had forgotten to install the door catches, the door opened again (by itself).

Another diagnostic that shows this to be true is the use of the prefix *re-*. In contrast to *again*, *re-* only allows for the restitutive interpretation (Marantz 1997). We know this because for verbs whose interpretations do not include a result state, such as activity verbs, the use of *re-* is infelicitous:

(28) *John re-walked

Thus, the fact that we can say ‘the door re-opened’ shows that what is being modified is the result state.

On the other hand, the example in (29) is predicted to be ambiguous depending on which event is being modified by *again*.

(29) John opened the door again

The repetitive reading is shown to be a possibility in the following example where John’s opening event is repeated:

(30) John opened the door, closed it and then he opened it again.

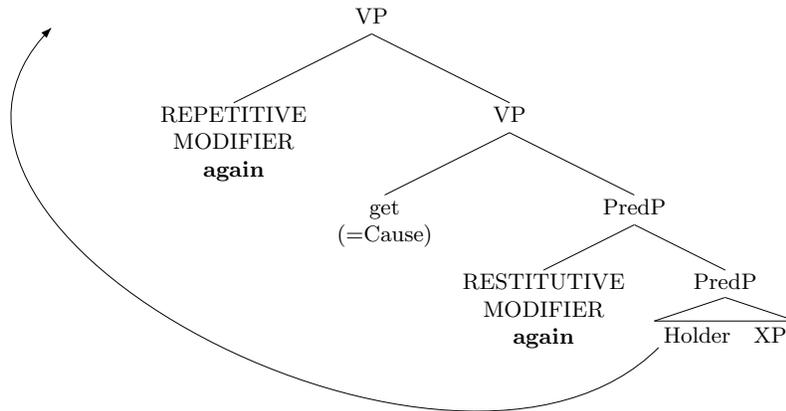
The restitutive reading may be isolated from the repetitive reading in two ways, either by setting up a context in which the Agent/Cause complex is occurring for the first time, but the caused event for the second (John has never opened the door before, but his opening of it has resulted in the door being restored to an open state), (31), or, we may simply employ *re-*, (32).

(31) Mary opened the door and then closed it. Later, John opened it again.

(32) John re-opened the door

Recall that the aim here is to show that the event denoted by *get* is Cause. Therefore, the structure of a *get* construction, even in its A-type variant (equivalent to intransitive *break* or *bloom*), necessarily contains two eventualities, the Cause event and the small clause eventuality, which should both be detectable using *again* modification in the following way:

(33) Again modification



The prediction is therefore that both a restitutive and a repetitive interpretation should be possible for any given *get* construction, even an A-type construction. To ensure an A-type construction we will use an inanimate subject³:

(34) The car got dry again

The repetitive reading is easy to discern. In a context where it rains every morning and is hot and sunny every afternoon we can say:

(35) The car got dry in the sun on Monday afternoon and then it again got dry in the sun on Tuesday afternoon [repetitive]

The restitutive reading is isolated in the following context. Imagine a situation in which cars are built dry and then put through a car wash before being painted. Most are still damp when painting begins but:

(36) One car got dry again before being painted

Here, it cannot be claimed that the car had previously, say at time t_{-1} , *got dry* as this would entail that it was, prior to time t_{-1} , not dry. However, we know from the context that this is not true as it was built dry, so the only possible reading is the one in which the state of being dry was restored, i.e., the restitutive reading.

It is not possible to show the restitutive reading using *re-* prefixation for independent reasons, specifically, that *re-* requires that the verb it attach to have a direct internal argument that may stand alone with the verb in an active verb phrase (this is Wechsler's (1989) generalisation). This discounts verbs which take small clause complements and therefore discounts *get*.

³It is necessary to use an inanimate subject here as A-type *get* constructions are ambiguous between an agentive reading (equivalent to, for example, *John got himself dry*) and a non-agentive reading. The desired reading is the latter, which may be forced using an argument that cannot be interpreted agentively, i.e., an inanimate (**The car got itself dry*). This is discussed in more detail in section 2.2.2, and given an analysis in chapter 4.

(37) *The car re-got dry

We will now look in more detail at thematic role assignment in adjectival *get* constructions.

2.2.2 Thematic roles and the possible lack of an external argument

As noted earlier, a general property of *get* constructions is that the thematic role of the subject DP in the A-type construction seems to correspond to the role played by the immediately post-*get* DP in the B-type counterpart, that is, *John* in both (38-a) and (38-b), for example, plays the role of the entity that ends up ill, independent of the fact that there is a mis-match in its linear position in each example.

(38) a. John got ill Pre-*get*
b. Mary got John ill Post-*get*

It is also important to consider the role of the other participant, namely *Mary* in (38-b). Empirically, it is clear that if Mary got John ill, then Mary did something such that the statement *John was ill* holds true. Mary, then, can be thought of as the Agent of the causing event which we have established that *get* denotes, and in fact we will show this to be the case below.

(39) Mary got John ill
→John: Holder of an eventuality of which the property of being ill holds⁴
→Mary: Agent of an event that causes the property of being ill to hold of an eventuality of which John is the Holder

Assuming this to be correct, what can we say about (38-a)? John is still the ill one, but what of the role that Mary plays in its counterpart? Is this role still relevant and is it played by John? In other words, does (38-a) have the argument structure shown in (40) or (41)?

(40) John got ill
→John: Holder of an eventuality of which the property of being ill holds

(41) John got ill
→John: Holder of an eventuality of which the property of being ill holds
→John: Agent of an event that caused the property of being ill to hold of an eventuality of which John is the Holder

⁴The phrase “Holder of an eventuality of which the property of being ill holds” is necessary, as opposed to the more simple “Holds the property of being ill” for reasons alluded to in section 1.2 and to be made clearer in section 2.4.5.

Interestingly, there is evidence pointing in both directions here. It appears that whether *John* in (38-a) plays a kind of dual role, as both Holder and Agent, or just the one role as Holder, is optional. Before discussing this issue further however, I will first establish that the matrix subject of the B-type construction really is an Agent.

Agent-Oriented Adverb Test (Truswell 2007)

Agent-oriented adverbs modify the way in which an Agent carries out the action described by the verb by further qualifying the manner in which the Agent has done so. In this way they ‘target’ Agents, and are therefore infelicitous in an Agent-less context. Agent-less contexts come in the form of derived subject constructions such as passives and unaccusatives:

- (42) a. Passive
#John was intentionally killed
b. Unaccusative
*Mary intentionally died

In (42-a), the adverb cannot be interpreted as modifying the way in which *John* is acting, the grammatical interpretation coming from the reading in which *intentionally* is predicated of the implicit Agent. (42-b) has no grammatical reading as not even an implicit Agent can be inferred.

Instrumental Phrase Test (Truswell 2007)

Instrumental phrases describe the means by which an Agent carries out the action described by the verb, and therefore an Agent is again required. As expected, the derived subject constructions fail the test:

- (43) a. Passive
#Mary was killed with a gun⁵
b. Unaccusative
#Mary arrived with a map

Example (43-a) has an irrelevant grammatical interpretation where the implicit Agent uses the gun to kill Mary. The relevant meaning, i.e. the one in which Mary used the gun to killed herself, is ungrammatical. Sentence (43-b) also has an irrelevant meaning where *with* is used in its ‘accompaniment’ sense. The relevant reading, where *with* introduces the instrumental phrase, is ungrammatical.

The implementation of these tests on sentences (38-a) and (38-b) produces interesting results. Application to the former suggests that ‘Mary’ has agentive properties - the adverbial-related intentionality here unequivocally lies with ‘Mary’:

⁵As expected, the active equivalent is grammatical. The external Agent wields the instrument: ‘Bill killed Mary with a gun’.

(44) Mary intentionally got John ill

Application to the second test sentence is where the real surprise is:

(45) John intentionally got ill

Again, the intentionality clearly lies with the matrix subject which must therefore be playing two thematic roles (despite only one overt appearance), namely as both matrix Agent and Holder of the embedded state.

The instrumental phrase test backs up this conclusion:

- (46) a. Mary got John ill with a series of drug overdoses
b. John got ill with a series of drug overdoses

We have shown then that Agentivity is a possible feature of the matrix subject of both A-type and B-type *get* constructions, but is it an obligatory feature?

Starting with A-type sentences, the grammaticality of the following examples indicates that the answer to this question is negative. Agents are normally assumed to be animate, and thus, under the assumption that the matrix subject is strictly an Agent, the use of an inanimate in subject position should be ruled out.

- (47) a. The car got cold
b. The ship got dry
c. The container got full

There is no possibility of appealing to teleological capability either (Folli and Harley 2007). Teleological capability, as describe by Higginbotham (1997), is taken to refer to “the inherent qualities and abilities of an entity to participate in the eventuality denoted by the predicate.” (Folli and Harley 2007, p.191). Thus, as ticking is an inherent property of clocks, and the verb *tick* is unergative⁶, to assert (48-a) is to say that the Agent of the ticking was the inanimate clock. The difference between this example, and those in (47) is that in (47), the embedded predicate bears no relation to the teleological capabilities, if any, of the respective sentential subjects; it is not an inherent property of cars that they be cold, or of ships that they be dry, or indeed of humans that they tick, (48-b). (48-b) shows that, depending on the verb, teleological capability can be more important than even animacy for determining the felicitousness of a given Agent.

- (48) a. The clock ticked
b. *John ticked

⁶Unergatives are normally considered to take Agent subjects, a notion that is built into the very syntax of these kinds of verbs’ argument structures in syntactic approaches like that of Hale and Keyser (1993), (2002).

Further, more solid, evidence comes from testing again with the now familiar Agent-Oriented Adverb and Instrumental Phrase tests, (49) and (50):

- (49) Agent-Oriented Adverb Test
- a. *The car intentionally got cold
 - b. *The ship carefully got dry
 - c. *The container intentionally got full
- (50) Instrumental Phrase Test
- a. *The car got cold with a fan
 - b. *The ship got dry with a towel
 - c. *The container got full with a fork lift.

Consideration of the most salient interpretation of a given sentence can also indicate that for animate subjects too, it is not necessarily the case that the subject be an Agent - it is entirely felicitous (and arguably a more natural interpretation) to assert (51) without wishing to imply that *John* played any part in bringing his own illness about. In other words, (51) may be employed simply as a statement of the fact that some event caused a state of illness to hold of an eventuality of which John is the Holder.

- (51) John got ill

Furthermore, inference patterns also indicate that this is the right conclusion to draw. (52-a) infers (52-b) but we already know from the former that *Mary* is the Agent so, as long as there is no shift in context, we can deduce that *John* cannot be in the latter:

- (52) a. Mary got John ill
b. John got ill

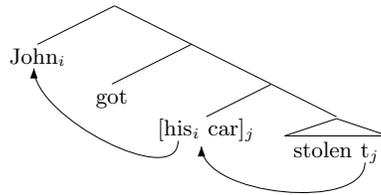
These facts point to a raising analysis and therefore a derived subject. It is therefore not an obligatory feature of the subject of an A-type *get* construction that it be an external argument, and property 2 has been shown. In what follows I will refer to the A-type constructions that have no external argument as true A-type *get* constructions, and to those that do have an external argument as agentive A-type *get* constructions.

Turning to B-type *get* constructions, the answer to the question of whether the subject is obligatorily agentive is, at best, mostly. Certainly for adjectival *get* constructions the obligation holds. However, an agentive interpretation is, in a minority of cases, not obligatory for passive *get* constructions where, in the right contexts, an Experiencer interpretation is also possible:

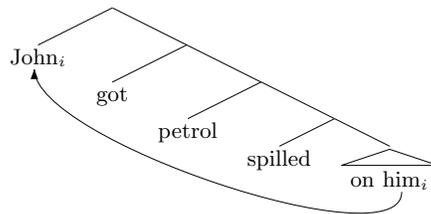
- (53) a. John_i got his_i car stolen (on him)
 b. John_i got petrol spilled on him_i

John may have arranged for his car to be stolen or to have had paint spilled on him, playing what we tend to think of as the Agent thematic role, or alternatively, he may be experiencing these eventualities, i.e., playing an Experiencer role. I will not be investigating this further except to say that, on an empirical level, it appears to be the case that access to these readings depends on there being an item co-indexed to the matrix subject but thematically related to the embedded predicate. It is therefore possible that in (53) the two subject DPs are really just one ‘split’ DP along the lines of (54) and (55), where just a subpart of the relevant DP has raised into subject position, leaving a pronounced agreeing pronominal behind, perhaps as a carrier of the available thematic role. Of course this is pure speculation and is left here as an open question.

- (54) John got his car stolen



- (55) John got petrol spilled on him



Returning to B-type adjectival *get* constructions, one prediction of the observation that their subjects are obligatorily agentive is that there should be a general restriction on inanimate Agents. This, however, can also sometimes be false:

- (56) Only Ariel non-bio got the clothes properly clean
 (57) The sun got the clothes bone dry in just 10 minutes

The reason for this appeals to the notion of teleological capability already mentioned above. An inherent property of wash powder is that it is a cleaning agent, while the sun emits heat, a property with the inherent capability of drying wet things, and hence, their aptness in these contexts. Notice, however, that the grammaticality

is quickly lost once the examples are converted into passive *get* constructions. The reason for this is that the entity now responsible for doing the cleaning/drying is not the matrix Agent, but rather the implicit Agent of the passive phrase. The role of the matrix Agent is still as Agent of Cause, but Cause now causes a state whose Agent is another individual. For whatever reason, this kind of causal sequence requires an animate Agent.

(58) *Only Ariel non-bio got the clothes cleaned properly

(59) *The sun got the clothes dried to the bone in just 10 minutes

2.2.3 No implicit Agent available

The presence or absence of an implicit Agent constitutes one of the main differences between unaccusatives and passives. The former do not license an external argument in their syntax, while in the latter, the Agent is present implicitly, if not overtly, and therefore reasoned to be syntactically accessible in some relevant way. Thus, should true A-type *get* constructions pattern with unaccusatives in this respect, we can reasonably conclude that they have no implicit Agent.

Agents, either implicit or overt, may control the PRO in a purpose clause:

(60) a. Overt Agent:

John_i burnt the building down PRO_i to collect the insurance payout

b. Implicit Agent:

The building was burnt down PRO to collect the insurance payout

No implicit Agent is available to control PRO in an unaccusative and therefore these sentences crash:

(61) No implicit Agent:

a. *The building burnt down PRO to collect the insurance payout

b. *The car broke PRO to settle the score

To ensure that the test is being carried out on a true A-type *get* construction, it is necessary to use an inanimate subject:

(62) *The car got dirty PRO to settle the score

As we saw earlier, the inanimate subject in (62) cannot be an Agent, leaving open the possibility of an implicit Agent. However, the fact that PRO has no controller indicates that one is not available.

Implicit Agents, where present, are semantically entailed. Thus, another way to

test for them is to force a contradiction by cancelling the entailment. This is what drives the judgment variance between (63-a) and (63-b):

- (63) a. Passive: *The ice was melted but no-one melted it
- b. Unaccusative: The ice melted but no-one melted it

Once again the *get* construction patterns with the unaccusative:

- (64) The car got dirty but no-one dirtied it

Finally, implicit arguments can be picked out in English with the use of a *by*-phrase, as in the passive examples below:

- (65) Passives
 - a. Mary was arrested by the police
 - b. The pot was broken by Peter

Conversely, for constructions with no implicit argument, a *by*-phrase will be impossible:

- (66) Unaccusatives
 - a. *John arrived by Mary
 - b. *John died by Peter

Again, A-type adjectival *get* constructions pattern with unaccusatives indicating once more that there is no implicit argument:

- (67) *The car got dirty by Mary

2.3 Intermediate summary

We have shown, then, that true A-type adjectival *get* constructions demonstrate the three conditions necessary to set them apart as representative of causative constructions with no Voice head, i.e., as constructions which project Cause, but no implicit or explicit Agent responsible for Cause. They represent, along with the Japanese Adversity Causative and the Finnish Desiderative Causative, another example of a causative construction with no external argument. However, they differ from the other two in that, where Cause is denoted by a causative morpheme in Japanese and Finnish, in English it shows up as the (semantically light) verbal element *get*. It is unclear how a θ -role analysis would be able to cope with the evidence provided above.

There are certain restrictions on which kinds of adjectives may appear in adjectival *get* constructions. We will consider how to account for these in the following sections.

2.4 Adjectival restrictions

While it is easy to find adjectives that may combine with *get*, it is equally as easy to find ones which will not. I will call these adjectives Incompatible Adjectives (IAs). Some examples follow:

- (68) a. *John got blessed/*The ship got sunken
b. *John got human/male
c. *John got former/possible
d. *John got (the) tallest

The adjectives in example (68-a) are both purely attributive. In (68-c) *former* is a privative adjective while *possible* is a modal adjective. *Tallest* in (68-d) is a superlative and finally, the two adjectives in (68-b) are individual-level. The conclusion that I will draw is that to be felicitous in the complement structure of an adjectival *get* construction, an adjective must be stage-level, a classification that subsumes that the adjective also be predicative (as opposed to attributive). The classificational terms used here will be explained in the following sections along with the reasons for the grammaticality judgements we find in (68).

2.4.1 Attributive and predicative adjectives

As a general rule, in English there exist two sentential positions for adjectives. They may either occur in the so-called attributive, pre-nominal position, (69), or alternatively, in a predicative, clause-final position, (70). The two adjectives in (68-a) are both examples of purely attributive adjectives, contrasting most dramatically with purely predicative adjectives such as *afraid*. The two classes are therefore diagnosable through their syntactic position in the sentence:

- (69) a. The sunken ship \leftrightarrow *The ship is sunken
b. The alleged murderer \leftrightarrow *The murderer is alleged

- (70) *The afraid woman \leftrightarrow The woman is afraid

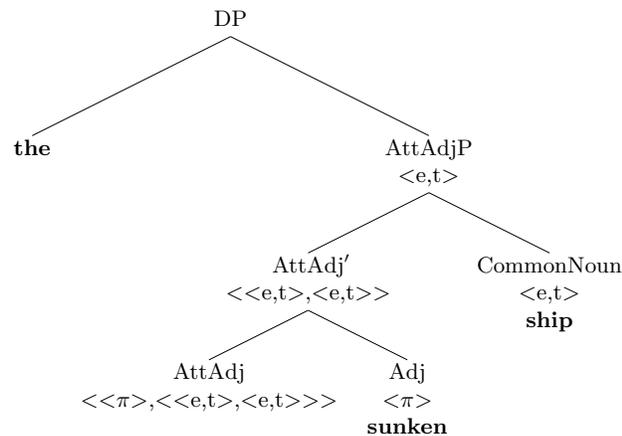
Many adjectives may be used either attributively or predicatively, eg *angry/pregnant*:

- (71) The pregnant/angry woman \leftrightarrow The woman is pregnant/ angry

Notice, however, that as a class, only the purely attributive adjectives are bad in the complement structure of *get*, (68-a), suggesting that all uses of adjectives in this position are predicative, independent of whether the given adjective may be used attributively. For several reasons, this is exactly as we would expect. Firstly, recall the

explanation already put forward for *get*'s semantic 'lightness'. The semantics of *get* reveal it to carry no propositional weight and for this reason a predicative complement is needed. The functional element *Pred* fulfills this role by introducing an event of which the property denoted by its complement holds true. Assuming, as we are, that adjectives simply denote properties of type π , whatever the functional element is that transforms this property into something which may be used attributively (let's call it AttAdj) it must create a modificational piece of structure. That is, at the relevant point in its derivation, an attributive will need to be of type $\langle\alpha, \alpha\rangle$, where $\langle\alpha\rangle$ is the type of the modified element. For the case in hand, this translates into the type $\langle\langle e, t, \rangle, \langle e, t \rangle\rangle$ (given a fairly standard analysis in which the common noun it is modifying is of type $\langle e, t, \rangle$, see (72)). Aside from being unclear as to what exactly it might mean to modify a *Pred* head with an attribute adjective, attributives are of the wrong type to combine with a *Pred* head via functional application, (73). The semantics of adjectives in a predicative structure will be addressed later.

(72) Type-driven tree structure for an attributively modified common noun



(73) AttAdj type: $\langle\langle\pi\rangle, \langle\langle e, t \rangle, \langle e, t \rangle\rangle\rangle$
 Pred type: $\langle\langle\pi\rangle, \langle\langle e \rangle, \langle s, t \rangle\rangle\rangle$

However, that an adjective is, or may be, predicative in nature is not sufficient for it to be used to create a well-formed *get* construction. Both *angry* and *human* are predicative yet only the former may be used with *get*:

- (74) a. John got angry
 b. *John got human

Therefore, while all purely attributive adjectives may be discounted as IAs, not all predicative adjectives may be counted in, as it were, as compatible adjectives (CAs)

and as such, a further means of subdividing the domain will need to be examined. We will do this in the next section.

2.4.2 Stage and individual level adjectives

Predicative adjectives may be further sub-divided into stage-level (SL) adjectives, and individual-level (IL) adjectives, terms first introduced by Carlson (1977). The adjectives in (68-b) are both considered IL. Carlson divided up the set of entities into individuals and stages, where the latter are spatiotemporal slices of the former. Thus, an individual like *John* has stages, which may be thought of as *John in a particular location* and/or *at a particular time*. Correspondingly, predicates may predicate over either the individual *John* or the stage *John at x time in y location*. For example, the property of humanness, as related to the human individual *John*, is individual level in the sense that it is true of *John* independent of his spatiotemporal specifics, whereas, for a predicate such as *dry*, as related to the same individual *John*, the specifics of his location and time are of the utmost importance in determining if the property of dryness is true of (a particular stage of) him.

This contrast has diagnosable effects on grammaticality and the meanings of sentences. For example, in the context of the past tense, IL predicates impart a strong feeling that their subject is no longer alive, compare (75) with (76):

(75) John was intelligent [IL]

(76) John was drunk [SL]

The reason for this is that IL properties tend to be permanent properties that hold of an individual for most of their life. Therefore, situating an IL property in the past is akin to situating the relevant individual's life in the past.

Past tense considerations aside, there exist at least five other linguistic environments that can be used to distinguish between SL and IL predicates.

1. Temporal and locative modification:

Only SL predicates may be modified with temporal adverbials and locatives:

- (77) a. Mary was pregnant 2 years ago/happy on Tuesday
b. Mary was happy in France

- (78) a. *Mary was intelligent on Monday/human yesterday
b. *Mary was human in France

2. Perception sentences:

Perception verbs, like *see*, resist taking IL predicates in their complement structures. However, no ungrammaticality results with SL predication.

(79) I saw Mary pregnant

(80) *I saw Mary female

3. *There* sentences:

Only SL adjectives are permitted in the coda position of *there* sentences.

(81) There are two women pregnant

(82) *There are two women intelligent

4. Bare plurals:

In the case of bare plurals, both SL and IL predication is grammatical, their respective interpretations being the difference between them. SL predicates may receive either an existential or a generic interpretation:

(83) Firemen are available
=‘There are firemen available’
=‘Availability is a property true of all firemen’

While IL predicates receive only a generic interpretation:

(84) Fireman are altruistic
* ‘There are firemen altruistic’
=‘Altruism is a property true of all firemen’

5. Adverbs of quantification:

SL predications interact with adverbs of quantification with no resulting ungrammaticality.

(85) When Mary is drunk, she is aggressive

On the other hand, IL predicates do not combine well with these adverbs.

(86) *When Mary is female, she is aggressive

An important point to note here is that we may naturally think of certain adjectival predicates as IL and others as SL, but that in neither case is this necessarily a fixed classification. A predicate like *intelligent*, for example, is more naturally thought of as referring to an IL property of an individual. We tend to be either intelligent or not,

independent of our spatiotemporal location. However, given an appropriate context, it is perfectly grammatical to use it as an SL predicate:

- (87) Context: John is not the brightest spark in the box, but is currently surprising everyone by making something difficult look easy.
 John is being intelligent [IL to SL coercion]

The converse is also true. By removing temporal boundaries, predicates generally thought of as SL may be used as IL predicates. To this extent, Carlson (1977) argued that (88) is ambiguous between an SL reading in which, in a particular situation in the past, John engaged in the smoking of more than one Cuban cigar, and an IL reading in which the smoking of Cuban cigars was deemed to be a habit of John's. Note that the latter reading again imparts a strong feeling that the individual is no longer alive.

- (88) John smoked Cuban cigars

Carlson called coerced SL predicates *habitual* predicates, differentiating them from the kind of IL predicates we have seen thus far and, as we will see, he accounts for them in different ways in his analysis.

However, what his analysis cannot account for is the kind of IL to SL coercion detailed in (87), and the arguably non-habitual SL to IL coercion exemplified below:

- (89) Non-habitual SL to IL coercion?:
 Being happy, John had many friends

It is difficult to argue that, in the same way that smoking Cuban cigars was a habit of John's in (88), the most natural interpretation of (89) is that happiness was deemed to be a habit of John's.

Thus, the bi-classification of adjectival predicates into IL and SL is not a consistent one. Rather, with appropriate contextualisation, we may often force a predicate to be of one type or the other.

Accounting for most of these facts, Carlson (1977) develops an analysis in which property types correspond to these entity types such that individual level properties predicate over individuals and stage level properties predicate over stages. In this way, not only are there two types of entities present in the lexicon, but also two types of predicates. For stage level predication, he suggests that it is the copula that mediates the relationship between the predicate and the individual it holds of. The copula semantics are shown below:

- (90) $[[\text{be}]] = \lambda P^s. \lambda x^i. \exists x^s. (R(x^s, x^i) \ \& \ P^s(x^s))$ [SL]

Example (90) states that given some SL property P^s and some individual x^i , there exists some stage x^s such that x^s is a stage of x^i , and property P^s is true of that stage. Therefore, effectively, the function of the copula is to allow a stage-level predicate to combine with an individual. With regards to IL predicates, these may combine directly with individuals, relegating the function of the copula to an identity map:

$$(91) \quad \llbracket \text{be} \rrbracket = \lambda f. \lambda P^i. \lambda x^i. [f(P^i)(x^i)] \quad [\text{IL}]$$

Semantically, it is unclear why this copula is obligatorily employed, given that the predicate may combine directly with the subject (although there may be some syntactic dependency that motivates its use here).

To explain the kind of coercion we see in (88), he posits a generic operator, GEN, a syntactic element that has the function of transforming SL predicates into habitual IL predicates. However, as previously stated, there is no account for (87) or (89).

Since Carlson (1977), many other analyses have surfaced. Among them, Kratzer (1995) argues that the difference between SL and IL predication can be put down to argument structure variation between the two. She takes the position that SL predicates have an extra Davidsonian spatiotemporal argument (DSA) not possessed by IL predicates, that has the function of situating the predicate in time or space, and uses this insight to derive their differences. For example, the DSA is considered to be a variable over which place and time adverbials may quantify. Given a requirement that no quantification may be vacuous (Chomsky 1982), examples (77), (78), (85) and (86) are explained. However, Kratzer's analysis suffers from the drawback that it cannot cope with the fact that IL habitual readings may also be temporally and locatively modified:

$$(92) \quad \text{John smoked Cuban cigars in the pub/in the evenings}$$

If habitual readings are IL, and IL predicates do not possess a DSA, then how can the IL predicate in (92) freely co-occur with place and time adverbials?

Contrary to Kratzer (1995), Chierchia (1995) adopts the position that all predicates have a DSA, and explains the difference between SL and IL predication by positing that for IL predication only, the DSA is bound by GEN. He implements this differently from Carlson by positing that all IL predicates come with a feature built into their lexical entry that forces the local (defined as within VP) presence of GEN, but that for SL predicates no featural dependency of this type exists per se, but rather, that GEN may be employed above VP level to force habitual readings, exactly like phonologically overt adverbs of quantification such as *always* or *usually*. Essentially, then, GEN renders our interpretation of a given IL subject predicate relation as true at all times and in all locations (i.e., as true independent of the subjects location

in space and time), whereas, for an SL subject predicate relation, GEN has the effect of returning an habitual reading.

Again, certain data is left unexplained, namely the possibility of IL to SL coercion evidenced in (87), and the non-habitual SL to IL coercion in (89). If the presence of GEN is forced by the need to check a feature on IL predicates, what happens to this feature in cases of SL predication of a canonically IL predicate? Furthermore, for an SL predicate to be coerced into a non-habitual IL reading, GEN would need to appear within the VP, which is not an option if the relevant SL predicate is ‘born’ without the relevant feature.

What all three of these accounts have in common is that none of them are able to explain the full range of coercion facts we have seen above. The problem is that at some level of representation, there is a stipulation which determines whether the interpretation of a given adjective is SL or IL. All three analyses build this into the lexicon. For Carlson there are two separate property types, P^i and P^s , and the type of any given adjective is therefore predetermined in the lexicon. Like Carlson, both Chierchia and Kratzer use a similar subdivision of the lexicon. Kratzer stipulates an inherent argument structural difference between IL and SL predicates, where only the latter enters the numeration with an extra DSA, while Chierchia, as we have seen, suggests that the division is feature based.

With respect to the *get* constructions under investigation here, the SL/IL distinction is an important one:

- (93) a. IL Adjectives:
 *Mary got female
 b. SL Adjectives
 Mary got pregnant

The question is why this should be the case? I suggest that the semantic denotation we have assigned to *get* (see (29)) offers a natural solution. As stated, IL properties are true of the entities they refer to, independent of where and when the entity happens to be. As such, IL properties can be thought of as “tendentially stable” (Chierchia 1995) or “intransitory” (Kratzer 1995) in nature and are thus not the sorts of properties that can be acquired or lost. Given that our lexical entry for *get* denotes an event that causes a new state to hold of some argument, it follows naturally that IL predication will be infelicitous in its complement. The subject of Pred acquires the property referred to by the adjective and, as we have seen, only a property which is SL in nature may be acquired. Thus, in the case of adjectival complements, only SL adjectives will be acceptable.

(94) Mary got pregnant/happy/dry

(95) *Mary got intelligent/human/female

To implement this formally, we will adopt an alternative, syntactic approach to the IL/SL problem, namely, the one proposed by Adger and Ramchand (2003) (henceforth AR) which utilises Carlson’s insight that the copula is responsible for mediating the relationship between the predicate and the individual it holds of, while maintaining that all adjectives enter the derivation with an equal semantic value, thereby doing away with the need for two separate adjective types. I stipulate, therefore, that the interpretational difference between SL and IL predicates boils down to no more than language convention, which may be coercively broken through the use of either metaphor, or other inventive, playful sentence creation. Before discussing AR, however, we will consider the examples in (68-c) and (68-d).

2.4.3 Extensional and Intensional adjectives

Adjectives like *carnivorous* are extensional in nature, picking out the set of things with the property they name, in this case, the set of carnivorous things. Thus, a carnivorous animal is a member of both the set of animals and the set of carnivores. Set-theoretically this picks out the intersection, and hence, these adjectives are called intersectives, (96) (the various classes of adjective discussed in this section are taken from Kamp and Partee 1995):

(96) $\llbracket \text{carnivorous N} \rrbracket = \llbracket \text{carnivorous} \rrbracket \cap \llbracket \text{N} \rrbracket$

Another class of adjectives, the subsectives, are intensional, effectively depending on the reference set N of the noun they modify to pick out a subset of N. Thus, the subsective adjective *typical*, in an example like *a typical plumber*, defines a subset of the set of plumbers the members of which are in some way typical.

(97) $\llbracket \text{typical N} \rrbracket \subseteq \llbracket \text{N} \rrbracket$

The difference between intersectives and subsectives can be made clearer with an inference pattern example as in (98). It is invalid to infer that John is a typical father from the information that he is a typical plumber, but valid to infer that he is a carnivorous father if he is a carnivorous plumber:

- (98) a. If John is a typical carnivorous plumber
b. and John is a father
c. then John is a carnivorous father
d. *then John is a typical father

A further class consists of adjectives that are neither intersective nor subsective. These so-called non-subsectives include privative adjectives, eg *former* and modal adjectives, eg *possible*, see (68-c). Privatives entail neither the intersection nor a subset, but rather, that the intersection be the empty set - a former president cannot be both formerly a president and also currently a president (where his role of presidency in both cases is over the same organisation or state):

- (99) a. $\llbracket \text{former president} \rrbracket \neq \llbracket \text{former} \rrbracket \cap \llbracket \text{president} \rrbracket$
 b. $\llbracket \text{former president} \rrbracket \not\subseteq \llbracket \text{president} \rrbracket$
 c. $\llbracket \text{former president} \rrbracket \cap \llbracket \text{president} \rrbracket = \emptyset$

Finally, modal adjectives have no entailments: a possible/alleged con man may or may not be a con man.

It is not sufficient for an adjective to be either subsective or intersective for it to be felicitous in the complement structure of *get*:

- (100) Subsectives
 a. The animal is carnivorous/red/dead
 b. John got red
 c. *John got dead
- (101) Intersectives
 a. The basketball player is small/skillful/typical
 b. John got skillful
 c. *John got typical

These classes therefore do not capture any kind of generalisation with respect to the constructions under consideration here. However, it seems that the same is not true of privative or modal adjectives which are universally IAs:

- (102) Privative adjectives
 a. The gun is fake/imaginary
 b. *The gun got fake/imaginary
- (103) Modal adjectives
 a. That $2+2 = 5$ is questionable
 b. That $a+b = c$ is possible
 c. *That $2+2 = 5$ got questionable
 d. *That $a+b = c$ got possible

Therefore, like attributives, these classes of As may be discounted as possible complements to *get*. In the case of privative adjectives, the reason appears to be straightforward and due to the fact that their interpretations are strongly IL. For modals however, it is difficult to argue that they are IL. The possible or questionable truth of a proposition P is not an immutable fact about P. I believe that the crucial difference here is that in predicative position, non-modal adjectives operate over nominal arguments specifying some property (of the nominal) whereas modal adjectives operate over propositions providing judgements about the way the world is. As such, notions like s-levelhood and i-levelhood are irrelevant to their interpretation, and the requirement that the complement of *get* be SL is violated.

2.4.4 Comparatives and superlatives

On the surface, comparatives and superlatives appear to have the same syntactic distribution. Both may be used in attributive and predicative environments:

- (104) Attributively
 a. The **taller** boy
 b. The **tallest** boy
- (105) Predicatively
 a. This boy is **taller** (than that one)
 b. This boy is/seems (the) **tallest**

However, their distribution differs in that only comparatives will combine with *get*:

- (106) This boy got **taller** ↔ *This boy got (the) **tallest**

According to our discussion thus far, there may only be two reasons for this. Either superlatives cannot, despite appearances, be predicative, or they are predicative, but are not capable of stage-level interpretation.

Intuitively, it is difficult to argue that they are not SL. For an entity to be the tallest, fattest, most beautiful etc, the property of being the tallest, fattest, most beautiful etc is not necessarily IL. Recall that an IL property is true of an entity independent of its spatiotemporal location. Temporally, however, an animate may grow and become over time the tallest, fattest, most beautiful of its kind, and may even, over time lose this mantle. Hence the grammaticality of (107).

- (107) Of all the women in the world, Mary became the tallest/ fattest/most beautiful.

Even an inanimate may gain or lose this kind of property: On April 20th 2004, the Council on Tall Buildings and Urban Habitat proclaimed the Taipei 101 building to be the tallest on Earth. Before then, the Petronas was considered the tallest.

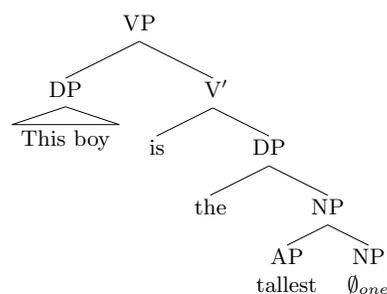
Conversely, whether held by an animate, or an inanimate, a superlative property is not the type of property that one may, as it were, switch on or off. When you are the tallest, fattest or most beautiful of your kind at a particular time and/or place, you assume those properties with no control. For this reason, they are ungrammatical with the present continuous, despite this being one way to test for s-levelhood.

(108) *Mary is being the tallest/fattest/most beautiful

The facts, then, appear contradictory and difficult to pin-point. The reason for this may be that superlatives are not actually predicational at all. Matushansky (2008) argues for this position. In her article she provides multiple arguments that this is the case in both English and cross-linguistically. Here we will consider just a few.

The first thing to note is that superlatives (almost⁷) always require the presence of the definite article, even in predicative position. Matushansky uses the standardly presumed assumption that the presence of an article depends on the presence of a nominal projection to claim that in predicative superlative phrases there is a null nominal which the superlative adjective modifies attributively. A sentence like (109) will thus have a structure something like the one shown below⁸.

(109) This boy is the tallest



Beyond the fact that the definite article must nearly always be used, evidence elsewhere for the presence of a nominal projection in the structure comes from considerations of how measure-phrases and anaphoric *so* interact with the constructions.

Beginning with measure phrases, in predicative comparative constructions they may occur either to the left of the AP, or on the right AP-periphery in a *by*-phrase (all examples taken from Matushansky 2008):

⁷There are exceptions, but the exceptions are not cross-linguistically consistent and therefore provide only weak evidence against the claim.

⁸The structure in (109) is a simplified version of what Matushanskys would presumably look like, and is for explanatory purposes only.

- (110) a. Thumbelina is **two inches/three times** taller than Tom Thumb
 b. Thumbelina is taller than Tom Thumb **by two inches/the factor of three**

The distribution for attributive comparative constructions is limited to the *by*-phrase only:

- (111) a. Thumbelina is a (***two inches/*three times**) taller doll than Tom Thumb
 b. Thumbelina is a taller doll than Tom Thumb **by two inches/the factor of three**

Abney (1987) notes as a general rule that measure phrases are not allowed NP-internally, (112-b). This generalisation explains the ungrammaticality of (111-a).

- (112) a. Thumbelina is **two inches** tall
 b. ***Thumbelina** is a **two inches** tall girl
 c. Thumbelina is a **two-inch** (tall) girl

Interestingly, superlative constructions pattern with attributive comparative constructions even when the superlative is in predicative position:

- (113) a. ***Thumbelina** is the **two inches/three times** tallest (of/ among the dolls)
 b. ***Thumbelina** is **two inches/three times** the tallest (of/ among the dolls)
 c. Thumbelina is the tallest (doll) **by two inches/by the factor of three**

Matushansky believes this to be the case because of the presence of a null NP in the projection which the superlative modifies, and furthermore, that superlatives must be obligatorily attributive as the fact that Abney's constraint is applicable rules out the availability of any purely predicative structure.

Examination of anaphoric *so* behaviour leads to the same conclusion. Once again, the distribution of comparatives and superlatives differs within this environment. Comparatives allow *so* anaphora, (114-a), whilst superlatives do not, (114-b) (again, all examples taken from Matushansky 2008):

- (114) a. The panda is a charming animal, but the lemur is **more so**
 b. ***There** are many charming animals, but lemurs are **the most so**

If *so* cannot appear as a noun modifier, (115), and superlatives modify a null NP then the dichotomy is explained.

- (115) a. ***The** panda is a charming bear, and the lemur is a **so** primate
 b. ***The** panda is a charming bear, and the lemur is a **more so** primate

The ungrammaticality of superlatives in *get* constructions provides more support for Matushansky’s analysis. If predicative, the argument against their possible interpretation as stage-level is at best weak, and moreover, Matushansky’s arguments for their role as pure attributives demonstrate that a classification as predicative is unlikely. As briefly discussed in the thesis conclusion (chapter 6), *get* combines with NP complements to form constructions with the broad meaning of acquisition; the subject in some way comes to acquire the NP complement. If superlatives indeed modify a null-NP we predict them to be fine under this kind of interpretation. The prediction is borne out:

- (116) Context: Six children are choosing one puppy each from a litter of six.
 John got **the smallest**

Predicative interpretations of *get* constructions with superlative complements are at best marginal, and only then without the definite article:

- (117) a. *Of the triplets, Mary got the tallest
 b. ??Of the triplets, Mary got tallest

On the other hand, as long as a comparative may be used predicatively, given an appropriate context even IL adjectives may be used in a *get* construction:

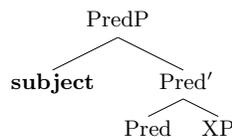
- (118) a. John got more human/alive

I will assume therefore that the comparative morpheme aids the process of IL to SL coercion and return to the question of how in section 2.5, where a semantics for the functional head responsible for turning an adjective into a comparative, namely *Deg*, will be proposed.

2.4.5 Returning to AR

Adger and Ramchand (2003) defend the position that “all semantic predicational structures are constructed asymmetrically via a syntactic predicational head.” (AR, p.1). This translates to the diagrammatic syntactic structure, shown below, of the predicational core of small clause constructions, off of which the semantic structure may be mapped in a one-to-one fashion:

- (119)



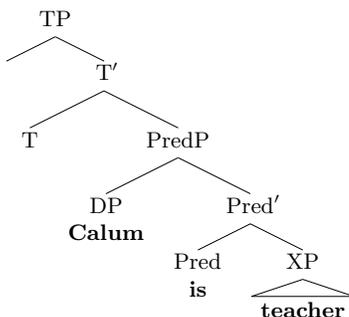
As we have already seen, this is essentially the view that I am also proposing and defending for the small clause complement of *get*, with the function of *get* itself being the addition of an extra causing event layer.

From a cross-linguistic point of view, perhaps the main conclusion of AR is that the functional head Pred may come in several (or at least two) ‘flavours’. Specifically, for the Scottish Gaelic predicational constructions AR considers, one type of Pred head selects unsaturated properties of type π , the semantic type of simple properties, and relates an argument directly to that property resulting in an interpretation in which the property is asserted to hold of the nominal in question:

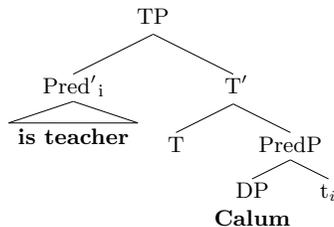
$$(120) \quad \llbracket \text{pred} \rrbracket = \lambda\pi\lambda x[\text{holds}(\pi, x)]$$

In these cases, the only possible interpretations are those in which the property denoted by the complement of Pred holds intrinsically of the subject, or in other words, holds of the subject independently of the particular spatiotemporal situation the subject may find itself in at the relevant time. In Scottish Gaelic, one such construction where this type of Pred head is found is the inverted copular clause (ICC), in which the Pred head position is occupied by the defective copula *is/bu*:

(121) Initial ICC structure for *Calum is a teacher*



(122) Final ICC structure for *Calum is a teacher*



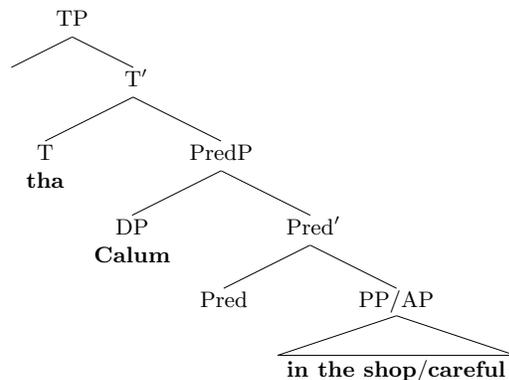
AR postulate that the defective copular forms *is* (used to denote present) and *bu* (used to denote past, future or conditional) carry the particular semantics shown in (120), and therefore, these structures return what we have been calling IL interpre-

tations. SL interpretations, on the other hand, are returned in clauses in which the Pred head is of a different ‘flavour’, namely with the following semantics:

$$(123) \quad \llbracket \text{Pred} \rrbracket = \lambda\pi.\lambda x.\lambda e [\text{holds}(\pi,e) \ \& \ \text{Holder}(e,x)]$$

In these cases, a property is not predicated directly of an individual, but rather, it is predicated directly of an eventuality, specifically, the particular eventuality contextually relevant to the individual in subject position, given its spatiotemporal circumstances. An example of a Scottish Gaelic construction demonstrating this kind of predication is the Substantive Auxiliary Construction (SAC), so-called in AR because the (non-defective) copular ‘be’, *bith*, is standardly termed the *substantive auxiliary* in Scottish Gaelic language grammars:

(124) SAC structure for *Calum is in the shop/(being) careful*



Note that, seen in these terms, i-levelhood and s-levelhood may no longer be considered relevant interpretive properties of particular predicates. Rather, the distinction arises as a result of the interpretive property of the sentences in which they are found, i.e., as a result of which type of Pred head is projected in any given sentence.

Interestingly, SACs with nominal complements require extra structure for grammaticality:

(125) *Tha Calum tidsear
 Be-PRES Calum teacher
 ‘Calum is a teacher’

(126) Tha Calum’na thidsear
 Be-PRES Calum in-3MS teacher
 ‘Calum is a teacher’

Precisely, what they require is the addition of the prepositional particle ‘*na* from the preposition *ann* meaning ‘in’. The question is then, why this should be the case only for NP complements? To resolve this, AR appeal to Stowell (1981), Higginbotham

(1985) and Parsons (1990). Stowell (1981) was the precursor to the kind of predicational structure shown in (119) and it was he who initially concluded that the category of XP must be restricted to the set of lexical categories N, V, A and P, all heads which may be semantically unsaturated. The difference in distribution highlighted above then boils down to differences between the categories. Generally, what distinguishes on the one hand NPs from, on the other, VPs, APs and PPs is that the former lack an eventuality variable in their semantic makeup that is present in the logical representations of the latter, a characteristic argued for by both Higginbotham and Parsons. AR implement this by positing that the functional structure under which N, A, V and P roots are embedded is to be held responsible. Specifically, the particular functional structures which select As, Vs and Ps introduce eventuality variables and correspondingly, these structures all denote properties of individuals with respect to an eventuality. Ns, on the other hand, are selected by D-related functional layers which do not introduce eventuality variables and thus, NP structures may only denote properties of individuals.

Analysed like this, nominal SAC structures, as in (125), are predicted to be ungrammatical, and the extra prepositional material needed to ‘save’ these structures, see (126), is explained. However, predictions in the opposite direction are less clear-cut. ICC constructions should be ungrammatical with AP and PP complements, yet both are possible (although not very productive):

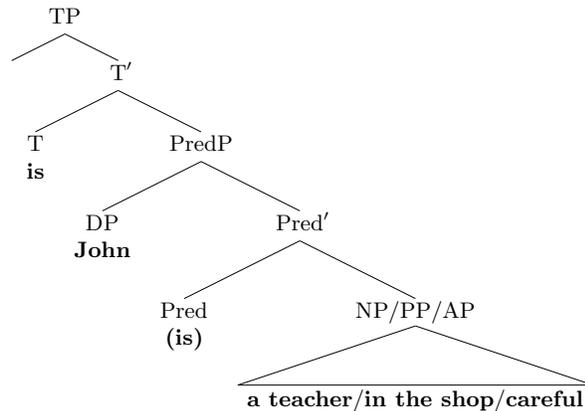
(127) Is mòr an duine sin
 Cop-PRES big that man
 ‘That man is big’

(128) Is le Calum an cù
 Cop-PRES with Calum the dog
 ‘The dog belongs to Calum’

AR reason that the grammaticality of APs, (127), and PPs, (128), in ICC constructions means that at some level their eventuality variable must be bound off through a nominalisation process.

In English, the distinction between (122), *John is a teacher*, and (124), *John is careful/in the shop*, is less structurally and lexically clear, as the same variety of forms of the copular verb are used in plausibly the same structure independent of what the complement of the Pred head may be:

(129) Calum is a teacher/in the shop/careful



It is reasonable to assume, therefore, that English *be* may license both types of Pred head (or alternatively, if base generated in Pred, may be the lexicalisation of either type of Pred head). The semantics of *get*, on the other hand, is such that it may only semantically combine with an eventuality, thereby restricting its complement to the Pred found in SAC structures, and predicting the ungrammaticality of *get* constructions with NP complements on the reading in which the NP is to be interpreted as being predicated directly of the subject. This turns out to be an accurate restriction although one which we will not be able to analyse here in any depth:

- (130) a. John got a doctor \neq John is a doctor
 b. John got Mary a doctor \neq Mary is a doctor⁹

This analysis provides us with a natural way to restrict the output readings of adjectival *get* constructions to SL interpretations while sidestepping the need to divide the adjectival domain in two, as in Carlson (1977), Chierchia (1995) and Kratzer (1995). The SL/IL distinction exists simply as a direct result of the type of Pred head employed, a difference which appears lexically at least in Scottish Gaelic, if not in English. Furthermore, under this system, coercion may just be seen as the result of breaking with convention about which predicates are standardly conceptualised as being of one type or another. As far as habitual IL readings are concerned, the topic is not tackled by AR. However, presumably a third copula may be employed which allows for the interpretation that the event be one of many identical events all of which hold of the individual in question. This would have the benefit of implying IL predication, but would also allow for adverbial time and place quantification. As *get* constructions never return IL readings, habitual IL predication is irrelevant and so the details of such an analysis, if indeed feasible or even desirable, will not be tackled

⁹Incidentally, this discounts any analysis which might suggest that the semantics of *get* includes BECOME in its logical representation.

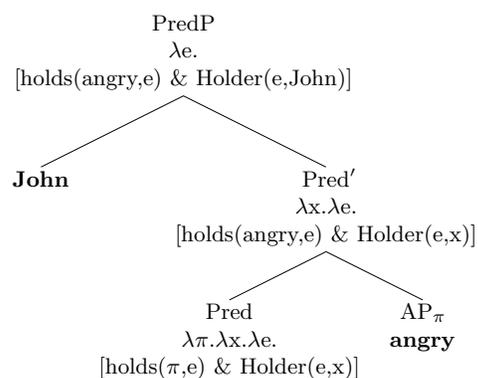
in the present work.

2.5 Application of the analysis to *get* constructions

2.5.1 The structure of the complement of an adjectival *get* construction

Application of the analysis in AR to the constructions under consideration here results in the following structure for the SC complement of *get*:

(131) [_{SC}John angry]

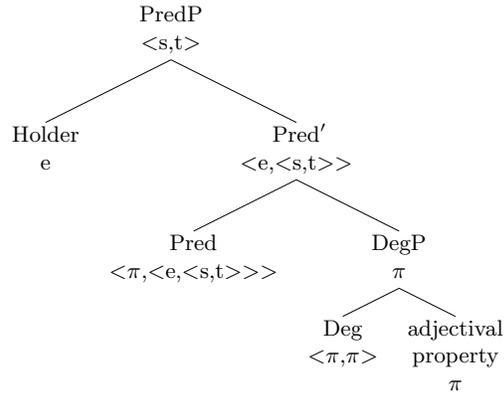


In words, PredP says that John is the Holder argument of an eventuality e , and that the property of anger holds of e . Thus, anger is in some way relevant to, i.e., holds of, a situation which is in some way relevant to John, i.e., where John is a Holder. The holds and Holder relations are used here and throughout this thesis as quasi-intuitive relational concepts. The exact nature of what it means, in the world as we perceive it, to be a **Holder** of an eventuality, or for a property to **hold** of an eventuality, I will not tackle in much detail. However, by way of some kind of explanation, these relations may be thought of as a kind of ‘update’ of Carlson 1977. Where Carlson utilised the concept of individuals and slices of individuals (stages), I use individuals and eventualities. If we think of eventualities as the counterpart to Carlson’s stages, we can consider them to be space-time slices not of individuals, but rather, of the universe (of discourse). The state-of-affairs described by the property is the relevant or salient situation that is true of (Holds relation) the space-time slice of the universe. The spacio-temporal slice with its property is then restricted in the semantics to coincide with an individual (Holder relation). I hope to remain realistic throughout as to what properties may reasonably be attributed to an eventuality.

The story for comparatives is trickier. To maintain strict unification of the syntax and semantics of the *get* constructions in question, I have proposed that *get* always takes a PredP as its complement. Given the value I have assigned to Pred, the

complement of *Pred* is forced to be a property of type π . Thus, *DegP*, the phrase-level node of the functional head responsible for returning comparative adjective readings from ‘normal’ adjective readings, must be of type π , while *Deg* must combine with a property of type π . *Deg*, then, must look like a modificational element of type $\langle \pi, \pi \rangle$.

(132)



I will assume, following Adger (2006), that *Deg* is a function that combines with adjectives and returns a scalar interval, *I*, where *I* may be analysed as a property and thus serve as a complement to *Pred*.

(133) $[[\text{Deg}]] = \lambda \pi. \iota I_{\pi}. [\text{scale}(\pi, S) \ \& \ \text{interval}(I, S)]$

Deg takes a property and returns a scale *S* and an interval function which selects an appropriately context determined subpart *I* of *S*.

Evidence from Schwarzschild (2002) and Schwarzschild and Wilkinson (2002) demonstrates that adjectives and their comparative counterparts are modified by different elements. More specifically, the quantity modifier *much* modifies comparatives but not normal adjectives, and conversely, the intensifier *very* modifies normal adjectives but not comparatives:

- (134) a. This calculation is very easy/*much easy
 b. This calculation is much easier/*very easier

Measure phrases also point to an analysis in which normal adjectives and comparative adjectives differ semantically. The former are often unable to receive measure phrase modification while the latter may always receive it:

- (135) a. 2 times easier
 b. *2 times easy

- (137) a. 8 weeks older/younger
 b. 8 weeks old/*young

- (136) a. 2 degrees colder/hotter
 b. *2 degrees cold/hot

- (138) a. 2 metres longer/shorter
 b. 2 metres long/*short

Schwarzschild (2002) and Schwarzschild and Wilkinson (2002) take measure phrases and *much* to be modifiers of scalar intervals prompting the analysis in Adger (2006) and herein.

On this account, an adjective is an abstract, unstructured concept on which *deg* operates to not only organise it onto a scale S, but also pick out a subpart *I* of S. As a subpart of S, *I* is, by definition, also a scale, albeit a bounded one. In other words S, and therefore *I* too, is a property with a scalar structure and as such still a property in essence. For this reason, *I* may be treated like a property in the semantics.

Exactly in what way *I* is bounded, is determined by the comparison subpart of S, call it *I'*, which is also contextually determined (if not overtly framed in a *than*-phrase as in *John got colder than Mary*, although even here the extent of Mary's coldness is only known from prior context). Thus, if *John got angrier*, then the interval on S, the scale of angeriness, that held of an eventuality of which John was the Holder, immediately after the causative 'getting' event took place, was greater than the contextually supplied interval on S that held of an eventuality of which John was the Holder just before the 'getting' event took place. In other words, $I > I'$, and *I* therefore has a lower bound such that it cannot be an interval on the scale of angeriness that is at any point on the scale less than the highest point of *I'*.

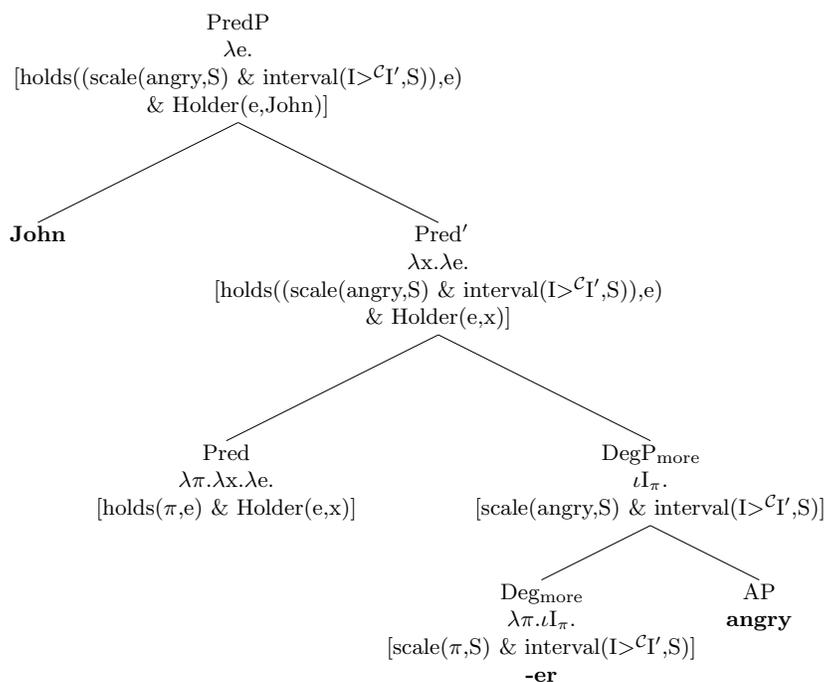
We might therefore wonder what happens if we want to express the *less than* relation, i.e., convey that $I < I'$? In other words, to express the sentence *John got less angry* what must change about *Deg*? To separate out these two opposing meanings for *deg* we will write the difference directly into its value by including a stricter definition of what may constitute an appropriate interval. In the new definitions below, superscript *C* stands for 'contextually determined', and thus, ${}^C I'$ is some other contextually determined interval which the interval *I* must either be greater than, in the case of *more*, or less than in the case of *less*:

$$(139) \quad \llbracket \text{Deg}_{\text{more}} \rrbracket = \lambda \pi . \iota I_{\pi} . [\text{scale}(\pi, S) \ \& \ \text{interval}(I > {}^C I', S)]$$

$$(140) \quad \llbracket \text{Deg}_{\text{less}} \rrbracket = \lambda \pi . \iota I_{\pi} . [\text{scale}(\pi, S) \ \& \ \text{interval}(I < {}^C I', S)]$$

The structure is as in (141):

(141) [*SC* John angrier]



At the PredP level, the semantics state that for the individual John, and some eventuality e , an interval I , which is a contextually relevant subpart of a scale of anger, holds of e (e is therefore effectively a state of being more or less angry than some other contextually relevant degree of anger) of which John is the Holder argument.

The question now is, what is it about the semantics of *Deg* that allows us to coerce IL predicates and use them in the complement of Pred? Towards an answer to this, consider the following example. Figuratively, if the more that one errs the more human one is considered to be, then if John has never erred, the moment he does, he will be deemed more human and we legitimise the phrase in (142).

(142) With every mistake John got more human

This is because we have taken a property normally considered immutable and organised it on a scale, which has the effect of immediately presenting us with the possibility that an interval of that scale relevant to an individual may change over time. The semantics of *get* are such that exactly a change of this sort is asserted.

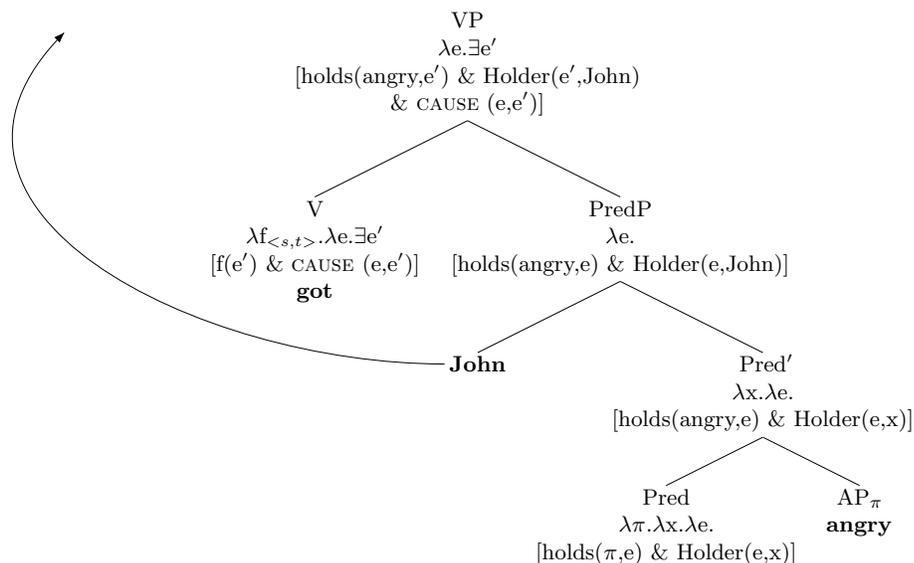
2.5.2 Merging *get*

Note first, that for the constructions *John is angry* and *John is angrier*, not much more than the above need be added. TP can take PredP directly in its complement,

and license *be* in its head as a hook for tense realisation.

Merging *get* is also relatively straightforward. Both (131) and (141) are of type $\langle s,t \rangle$ so can merge directly into the complement of the verb. We will use [John angry], not [John angrier], in the following trees:

(143) [John got angry]



After *get* merges, TP will merge and *John*, the Holder argument, will move (re-merge) for nominative Case marking in the Spec of TP. For a B-type *get* construction, the Holder argument will remain in-situ and be Case marked as accusative by vP. vP, of course, merges and introduces, via event identification, the Agent argument which moves to Spec TP for nominative Case. (144) is an example of this kind of construction:

(144) Mary got John angry

I have touched upon the fact that A-type constructions have two interpretations, one agentive and one, which I have labelled the true A-type construction, not (section 2.2.2). For now, we will ignore consideration of agentive A-type constructions and return to them in detail in chapter 4.

2.6 Chapter summary

In this chapter we began by providing evidence in support of the claim that adjectival *get* constructions constitute one English sentence structure that may denote a causing event, lexicalised by *get*, without necessarily projecting Voice. This was done by

demonstrating that the following three properties in particular may simultaneously hold of the true A-type variant of these constructions:

1. There is a causing event in the structure.
2. The matrix subject is not an external argument.
3. There is no implicit external argument.

An example in which this is true is shown in (145)

(145) The car got dirty (by being driven in the rain/*by Mary)

The felicitous *by* phrase names the Cause denoted by *get*. As an inanimate, the matrix subject *the car* cannot be an Agent (external argument). The infelicitous *by* phrase is trying to pick up on an implicit Agent but cannot as there is not one present.

The focus then shifted to a discussion of the various adjective classes that have been analysed elsewhere in the literature, as a means to arriving at an accurate characterisation of which may and which may not serve as complements to *get*. The relevant division was drawn between i-level (IL) adjectives and s-level (SL) adjectives where only the latter are well-chosen as complements of *get*. A principled reason was given for this based on two things, the meaning of *get* and the meanings of SL vs IL adjectives. Briefly, the meaning of *get*, as being close to the meaning of English *cause*, is such that it causes the onset of a new state of affairs of some sort. In the adjectival domain, this requires application of *get* to a property state that may in some way be acquired. The property must therefore be of a transitory nature, or in other words, stage-level.

Following Adger and Ramchand (2003), one way to implement this transitoriness is to say that the relevant property holds of some situation which is true of a particular individual at the relevant reference time. This is done using a Pred head with the following value:

(146) $[[\text{Pred}]] = \lambda\pi.\lambda x.\lambda e.[\text{holds}(\pi,e) \ \& \ \text{Holder}(e,x)]$

On the other hand, IL adjectives, which describe properties true of individuals independent of the particular situations they find themselves in, are related to individuals in the semantics via another Pred head in which the property holds directly of an individual:

(147) $[[\text{Pred}]] = \lambda\pi.\lambda x.[\text{holds}(\pi,x)]$

The semantic value of *get* is such that it can only combine with phrases of type $\langle s,t \rangle$:

(148) $[[\text{get}]] = \lambda f_{\langle s,t \rangle}.\lambda e.\exists e'[\text{f}(e') \ \& \ \text{CAUSE}(e,e')]$

Therefore, only the first of these Preds is of a suitable type at the phrase level to combine with *get*, providing a formal way to discount IL complements that matches the intuitive and empirical reasons to wish to do so.

Lastly, the analysis was applied, for expository purposes, to the derivation of two relevant *get* constructions.

In the next chapter we will test the analysis on *get* constructions with prepositional complementation.

Chapter 3

Prepositional complementation

3.1 Introduction

The analysis thus far successfully accounts for *get* constructions with an adjectival complement. In this section we will test the analysis with a second complement type, namely a (spatial) prepositional complement, as exemplified below:

- (1) a. A-type:
John got off the roof
- b. B-type:
Mary got John off the roof

Recall that we are working towards a story in which Cause may be realised separately from Voice resulting in an interpretation for A-type *get* constructions in which the matrix subject is not an external argument of *get* and no implicit Agent is present yet, nevertheless, the construction is causative. Thus, after a short introduction to the prepositional domain, we will proceed in a manner parallel to the previous chapter and demonstrate these three properties to be true, before looking more closely at the semantics of PPs and what restrictions exist, if any, on the prepositions that may be used felicitously in the complement structure of *get*.

3.2 Introduction to the prepositional domain

The main point of this short introduction is to show that the spatial prepositional domain may be divided broadly into two types, namely (i) those prepositions that describe the position of one entity with respect to another, so-called *locative* prepositions (henceforth LocPs - see (2)) (Zwarts and Winter 2000, Zwarts 2005) or *place* prepositions (Svenonius 2008), and (ii) those that describe directed motion of one

entity along a path associated in some way or other with a second entity, so-called directional prepositions (henceforth DirPs - see (3)) (Zwarts and Winter 2000, Zwarts 2005) or *path* prepositions (Svenonius 2008).

- (2) LocPs
 - a. The boy is **on** the table
 - b. The boy is **in** the car

- (3) DirPs
 - a. The boy crawled **onto** the car
 - b. The boy swam **into** the car

To clarify which argument is being referred to at any particular time through the course of the discussion, for the set of LocPs, we will follow Svenonius (2008) (from Talmy 1983) and call the entity whose location is under consideration the *Figure*, and the entity where the Figure is located, the *Ground*. In (2), *the boy* is the Figure, and *the table/car* are the Grounds. For the set of DirPs, we will follow Zwarts (2005) in calling the entity with which the path is associated the reference object. In (3), the reference object is *the car*. *The boy* has some thematic relation to the main verb which is always a motion verb and we will therefore sometimes refer to this entity as the *Mover* (Kracht 2002).

Initially, then, we can divide the set of prepositions up into LocPs and DirPs as follows¹:

LocPs: above, at, behind, below, beside, between, in, in front of, inside, near, on, outside, under

DirPs: across, along, around, away from, down, from, into, off, onto, out of, over, past, through, to, towards, up

Closer inspection of the examples in (2) and (3), reveals a distributional distinction between the two types, namely that LocPs may be distinguished from DirPs through their distribution with respect to *be* constructions. LocPs combine with *be* to form stative locative sentences:

- (4) The book is in the box/under the table/on the shelf

¹Although inaccurate, these lists will suffice for now. As will become clear, there is in fact a substantial amount of cross-over. For example, *over* is listed as a DirP, but it also has LocP uses, e.g. *the cloud is over my head* means that the cloud is located in a position directly above my head. The lists are, of course, incomplete too. Although a closed class, the total number of prepositions exceed the number shown here.

In the main part, DirPs will not combine with the copula², (5). However, under the condition that one must be able to understand the location “as the endpoint of a hypothetical journey...from an implicit point of view” (Zwarts 2005, p.741) the constructions are grammatical. In other words, and unlike the LocP examples, even in conjunction with the copula, there is an understood path involved, (6).

(5) *The book is into the box/onto the shelf

(6) The postbox is up the street/over the road (from here)

A further distinction is evident. DirPs, unlike LocPs, can play a part in determining the aspectual properties of a sentence. They combine well with verbs of motion, which by themselves are aspectually atelic, (7). However, depending on the preposition, the aspectual properties of the containing sentence varies, (8):

(7) John swam *in an hour/for an hour

(8) a. John swam **into** the enclosure in one hour/*for one hour

b. John swam **towards** the north bank *in one hour/for one hour

c. John swam **across** the lake in one hour/for one hour

The preposition *into* gives rise to telic aspect, *towards* leads to atelic aspect and *across* is ambiguous in that it may bring about either a telic or an atelic interpretation.

LocPs, on the other hand, cannot affect aspect. Whatever the LocP used, the atelic nature of the verb of motion remains constant:

(9) a. John ran on/near/beside/under/below the bridge *in one hour/for one hour

b. John ran behind/in front of/beside/between the cars *in one hour/for one hour

These facts about DirPs allow us to further sub-divide the domain into the four types summarised below.

LocPs: *above, at, behind, below, beside, between, in, in front of, inside, near, on, outside, under*

Telic DirPs: *into, off, onto, out of, past, to*

Atelic DirPs: *along, away from, from, towards*

Telos ambiguous DirPs: *across, around, down, over, through, up*

²This is potentially problematic for the analysis being presented here. If it can be shown that *get* can combine with DirPs, then *be* should automatically be grammatical with DirP complements, after all, *get* constructions are seen here as causative versions of PredP sentences as analysed by Adger and Ramchand (2003). A solution to this is proposed in section 3.9, in which it is shown that, in fact, the copula can take most DirP complements and that there is a principled reason why those it cannot take lead to ungrammaticality.

With respect to *get*, at first inspection, it looks like only the atelic DirPs are incompatible:

- (10) LocPs
John got on/beside/under the ladder
- (11) Telic DirPs
John got out of/into/in the theatre
- (12) Atelic DirPs
*John got towards/along/from the river
- (13) Telos Ambiguous DirPs
John got across/over/through the river

However, there is one notable exception from the set of LocPs, namely *at*, which will be discussed in section 3.8.

- (14) *John got at the river

Furthermore, for the telos ambiguous DirPs, in combination with *get* they appear not to be ambiguous anymore. Indeed, if John gets *across*, *over* or *through* a river then he has reached the other side of the river, the other side marking the endpoint of the journey and therefore providing a telos. The *in an hour/for an hour* test shows this more clearly:

- (15) John got across/over/through the river in one hour/*for one hour.

The problem of loss of telos ambiguity is related to the wider problem of finding out what exactly it is about DirPs, as opposed to LocPs, that allows them to influence the telicity of a sentence in the first place.

These problems and more will be addressed later. For now, however, it is sufficient that we have determined that the spatial prepositional domain divides into two broad types, and that at least some prepositions from each type combine with *get*. We will therefore, in the following sections, test the two broad types (LocP and DirP) for the presence of Cause, an Agent and an implicit Agent to show what kinds of constructions we are looking at and whether they are equivalent to those considered in chapter 2.

3.3 Three properties in support of a bi-eventive analysis

We will tackle each of the three relevant properties in turn, beginning with Cause in section 3.3.1, moving onto detecting Agents in 3.3.2, ending finally with a section on

implicit Agents, 3.3.3.

3.3.1 The presence of Cause

To ascertain if the relevant *get* constructions are causative, we will once again show them to be eventive first and then proceed to determine whether the event is causative (leading to a change of state). The relevant tests are repeated below:

- (16) Eventive/Stative tests
 - a. Pseudoclefting, or the ‘What happened was..’ test
 - b. The Progressive test
 - c. The True Present Tense test
- (17) Pseudoclefting with a LocP
 - a. What happened was John got on the roof
 - b. What happened was Mary got John on the roof
- (18) Pseudoclefting with a DirP
 - a. What happened was John got off the roof
 - b. What happened was Mary got John off the roof
- (19) Progressive with a LocP
 - a. John is getting on the roof
 - b. Mary is getting John on the roof
- (20) Progressive with a DirP
 - a. John is getting off the roof
 - b. Mary is getting John off the roof
- (21) True Present Tense with a LocP
 - a. *Look...! John gets on the roof
 - b. *Look...! Mary gets John on the roof
- (22) True Present Tense with a DirP
 - a. *Look...! John gets onto the roof
 - b. *Look...! Mary gets John onto the roof

With regards to the LocP examples, the results clearly indicate the presence of an event which is, as before, unlikely to be associated with the complement. The interpretation denoted by the LocPP *on the roof* is undoubtedly stative as the examples with stative *be* constructions below demonstrate:

- (23) a. *What happened was John was on the roof
 b. *John is being on the roof
 c. Look...! John is on the roof

As we have seen, DirPs will not combine with the copula³. They are also ungrammatical in conjunction with absolutive *with*-phrases:

- (24) a. With John on the roof, Mary...
 b. *With John onto the roof, Mary...

These two facts point towards an analysis in which they may be considered non-stative. However, pre-empting later discussion, we will not commit to calling them eventive just yet as they appear to occupy an unusual place somewhere in between statehood and eventhood. They denote a path along which an individual travels, and furthermore, they are spatiotemporally bound in the sense that the path has a start and an end and spatial progression along the path advances with the progression of time. However, there is no explicit process evident, as we would find in an eventive VP for example, and there is no way to modify the DirP in ways traditionally associated with event modification, such as with adverbs in VPs or the adjectives *constant* and *frequent* for event nominals.

- (25) a. *John slowly onto the roof
 b. *John constant onto the roof
- (26) a. #John ran slowly onto the roof
 b. #John's constant running onto the roof

Slowly and *constant*, in (26-a) and (26-b) respectively, modify the event associated with running and not the DirP. What we can modify in a DirP is the path by, for example, cutting it short or measuring its length. This, however, does not look like event modification as such, but rather, modification of the spatial/temporal structure of the event:

- (27) a. John ran halfway to the shops
 b. John ran 10 metres into the house

Therefore, we will be agnostic about the eventivity of DirPPs, and assume that as *get* is eventive elsewhere, despite currently having no way to show it, it is also eventive here.

As before, we can empirically verify that the event denotes a change of state:

³In fact, as already stated, we will show in section 3.9 that the majority of DirPs are compatible with the copula. For those that are not, there is a principled reason why. Once this has been shown it becomes clear that the *be* test is relevant to DirPs and can show that they too are stative.

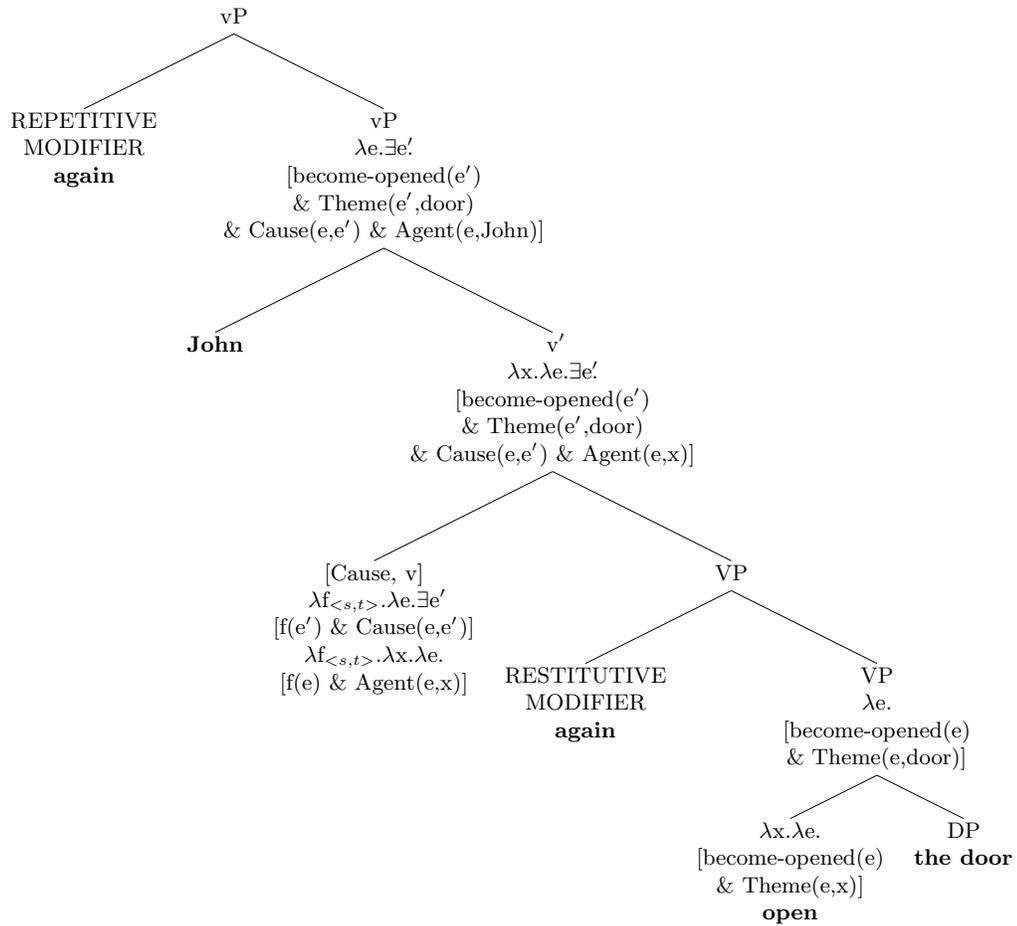
- (28) a. John got on(to) the roof at 7pm
b. John was on the roof at 7pm

Included in the interpretation of the a. example are two pieces of information about John and his relationship with respect to *the roof*. Firstly, that he was on the roof at 7pm, and secondly, that before 7pm, he was **not** on the roof. This second piece of information is not conveyed by the stative b. example which merely informs us about a state of affairs true at precisely 7pm. Thus, the former relays a change of state interpretation narrowing the options available as to the type of event that *get* communicates, namely to either an inchoative or a causative event.

Inchoatives, like intransitive *break*, express the beginning of a state or process without a causative part to their meaning and are thus comprised of one eventuality. Causatives are distinguished from inchoatives by the fact that they express a relation between two eventualities, namely a causing event and a caused eventuality (Lewis 1973). Thus, through observation alone it may be concluded that *get* constructions are causative - we have shown that there are two eventualities present, one denoted by *get*, the causing event, and the other denoted by the complement of *get*, the caused eventuality.

The presence of two eventualities can also be demonstrated, as before, with adjectival *get* constructions, using *again* modification. Recall that *again* may either scope (i), below the causing event and above the caused eventuality, leading to a restitutive reading, or (ii), above the causing event, leading to a repetitive reading (von Stechow 1996), (29).

(29) John opened the door



For B-type constructions, it is relatively straightforward to show that they are bi-eventive. The repetitive reading is shown in (30) and the restitutive in (31):

(30) Mary got John on(to) the roof and then she got him on(to) the roof again

(31) Sue got John on(to) the roof and then Mary got him on(to) the roof again

The aim, however, is to demonstrate that even A-type prepositional *get* constructions are bi-eventive, so I will use an inanimate subject to force a true A-type construction. Consider the following context. A bird builds its nest in a tree. The nest has never left the tree before but one day it falls out. The next day, however, the same nest is back in the tree. In this case (32) shows the restitutive reading.

(32) The nest got in(to) the tree again

The same example may also be repetitive if the whole event happens for a second time.

In conclusion, for both LocPP and DirPP complements of a *get* construction, we have shown that even the A-type constructions are causative, and that the causativity is related to the event denoted by *get*. We will now look at agentivity.

3.3.2 Agentivity and the θ -role ambiguity

In section 2.2.2 it was demonstrated that A-type adjectival *get* constructions are ambiguous when the matrix subject is animate (or at the very least, teleologically capable). Specifically, it was shown that for the sentence *John got ill*, the following two interpretations are possible:

- (33) John got ill
→John is the Holder an eventuality of which the property of being ill holds
→John is the Agent of an event that caused the property of being ill to hold of an eventuality of which John is the Holder (e.g. John got ill on purpose so he could get off school)

While for a sentence such as *the car got cold*, only one interpretation is possible:

- (34) The car got cold
→The car is the Holder of an eventuality of which the property of being cold holds

For B-type adjectival constructions it was also shown that only one interpretation is possible:

- (35) Mary got John ill
→Mary is the Agent of an event that caused the property of being ill to hold of an eventuality of which John is the Holder

To demonstrate the existence of a non-agentive interpretation was the overall goal of the section as it represented one step towards the conclusion that Cause may be realised without Voice. With the same end in mind, I will show that an identical ambiguity exists for prepositional *get* constructions with animate subjects and that the ambiguity is not present for either B-type prepositional *get* constructions or A-type prepositional *get* constructions with an inanimate subject.

A series of three tests were previously used to show this to be the case. The three tests were:

- (36) a. The purpose clause test
 b. The Agent-oriented adverb test
 c. The instrumental phrase test

Consider B-type constructions first. The goal for these is to show that the matrix subject is an Agent. Thus, they should accept an appropriate purpose clause (PC) - that is, one in which the PRO may only be controlled by an Agent - and be compatible with both Agent-oriented adverbs and instrumental phrases. We will begin with the PC test.

In (37), the pronoun embedded inside the PC forces the c-commanding PRO to be of a different index from it (Condition B), but in (38), the corresponding anaphor forces the c-commanding PRO to refer to the same entity as it (Condition A).

(37) Mary_m got John_j on the roof PRO_m to hide him_j from the police

(38) *Mary_m got John_j on the roof PRO_j to hide himself_j from the police

Considered together, (37) and (38) show that *Mary*, the matrix subject, is the only possible Agent. The same is true in DirP contexts:

(39) Mary_m got John_j onto the roof PRO_m to hide him_j from the police

(40) *Mary_m got John_j onto the roof PRO_j to hide himself_j from the police

As for the other two tests, the intentionality in (41) obviously lies with the matrix subject, and the instrumental phrase in (42) clearly describes the means by which Mary, and crucially not John, carried out the ‘getting’ event. Both tests support the conclusion already drawn from the PC test, strongly suggesting that the subject of a B-type prepositional *get* construction is an Agent.

(41) Intentionally, Mary got John on(to) the roof

(42) Mary got John on the roof with a catapult

Thus far, this is all as expected. The more interesting cases are the A-type constructions which are often ambiguous. The three tests used above are all felicitous with A-type constructions so long as the subject is animate (I have included (43) to show that with a suitable context the sentence *The stick got on(to) the roof* is grammatical).

(43) The stick got on(to) the roof by being thrown there by John

- (44) PC test
- a. John_j got on(to) the roof PRO_j to hide himself_j from the police
 - b. *The stick_s got on(to) the roof PRO_s to hide itself_s from the ruthless dog
- (45) Agent-oriented adverb test
- a. Intentionally, John got on(to) the roof
 - b. *Intentionally, the stick got on(to) the roof
- (46) Instrumental phrase test
- a. John got on(to) the roof with a catapult
 - b. *The stick got on(to) the roof with a catapult

Thus, an animate subject of an A-type prepositional *get* construction can be agentive and therefore be a suitable controller for PRO. However, it can also be shown that animate subjects are not necessarily agentive. Consider the following context. In a gameshow in which couples compete to complete tasks, the first task is for the female members of the couples to get their respective partner from a starting position on the ground to a finishing position in a bathtub without any help from the partner. Three couples are involved, Nicholas and Vanessa, Sebastian and Maria, and John and Mary. Let us stipulate that only Vanessa and Maria complete the task. Despite their clearly non-agentive roles we can still use the males as the grammatical subjects and summarise the results of the contest by saying (47):

- (47) Nicholas and Sebastian got in(to) the bathtub but unfortunately John didn't.

Thus, an animate subject of an A-type prepositional *get* construction is not necessarily an Agent.

Finally, we need to show the third condition, namely that no implicit Agent is present. This is only pressing for the true A-type *get* constructions as we have already shown that B-types include an overt Agent. The following section will therefore be concerned with showing that true A-types have no implicit Agent.

3.3.3 No implicit Agent

Evidence of there being no accessible implicit Agent comes from the use of Agent-oriented *by* phrases. These kind of *by* phrases are found in passive constructions to pick out the implicit Agent, and so their use with unaccusatives is expected to be infelicitous:

- (48) Passive
The door was closed by Mary

- (49) Unaccusative
*The door closed by Mary

The *get* constructions under consideration pattern with unaccusatives:

- (50) a. *The stick got on the roof by Mary
b. *The stick got onto the roof by Mary

The argument above is, however, quite weak as it is possible that (49) and (50) are ungrammatical for other reasons, for example, if Agent-oriented *by* phrases are only licensed in the presence of a passive participle. Stronger evidence comes in the form of purpose clauses.

Recall that for constructions with Implicit Agents, like the passive, although covert, the Agent may still control PRO. For unaccusatives, where no Implicit Agent is present, purpose clauses lack a controller for PRO and the sentences crash:

- (51) Passive
The stick was broken in two PRO to reduce its length

- (52) Unaccusative
*The stick broke in two PRO to reduce its length

The most reliable way to ensure a true A-type *get* construction is to use an inanimate subject. The use of the pronoun in (53) to refer back to *the stick* from inside the embedded clause, forces an entity different from the stick to control PRO (by Condition B) and, as a knock on effect, ensures that *the stick* cannot be interpreted as an overt Agent (as to do so would require PRO to refer to the same entity as *the stick*). PRO must be controlled, but there is no overt Agent to do so. The next best thing would be an implicit Agent, but ungrammaticality shows that there is not one available.

- (53) *The stick_s got on(to) the roof PRO to hide it_s from the dog

The way the test is set up to work means that it is possible to use a purpose clause to force a true A-type *get* construction - the embedded pronoun need only corefer with the matrix subject. Thus, testing for an Implicit Agent can also be done on animate subject A-type constructions too.

- (54) *John_j got on(to) the roof PRO to hide him_j from the police

Again, there is no implicit Agent present to control PRO and the sentence crashes.

Thus, we have successfully shown that the following three properties are all true of A-type prepositional *get* constructions:

1. That there is a causing event in the structure.
2. That the matrix subject is not an external argument.
3. That there is no implicit external argument.

We will now return to the semantic features of LocPs and DirPs, and how they relate specifically to *get* constructions.

3.4 A closer look at locative and directional Ps

Recall that earlier we split the prepositional domain into LocPs and DirPs, and then the latter into three further classes, those that give rise to telic aspect, those that gives rise to atelic aspect, and those that are compatible with both telic and atelic interpretations. This gave us the following breakdown:

LocPs: *above, at, behind, below, beside, between, in, in front of, inside, near, on, outside, under*

Telic DirPs: *into, off, onto, out of, past, to*

Atelic DirPs: *along, away from, from, towards*

Telos ambiguous DirPs: *across, around, down, over, through, up*

We then showed that *get* is incompatible with both the LocP *at*, and the atelic DirPs. This immediately leads to some problems: how to account for *at*, how to account for the fact that DirPs are capable of influencing telicity, and related to that, why ambiguous DirPs are no longer ambiguous inside a *get* construction - they are unambiguously telic? We will leave these problems for later, turning our attention first towards a more thorough investigation of the features of each type of preposition.

3.4.1 Blurred division lines

The neat categorisation of prepositions into the four types listed above does not entirely reflect the truth of the matter. In fact, many of the prepositions listed as DirPs have locative uses:

- (55) a. The log is lying across the stream
 b. The belt is around his waist

Likewise, many in the LocP category have DirP uses, (56). As pointed out by Svenonius (2007), they may sometimes, particularly in conjunction with motion verbs, acquire a directional interpretation, although the locative meaning is normally the most salient one.

- (56) a. The boat drifted behind the hill
- b. The boat drifted inside the cave
- c. The boat drifted below the bridge
- d. The boat drifted beyond the city limits
- e. The boat drifted in front of the palace
- f. The boat drifted above the dam

Examples taken from Svenonius (2007)

In other words, the meaning of (56-a) is ambiguous between one in which the boat is located behind the hill and drifting within that location, and one in which the boat began not behind the hill and drifted **to** a location behind the hill, i.e., a path interpretation.

Svenonius suggests that this is so because of the presence of a null path head with a meaning approximately equivalent to overt *to*. In fact, overt *to* is even arguably acceptable, (57), and to reflect a converse path reading (for example, a path leading from a position behind a hill to a position not behind a hill), we need only add the converse preposition *from*, (58).

- (57) a. ?The boat drifted to behind the hill
- b. ?The boat drifted to inside the cave
- c. ?The boat drifted to below the bridge
- d. ?The boat drifted to beyond the city limits
- e. ?The boat drifted to in front of the palace
- f. ?The boat drifted to above the dam

Examples taken from (Svenonius 2007)

- (58) a. The boat drifted from behind the hill
- b. The boat drifted from inside the cave
- c. The boat drifted from below the bridge
- d. The boat drifted from beyond the city limits
- e. The boat drifted from in front of the palace
- f. The boat drifted from above the dam

Examples taken from (Svenonius 2007)

This works for many LocPs, but not for all. Again, *at*, is a notable exception and one which we will consider in more detail in section 3.8:

- (59) a. The man was running at the race-meet
- b. *The man was running to at the race-meet
- c. *The man was running from at the race-meet

This also highlights another problem. Given that of all the LocPs, only *at* will not combine with *get*, and furthermore that, unlike the other LocPs above, *at* does not seem to have a DirP use, a natural question to ask is whether LocPs may ever be used with *get*? In other words, is it the case that *get* may take a LocP in its complement structure, or are the LocPs that appear there really being used as DirPs? This is an important question that is answered in the next section with the conclusion that LocPs are indeed felicitous with *get*.

3.4.2 LocPs or DirPs?

As has been seen, LocPs locate a Figure with respect to a Ground whereas DirPs describe the trajectory of a Mover with respect to a reference object. The fact that these two broad categories have such different interpretations should mean that, as they are compositionally merged with other elements, these differences should influence the meanings of the overall sentences they are contained within in predictable ways, a LocP denoting a location for an entity and a DirP denoting a path along which an entity travels. The difference is clear for the examples in (60)

- (60) a. John is on the dance floor
 b. John ran onto the dance floor

The difference should also be as equally clear in any other cases, but for *get* this is not always true:

- (61) a. John got in the car
 b. John got into the car
- (62) a. John got behind_{Loc} the sofa
 b. John got behind_{Dir} the sofa

Knowing that almost all LocPs, including both *in* and *behind*, may also be used as DirPs, and given that *at* is seemingly the only LocP that both resists a DirP use and will not combine with *get*, we might reason that all LocPs in the complement of *get* are really just disguised DirPs. There is, however, a strong argument against this conclusion from evidence based on the respective LocP and DirP meanings of prepositions like *across* and *over*. These two prepositions differ from *in* and *behind* in that the locations they denote as LocPs differ significantly from the endstate locations they denote as DirPs. Whether a man is simply located behind a sofa, or moves to a location behind a sofa, in either case, after all is said and done, he is behind the sofa. However, if a log is located across a road or has moved to a position across a road, its location in the first case is very different to its endstate location in the second. In

the first, the LocP use, the log lies across the road bisecting it. In the second, the DirP use, the log moves to a position on the opposite side of the road from where it started. Something equivalent holds for *over* too. If a spaceship is located over a city it is positioned vertically above the city (the LocP use), but if a spaceship flies over a city (in less than an hour, say), we know it has moved in some way from one side of the city to the other side.

The meaning of *get* is such that a new state of being is caused, directly implying a transition from an old state of being. This kind of transition in the spatial domain is normally accompanied by directed movement and hence the confusion when the endstate in either case (LocP or DirP) is the same. For *across* and *over*, however, this is not a problem. Thus, if the bisection/vertically above readings are feasible with *get* then we can be sure that *get* can take a LocP complement. The following examples show that both these readings are indeed possible:

- (63) Pointing at a log bisecting a road:
How did the log get across the road?
- (64) Watching District 9:
How did the spaceship get over Johannesburg?

In the next section we will set out a formal analysis for locational prepositional *get* constructions.

3.5 Locational prepositions

To unify the analysis of these prepositional *get* constructions with the one already set out for adjectival *get* constructions in the previous chapter, the locative preposition will need to combine with Pred. Recall that *get* selects Pred which takes a property expression π in its complement and relates it to an argument x in its specifier, (65). It does this via an eventuality e , such that π holds of e and x is a Holder of e .

$$(65) \quad \llbracket \text{Pred} \rrbracket = \lambda\pi.\lambda x.\lambda e. [\text{holds}(\pi, e) \ \& \ \text{Holder}(e, x)]$$

The reason for using this kind of Pred head, as opposed to one that directly associates the property to the argument (see (120) in chapter 2), was that in the adjectival domain it provides a natural solution to the problem of excluding the use of i-level predicates in the complement structure of *get* without ruling out s-level predicates. Predicative prepositional structures, both locative and directional, are spatiotemporal and therefore inherently s-level (recall that one way to diagnose s-levelhood is to test its compatibility with spatial and temporal modifiers. If a given sentence is

s-level, spatiotemporal modification is unproblematic, but if a given sentence is i-level, modification of this sort results in ungrammaticality). Therefore, assuming that they are property denoting, there is, *a priori*, no reason to discount either LocPs or DirPs as complements of Pred. Following Bowers (1993), Bowers (2001), Adger and Ramchand (2003) among others, I will widen the scope of what may constitute a property expression to include the set of predicational elements at phrase level, namely the lexical category phrases NP, AP and PP⁴. The Pred head does the job of turning the property into a proposition by relating an argument to the property over which it predicates with respect to an eventuality.

As discussed, LocPs give rise to stative locational interpretations: if John is on the roof then John is located on the roof. Like predicative adjectives, then, we will assume that here too there is a property that can combine with an entity x mediated by Pred, in this particular case ‘John’, and assign that property to x via an eventuality. The property is one of being located with respect to an entity x, in this case, the property of being *on* x where x is ‘the roof’. *The roof* may be defined as a set of contiguous points i in a 3D landscape. We will therefore take *on the roof* to denote a property consisting of the set of point locations i⁵, (66). Pred, then, has the same function as before - it takes in the property, π , and states that π holds of an eventuality of which some individual x is a Holder. Formally, what we have is the following:

(66) $[[\text{on}]] = \lambda x.\lambda i.[i \text{ has the property on}(x)]$

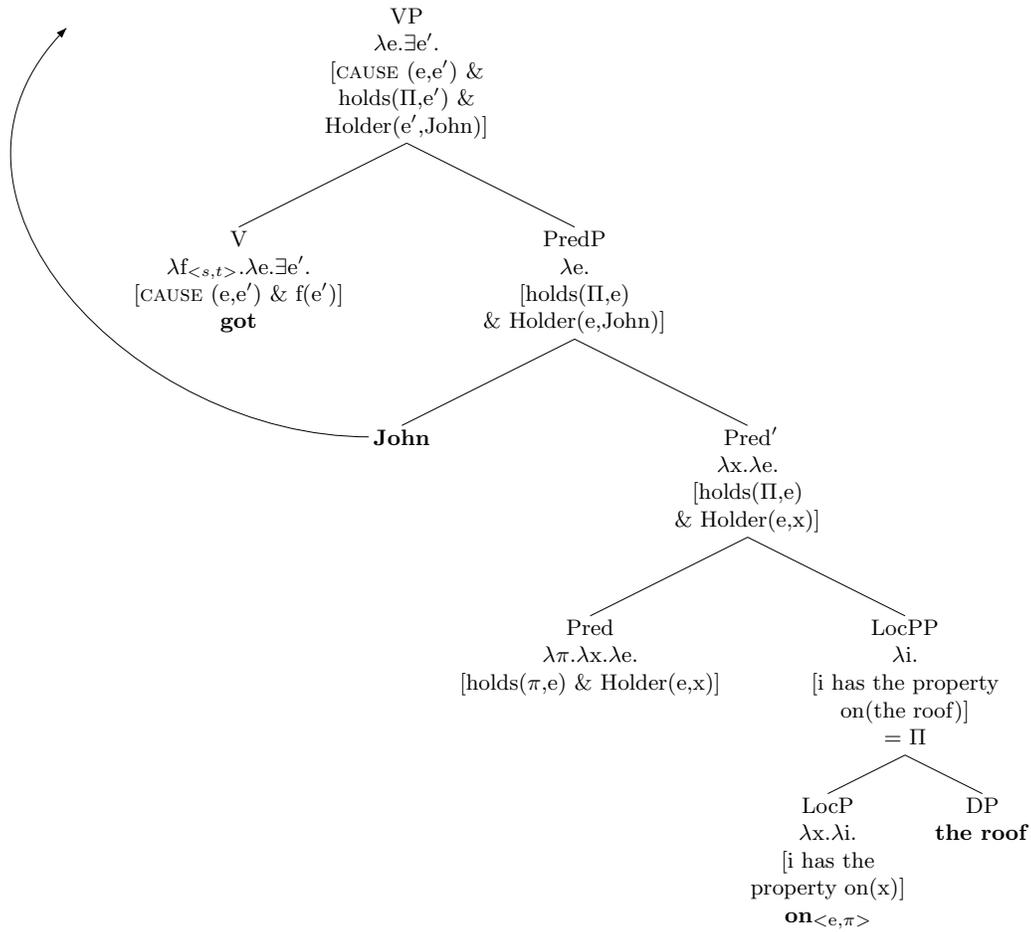
(67) John on the roof

⁴I will not include VP here as I will assume that the Agent θ -role is introduced by little *v*.

⁵I will leave out the temporal side to the property as I believe that, in the spatial domain, it is less important than location. Its role may be more pronounced for non-spatial uses of prepositions with *get* such as in particle constructions like *John got on well with Mary*. As will be seen, greater import to time will necessarily be given in chapter 5 which discusses the domain of events and states resulting from events.

(68) John got on the roof

[A-type construction]



The analysis here is fairly non-standard in that LocP is a function from individuals to properties, the property being one of locations. The standard analysis is that a preposition like *on* denotes a relation between two individuals such that one (the Figure) is located with respect to another (the Ground) (Heim and Kratzer 1998, p.63). A less standard analysis treats PPs as properties of events (Adger and Ramchand 2003):

(69) $\llbracket \text{on} \rrbracket = \lambda x. \lambda e. [\text{on}(e, x)]$
e is an event of being on *x*

In (67) and (68), however, we are taking the LocPP to be a kind of atomic property of locations, albeit one with internal structure, and to get the stage-levelhood of the LocP out, it is then predicated with respect to an eventuality *e* such that the property is true of an individual just in case that individual is a Holder of *e*. Another way to reach the same kind of intuition through the semantics would be to treat the LocPP as

a predicate of events and then ‘intentionalise’ it using Chierchia’s (1985) \cap operation before applying Pred to convert it into a predicate of events, a possibility alluded to in Adger and Ramchand 2003, footnote 8 p. 12.

We will now move on to the more tricky subject of directional prepositions, beginning in the next section with an introductory discussion of paths and prepositional aspect.

3.6 Directional prepositions

The features that distinguish DirPs from LocPs are that they are able to affect sentential telicity, and that they project a path as part of their interpretation. In this section we will look more closely at these two features including a summary of a recent analysis of path algebra and prepositional aspect formulated by Zwarts (2005). We will begin, however, with an informal discussion of the two features in which we look at ways other than telicity to divide up the DirP domain into useful classifiable subdivisions.

3.6.1 Paths and prepositional aspect

As has been seen, the telicity of a motion verb can be affected by the choice of directional preposition used in its complement. Likewise, the telicity of verbs of motion can also be affected by turning them into verbs of motion to a goal. The nominal *a mile* in (70) introduces a spatial path with an understood endpoint located one mile from the start of John’s swim, the goal being the endpoint.

(70) John swam a mile in 10 minutes/*for ten minutes

DirPs also introduce paths, along which an individual is deemed to travel. With respect to *get* constructions, we have so far stated that if a DirPP is uttered in its complement, it must be telic. Telicity, however, is a characteristic normally associated with events, a telic event being one in which the interpretation includes an end result. We might therefore posit that telicity in the domain of DirPs is equal to the requirement that the reference object denote an endpoint location:

(71) John swam to the pier in five minutes/*for five minutes

In (71), the reference object denotes an endpoint and the sentence is telic. In fact, however, a DirPP may fail to denote an endpoint location, but may still transfer telicity to the sentence it is contained within. This is the case with, for example, both *past* and *off*:

(72) John tiptoed past the guard's cabin in seconds

In (72), *the cabin* is not the endpoint of the path traversed by John, but rather, it represents a set of points near the path (not including the startpoint or endpoint of the path) that John must traverse in order to pass it by. There is, however, a result conveyed, namely the state of John being somewhere beyond the other side of the cabin with respect to John's position before the activity event took place.

(73) John climbed off the roof in minutes

In (73), *the roof* represents an area within which the startpoint of the path traversed by John is located, and again, no endpoint location is explicitly defined. However, as before, a result is conveyed, namely the state of John being located somewhere **not** on the roof.

As we have seen, *get* constructions denote an end result and therefore impart telic aspect. We know that there is an end result because it cannot be contradicted:

(74) *John got onto the roof but in the end he wasn't on it

Again, however, this does not mean that the reference object need necessarily be defined as including an endpoint for the relevant path. Both *past* and *off* are compatible with *get* too:

- (75) a. John got past the guard's cabin unseen
b. John got off the roof

We need therefore to distinguish prepositions that give rise to telic aspect (*get*-compatible DirPs) from those that give rise to atelic aspect (*get*-incompatible DirPs) on some ground other than the existence of a specified endpoint location. Thus, from now on, we will refer to the former as *bounded* and the latter as *unbounded*, notions to be clarified below. First, however, we will better clarify how to refer to the semantically distinct types of DirPs just discussed.

3.6.2 Goal, source and route DirPs

Within the DirP domain, Zwarts (2005) divides up the set of DirPs into *goal*, *source* and *route* denoting PPs. Prepositions like *off* are source prepositions, because their complement, the reference object, defines a set of contiguous points any of which may be used as a startpoint for the understood path. A preposition like *past* is one of a number of route prepositions, because its reference object defines a contiguous set of points somewhere on or near the route of the understood path without defining either a start location or an end location. Finally, prepositions like *to* are classified as goal

prepositions because the reference object defines a contiguous set of points any of which may be used as an endpoint for the understood path. These three prepositions all give rise to telic interpretations so are bounded.

We may also divide the prepositions that give rise to atelic interpretations, the unbounded ones, along similar lines.

(Away) from may be classified as a source preposition as the reference object defines a location that gets further from the path traverser as the path is moved along. The reference object does not define the actual start location for the Mover, so we will consider it as a ‘would be’ source. *Along* may be classified as a route preposition as the reference object defines a location that remains near the path traverser, throughout the extent of the path. The reference object defines a ‘would be’ route. Finally, *towards* may be classified as a goal preposition as the reference object defines a location that gets nearer to the path traverser as he/she moves along the path, but again, the reference object location does not include an actual endpoint for the path as the path never reaches the reference object and thus, neither does the Mover. We will consider it to be a ‘would be’ goal.

The prepositions *through* and *across* used as unbounded DirPs are different again.

- (76) a. John ran through the forest for days
 b. John swam across the lake for hours

For these cases, the entire path is encased within the location defined by the reference object. In other words, it is not that the reference object lies somewhere on or near the path, but rather, that the path lies ‘on’ the reference object. As the entire route of the path is within the reference object we will also call these route prepositions. They also have bounded uses that are semantically similar to *past*.

These classifications are summarised in the table in (77).

- (77) DirP classes

	Bounded	Unbounded
Source	off, out of	(away) from
Goal	to, into, onto	towards
Route	past, through, across, over	along, through, across

We will now begin to tackle what is meant by the bounded, unbounded distinction.

3.6.3 Boundedness

On an intuitive level, the reference object of a DirP defines a set of contiguous points in a 3D landscape which we will call an extended location (EL). Also intuitively, a path may be defined as a set of contiguous points arranged linearly. A feature of the meaning of unbounded DirPs is that for any path p in their denotation, if we split p into smaller paths, these smaller paths will also be in their denotation. The subparts of any path *through* an EL are also *through* the EL.

This observation is not true of the bounded DirPs. For example, for a DirPP such as *off the roof*, what is important about the paths in its denotation is that they all start at the source EL, *the roof*, and cross its outer edge (boundary) ending up no longer on the EL. Thus, a subpart of a path off a roof which does not include any points in the source EL can no longer be deemed to be representative of a path off the roof.

Zwarts (2005) defines this property formally as divisivity and shows that it is problematic as a criterion for boundedness as, in fact, it is not true that all subparts of, for example, an unbounded path *towards* an EL may be considered *towards* that EL. For example, if I take a path towards a river that initially, say for the first 20 metres, leads geographically further away from the river, then the subpart of my path towards the river that includes the first 20 metres only, is not, in its own right, a path towards the river. Similarly for *through*: if subparts of a path through a tunnel run across the tunnel from one side to the other, can we really also refer to those subparts as paths through the tunnel?

In fact, what successfully distinguishes boundedness from unboundedness is a condition in the opposite direction, i.e., a fact about joining smaller paths to make larger ones. To define this condition we will need a formal algebra of paths. We will therefore begin with this in the next section after which we will look at a theory of how prepositional aspect is transferred to events.

3.6.4 An algebra of paths

To see Zwarts's explanation of how aspect may be transferred to the verbal domain we will first need an algebra of paths. For this we use Zwarts (2005):

- (78) An algebra for paths:
- a. P is the set of paths in the universe of discourse.
 - b. A path p is a continuous function from the real unit interval $[0,1]$ (the indices) to positions in a model of space such that:
 - (i) The starting point is $p(0)$.
 - (ii) The end point is $p(1)$.
 - (iii) For any $i \in [0,1]$, $p(i)$ is the corresponding point of the path.

P is partially ordered by a subpath relation:

- (79) p is a subpath of q ($p \leq q$) if p is the same path as q restricted to part of its domain.

Paths may be ‘added’ by an operation called concatenation:

- (80) Concatenation
 For two paths p, q , if $p(1)=q(0)$, then the concatenation of p and q ($p+q$) is the path that goes from $p(0)$ to $q(1)$ via p and q .

As the definition shows, concatenation is only defined when the second path (q) starts at the end of the first path (p). In this way, each ‘concatenat’ is a subpath of the concatenation. As we will see, this is particularly important when considering boundedness from a formal perspective, a topic to which we turn next.

If a path is bounded, it **cannot** be cumulative, and if a path is unbounded, it **must** be cumulative (Zwarts 2005). *Cumulativity* is as defined below:

- (81) *Cumulativity*
 A set of paths X is cumulative iff
- a. there are $p, q \in X$ such that their concatenation ($p + q$) exists and
 - b. for all $p, q \in P$, if $p + q$ exists, then $p + q \in X$.

Consider the bounded DirPP *to the river*, call it g . The set of paths G denoted by g are all the paths whose endpoint $G(1)$ is *at* the river. Thus, given (80), no two paths p, q in the denotation of g may be concatenated ($p(1)$ cannot equal $q(0)$ as $p(1)$ is necessarily at the river and $q(0)$ is necessarily not at the river). As such $p + q$ does not exist and *to the river* is not cumulative. On the other hand, an unbounded DirPP like *along the river* (call it h) is cumulative. The set of paths H denoted by h are all the paths which run alongside the river. It is therefore possible to find two paths p, q in H such that $p(1) = q(0)$, and concatenate these paths to make another, longer path still in H . As such, h is cumulative and therefore unbounded.

3.6.5 Aspectual transfer

Transfer of prepositional aspect to the verbal domain is achieved via a thematic function that gives the relevant event a spatial trace (Zwarts 2005 based on Link 1998 and Krifka 1998). Zwarts calls this function *Trace* and it is defined over motion events **only** as the path followed by the relevant event participant (e.g. by the Theme of a pushing event or the Agent of a Walking event):

$$(82) \quad \llbracket V_{\text{motion}} \text{DirPP} \rrbracket = \{e \in \llbracket V_{\text{motion}} \rrbracket : \text{Trace}(e) \in \llbracket \text{DirPP} \rrbracket\}$$

Trace is structure preserving. That is, following Zwarts (2005), (i) two spatiotemporally adjacent events may be concatenated just as two paths that meet head-to-tail (spatial path adjacency) may be concatenated, and (ii), motion events may be made up of subevents, as paths may be made up of subpaths. Armed with these assumptions we can then say that if a motion event e' is a subpart of a motion event e , then the path mapped out by $\text{trace}(e')$ is a subpath of the path mapped out by $\text{trace}(e)$, (83-a). Furthermore, the trace of two concatenated events is equal to the trace of the first concatenated with the trace of the second, (83-b).

$$(83) \quad \begin{array}{l} \text{a. } e' \leq e \longrightarrow \text{trace}(e') \leq \text{trace}(e) \\ \text{b. } \text{trace}(e+e') = \text{trace}(e) + \text{trace}(e') \end{array}$$

With these assumptions and relations in place, we can concatenate suitably adjacent motion verb events into longer events of motion and as such, motion verbs, like unbounded paths, may also be defined as cumulative in reference (and therefore atelic). If however, we combine a motion verb with a non-cumulate DirPP the result is non-cumulative (and therefore telic). This is because if we map two concatenated events in the VP denotation to their paths, the paths, due to structural preservation, will necessarily be concatenated too and will therefore lie outside of the denotation of the bounded DirPP which, by definition, includes no concatenated paths.

To see this more clearly we will consider an example that Zwarts (2005) provides. If John swims from 1am to 2am from location A to location B, and from 2am to 3am from location B to location C, then these two events may be concatenated into one event e of swimming from 1am to 3am from A to C. The swimming event from A to B, call it e' , may therefore be considered a subevent of e , as may the swimming event from B to C, call it e'' , and the two together as concatenable subevents of e . As such, the paths mapped out by their traces may be considered as concatenable subpaths of $\text{trace}(e)$. The meaning of atelic *swim*, in combination with an unbounded DirPP like *across the lake (for hours)*, remains atelic. If the swimming event passes locations A, B and C as described above, then both e' and e'' fall inside the denotation of *swim*.

Each has a trace, $\text{trace}(e')$ and $\text{trace}(e'')$, which also fall inside the denotation of the unbounded DirPP (both denote a path *across the lake* (read as unbounded *across*) albeit a subpath of $\text{trace}(e)$) and the result is an atelic sentence. If, on the other hand, we combine the same swimming event with a bounded PP like *to C*, again, both e' and e'' fall inside the denotation of the swimming event. The problem is that their traces do not both fall inside the denotation of the DirPP. Specifically, e' fails to denote an event of swimming to C. The bounded DirPP *to C*, in effect, restricts the number of possible paths to just those whose endpoint is at C. If all the paths must end at the same location, no two are concatenable and the interpretation of the sentence is telic.

Compositionally, a sentence like *John swam to location C* works as follows (ignoring tense):

$$\begin{aligned}
 (84) \quad & \text{John swam to location C} && [\text{Telic}] \\
 & \{e \in \llbracket \text{swim} \rrbracket : \text{Trace}(e) \in \llbracket \text{to location C} \rrbracket \ \& \ \text{Agent}(e, \text{John})\} = \\
 & \{e \in \llbracket \text{swim} \rrbracket : \text{Trace}(e) \in \{p : p(1) \text{ is at location C}\} \ \& \ \text{Agent}(e, \text{John})\} = \\
 & \{e \in \llbracket \text{swim} \rrbracket : \text{Trace}(e)(1) \text{ is at location C} \ \& \ \text{Agent}(e, \text{John})\}
 \end{aligned}$$

In words, (84) denotes the set of swimming events e such that the endpoint of the path followed by John, the Agent of e , is at location C. An atelic sentence looks as follows:

$$\begin{aligned}
 (85) \quad & \text{John swam across the lake} && [\text{Atelic}] \\
 & \{e \in \llbracket \text{swim} \rrbracket : \text{Trace}(e) \in \llbracket \text{across the lake} \rrbracket \ \& \ \text{Agent}(e, \text{John})\} = \\
 & \{e \in \llbracket \text{swim} \rrbracket : \text{Trace}(e) \in \{p : \text{for all } i \in [0,1] \ p(i) \text{ is on the lake}\} \ \& \ \text{Agent}(e, \text{John})\} = \\
 & \{e \in \llbracket \text{swim} \rrbracket : \text{Trace}(e) \text{ is on the lake} \ \& \ \text{Agent}(e, \text{John})\}
 \end{aligned}$$

In words, (85) denotes the set of swimming events e such that the path followed by John, the Agent of e , is on the lake.

The fact that Trace is only defined over motion events is problematic for the analysis we are defending in this thesis, as *get* is not a motion event. It is particularly problematic in view of the fact that there does appear to be a path interpretation for these kinds of *get* constructions. To see this, we need to look at some ways of detecting paths.

3.6.6 Diagnosing Paths

There are several ways to test for the presence of a path. We will go through two in this section. The first is to modify some feature of the path. For example, we can add that on John's trek in a national park, the path he traverses includes a section that passes via the main entrance gate. We will call this the Via Test:

- (86) Path is present
 - a. John trekked into the national park
 - b. John trekked into the national park via the main entrance
- (87) No path is present
 - a. John trekked at the national park
 - b. *John trekked at the national park via the main entrance

A second diagnostic, suggested by Tenny (2000), involves the use of a measure adverb like *partway*. The idea is that if a sentence contains a path, the traversal of the path by the subject should be measurable. The use of this type of adverb follows the expected pattern. We will call this the Measure Test:

- (88) a. John trekked partway to the national park [Path is present]
- b. *John trekked partway at the national park [No path is present]

With these two tests we now have the tools to evaluate if there are path interpretations included in the denotation of prepositional *get* constructions with DirPP complements:

- (89) Via Test
 - a. John got onto the roof via the drainpipe
 - b. Mary got John onto the roof via the drainpipe
- (90) Measure Test
 - a. John got partway onto the roof
 - b. Mary got John partway onto the roof

The tests confirm the presence of a path for both A and B-type constructions. An interesting fact is that even for A and B-type constructions with a LocP in their complement, it is possible to detect a path:

- (91) Via Test
 - John got in the car via the front door
- (92) Measure Test
 - John got partway in the car

The meaning of a *get* construction is, intuitively, and even formally, under the analysis thus far, one of change of state. In the spatial domain this kind of change is normally mediated by movement. For a new location to hold of an entity, the entity must move. This movement interpretation is strong enough to coerce, where possible, canonically

locative prepositions into DirPs.

As we saw in section 3.4.2, there are some ambiguous PPs that combine with *get* but leave meanings clearly associated with their LocP uses. The examples given were for *across* and *over*, repeated below:

- (93) Pointing at a log bisecting a road:
How did the log get across the road?
- (94) Watching District 9:
How did the spaceship get over Johannesburg?

Even in these cases, however, a path may be detected. Possible answers to the above examples demonstrate this:

- (95) a. The log got across the road via the hill which it rolled down before coming to rest
- b. The spaceship got over Johannesburg via Namibia and Botswana.

The same reasoning applies here. *Get* is causative demanding a result phrase complement which is interpreted as a caused eventuality. Given the fact that the eventuality has been caused, the result may be seen as a description of a newly acquired state. For PP complements we are based in the spatiotemporal domain, meaning that acquisition of a new state is akin to acquisition of a new location which must entail movement from a previous location. Thus, if not formally present in the semantics, a path will necessarily be implied. Any analysis of *get* must be able to account for this in some way.

We will now look at some formal values for the various directional prepositions before formulating an alternative analysis of how they combine with motion verbs and *get*, and transfer their aspect to the relevant event.

3.6.7 Semantic prepositional values

Zwarts, in his 2005 paper, gives definitions to all of the main prepositions in terms of the possible sets of paths they may denote. I have split them up into different types under the more general headings of bounded and unbounded.

Bounded DirPs:

(96) Goal DirPPs

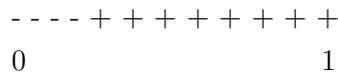
- a. $\llbracket \text{to } x \rrbracket = \{p: \text{there is an interval } I \subset [0,1] \text{ including } 1 \text{ and consisting of all the } i \in [0,1] \text{ for which } p(i) \text{ is at } x\}$
- b. $\llbracket \text{onto } x \rrbracket = \{p: \text{there is an interval } I \subset [0,1] \text{ including } 1 \text{ and consisting of all the } i \in [0,1] \text{ for which } p(i) \text{ is on } x\}$
- c. $\llbracket \text{into } x \rrbracket = \{p: \text{there is an interval } I \subset [0,1] \text{ including } 1 \text{ and consisting of all the } i \in [0,1] \text{ for which } p(i) \text{ is in } x\}$

Notice that the definition for *to x* here is more complex than the one used earlier in (84) repeated in (97):

(97) $\llbracket \text{to } x \rrbracket = \{p: p(1) \text{ is at } x\}$

The reason for this is that (97) denotes paths that we would naturally tend not to include in the meaning $\llbracket \text{to } x \rrbracket$. (97) allows any path so long as the end of the path is at *x*. Thus, paths that are located entirely at *x* are included as well as paths that move to and from *x* several times. What *to x* is most normally understood to denote is a path with a two stage structure (Fong 1997 and Kracht 2002), the first stage of which is not at *x* and the second stage of which is at *x*. We can represent this schematically as in (98):

(98) One possible path denoted by *to x*:



The minuses stand for points on the path not at *x* and the plusses stand for points on the path at *x*. The path in (98) begins with a minus at 0, the startpoint, and ends with a plus at 1, the endpoint, changing just once, giving a two stage structure. Some paths outside the denotation of *to x* in (96-a), but within the denotation in (97), look as follows:

- (99) a. $\begin{array}{cccccccccccc} + & + & + & + & + & + & + & + & + & + & + & + \\ 0 & & & & & & & & & & & 1 \end{array}$
- b. $\begin{array}{cccccccccccc} + & + & + & + & - & - & - & - & - & - & + & + & + & + \\ 0 & & & & & & & & & & & & & 1 \end{array}$
- c. $\begin{array}{cccccccccccc} - & - & - & - & + & + & + & + & - & - & - & + & + & + & + \\ 0 & & & & & & & & & & & & & & 1 \end{array}$

(103) Up and Down

- a. $\llbracket \text{up } x \rrbracket = \{p: \text{ for every } i \in [0,1], p(i) \text{ is on } x \text{ and } p(1) \text{ is the highest point on } x\}$
- b. $\llbracket \text{down } x \rrbracket = \{p: \text{ for every } i \in [0,1], p(i) \text{ is on } x \text{ and } p(1) \text{ is the lowest point on } x\}$

As defined above, both *up* and *down* appear to have a one stage structure. However, there is still something ‘special’ about the end point which marks it out, namely that it is either the highest or lowest point of *x*. I will mark this by using a larger plus sign to signify *highest*, and a smaller one to signify *lowest*. We will consider the structure bipartite with one of its stages including just one point, the endpoint:

(104) up *x*
 + + + + + + + + + + + +
 0 1

(105) down *x*
 + + + + + + + + + + + +
 0 1

Leaving *up* and *down* to one side for the moment, what is common to all these definitions is that firstly, there is an interval, that secondly, they all have a stage structure >1 and that thirdly, the points in the interval are defined with respect to a basic locative preposition, a pattern which sometimes repeats across all three types (i.e. goal, source and route). Thus, there is a goal ON preposition, a source ON preposition and a route ON preposition, *onto*, *off* and *across* respectively. The same is true for IN, and additionally, there is a goal and route preposition for AT and route prepositions for NEAR and ON/ABOVE.

(106) Bounded DirPs

| | AT | ON | IN | NEAR | ON/ABOVE |
|---------------|-----|--------|---------|------|----------|
| Goal | to | onto | into | | |
| Source | | off | out of | | |
| Route | via | across | through | past | over |

The fact that the points in the interval are defined with respect to a locative preposition means that, by extension, so is the endpoint. For a Goal DirP where the endpoint lies within the interval, this is straightforward, but for source and route DirPs this is also true, the difference being that the endpoint must be located with respect to the negative of the relevant locative preposition. Thus, if the source or route DirP is an

ON DirP, the endpoint is necessarily **not on** the reference object.

To unify matters more, the definitions for *up* and *down* may also be framed with an interval:

- (107) Up and Down
- a. $\llbracket \text{up } x \rrbracket = \{p: \text{there is an interval } I \subset [0,1] \text{ including all points } i \in [0,1] \text{ except } 1 \text{ and for which } p(i) \text{ is on } x \text{ and } p(1) \text{ is the highest point on } x\}$
 - b. $\llbracket \text{down } x \rrbracket = \{p: \text{there is an interval } I \subset [0,1] \text{ including all points } i \in [0,1] \text{ except } 1 \text{ and for which } p(i) \text{ is on } x \text{ and } p(1) \text{ is the lowest point on } x\}$

However, where *up* and *down* fit into the table in (106) is unclear as what seems to count more is the meaning of the preposition in combination with the reference object and verb. Thus, someone may run up/downstream meaning they follow a path NEAR the stream, or swim up/downstream meaning they follow a path IN the stream. They might fly up/downstate meaning they follow a path ABOVE the state, or drive up/downstate meaning they follow a path IN the state. Or, they may climb up/down a hill meaning they follow a path ON the hill (this is the definition supplied in (107)), or climb up/down a tree meaning they follow a path IN the tree. In any case, however, the interval is defined with respect to a locative preposition, and by extension, so is the endpoint. We will now look at unbounded DirPs.

Unbounded DirPs:

We may differentiate unbounded DirPs from the bounded ones above in two ways. Firstly, the entire path from $p(0)$ to $p(1)$ is equal to the interval (or alternatively, there is no interval), and secondly, as a direct result of the first difference, they all have a single stage structure. A single stage structure is achieved in one of two ways. Either no point on the denoted path lies *at* the reference object, which is what we see with the source and goal prepositions, or all the points on the denoted path lie *in, on, above* or *near* the reference object, seen with the route prepositions and *up* and *down*.

- (108) Goal DirPP
- $$\llbracket \text{towards } x \rrbracket = \{p: \text{for every } i \in [0,1] \text{ } p(i) \text{ is not at } x \text{ and } p(1) \text{ is nearer to } x \text{ than } p(0)\}$$

- (109) Source DirPP
- $$\llbracket \text{away from } x \rrbracket = \{p: \text{for every } i \in [0,1] \text{ } p(i) \text{ is not at } x \text{ and } p(1) \text{ is further from } x \text{ than } p(0)\}$$

The structure for the goal and source DirPs may be represented as a series of minuses as the goal/source is never reached/begun from.

- (115) a. $*[[\text{up } x]] = \{p: \text{for every } i \in [0,1] \text{ not including } 0 \text{ and } 1, p(i) \text{ is on } x \text{ and } p(1) \text{ is higher than } p(0)\}$
 b. $*[[\text{down } x]] = \{p: \text{for every } i \in [0,1] \text{ not including } 0 \text{ and } 1, p(i) \text{ is on } x \text{ and } p(1) \text{ is lower than } p(0)\}$

Each of the definitions for the unbounded DirPs may trivially be re-written to include an interval which will necessarily include all points of the path, placing these points with respect to the reference object in some way or another.

Next we will consider a novel analysis for DirPPs.

3.7 Analysis of DirPPs

In this section, we will develop an alternative analysis to Zwarts (2005) in which a DirP will be considered a property of locations, similar to LocPs, but with an organised structure⁶. We will continue to use Zwarts's path algebra for defining how a given path is structured. The property of locations may then, as before, be predicated of an individual to create a small clause proposition. Some of these small clauses will be resultative (the ones with a bounded DirP) and some not (the ones with an unbounded DirP), and only the former are compatible with *get*. Within the broad notion of property assumed here, this kind of analysis does not present a problem as predication of a DirPP over an individual results in a meaningful clause, that is, gives us a conceptual completeness of some distinction (Chomsky's (1986) *Complete Functional Complexes*).

To maintain this analysis we need to show that it holds not only for *get* constructions, but also for motion verb constructions. In other words, we need to maintain that the DirP complement of a verb of motion is a small clause, (116).

- (116) John ran [_{sc}into the house]

At first sight this does not look too promising, but in fact, there is some supporting evidence shown by the following paradigm in which a phrase with a DirP is compared to one with a LocP adjunct in order to identify potential argument positions:

- (117) a. John walked into the river
 b. John walked in the river
- (118) a. John walked the dog into the river
 b. John walked the dog in the river

⁶This is, in some ways, analogous to the distinction made between 'normal' adjectives and comparative adjectives in the previous chapter.

- (119) a. John walked himself into the river
 b. *John walked himself in the river

The fact that the extra anaphoric argument position is available in (119-a) seemingly with little change to the meaning in (117-a), but not available in the locative equivalent, is difficult to explain unless we posit that *into the river* is predicating over the individual denoted by the anaphor.

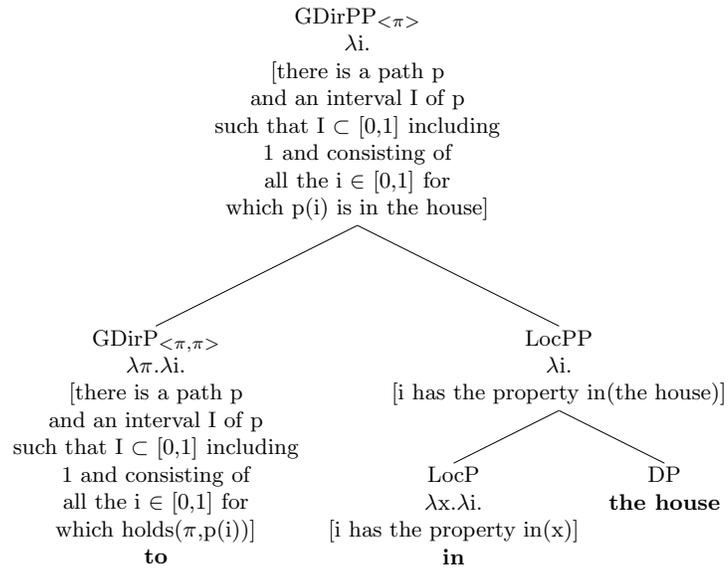
- (120) John_i ran [_{sc}John_i into the house]

Following Svenonius (2007), we will assume that the denotation of a DirP is built compositionally out of a LocP functionally applied with a relevant *Path* head. Path heads will either be goal, source or route in nature and we will label them as GDirP, SDirP and RDirP respectively. Their values are as follows:

- (121) $\llbracket \text{GDirP} \rrbracket = \lambda\pi.\lambda i.[\text{there is a path } p \text{ and an interval } I \text{ of } p \text{ such that } I \subset [0,1] \text{ including } 1 \text{ and consisting of all the } i \in [0,1] \text{ for which holds}(\pi, p(i))]$
- (122) $\llbracket \text{SDirP} \rrbracket = \lambda\pi.\lambda i.[\text{there is a path } p \text{ and an interval } I \text{ of } p \text{ such that } I \subset [0,1] \text{ including } 0 \text{ and consisting of all the } i \in [0,1] \text{ for which holds}(\pi, p(i))]$
- (123) $\llbracket \text{RDirP} \rrbracket = \lambda\pi.\lambda i.[\text{there is a path } p \text{ and an interval } I \text{ of } p \text{ such that } I \subset [0,1] \text{ including neither } 0 \text{ nor } 1 \text{ and consisting of all the } i \in [0,1] \text{ for which holds}(\pi, p(i))]$

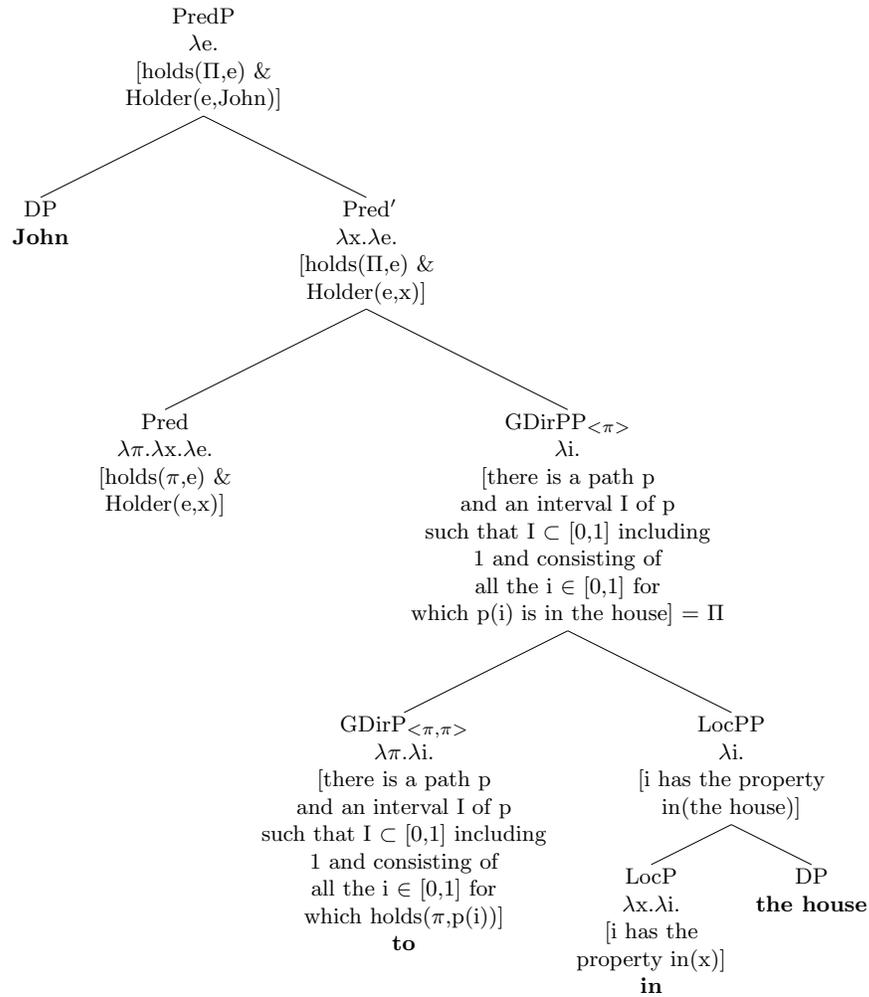
These DirPPs are modificational. They take in a LocPP property of locations of type π and give back a property of locations also of type π . In doing so, they provide us with a number of new bits of information as follows. They organise a set of points (the locations which make up the property) as a contiguous linear path in which intervals of that path are related in some way to the property of locations denoted by their LocPP complement. Thus, if the DirPP is *into the house* then there exists a path p with an interval I of p including the endpoint of p such that I is entirely located inside the house. Although not made explicit in its meaning, the fact that the startpoint of p is not included in I means that there must be another interval, say I' , which minimally includes the startpoint but will consist of all the $i \in [0,1]$ for which $p(i)$ is **not** in the house. Furthermore, I' concatenated with I is equal to p . This, of course, satisfies the intuition that a Goal path consists of a two-stage structure. We will continue to assume that I' is not made explicit in the meaning of *into*, but rather, that it is understood as an entailment of the fact that p has an interval I . We will return to this shortly. Formally, then, we have the following:

(124) into the house



Thus, the property *into the house* denotes a set of points organised as a path with a two stage structure, the end of which (and crucially not the start of which) is included in an interval I of the path in which all points of I are inside the house. Predicating this of an individual via Pred gives the following:

(125) John into the house



PredP says that for some event e it holds that there is a path with a two stage structure, the end of which is in the house, and that John is the Holder of the event e and therefore the Mover along the path.

Returning to entailments, as Zwarts (2005) notes, sentences with DirPs have entailments that tie them to a locative expression (namely the LocPP that appears in their denotation):

- (126) Bounded Goal DirP entailment
- a. John will go into the vault \rightarrow John will be in the vault
 - b. John will go behind the house \rightarrow John will be behind the house

This however is only one of the entailments that these goal prepositions have. There is also the entailment shown in (127):

- (127) a. John will go into the vault \rightarrow John is not in the vault
 b. John will go behind the house \rightarrow John is not behind the house

There are, then, two entailments for these prepositions and the same is true for bounded source DirPs, *up* and *down*:

- (128) Bounded Source DirP
 John will go out of the house \rightarrow
 a. John is in the house
 b. John will not be in the house
- (129) Bounded Up
 John will go up the hill \rightarrow
 a. John will be on the hill
 b. John will be at the highest point of the hill
- (130) Bounded Down
 John will go down the hill \rightarrow
 a. John will be on the hill
 b. John will be at the lowest point of the hill

On the other hand, bounded route DirPs entail three things:

- (131) Bounded Route DirP
 John will go through the tunnel \rightarrow
 a. John is not in the tunnel
 b. John will be in the tunnel
 c. Having been in the tunnel John will not be in the tunnel again

The generalisation we can pull out here is that the number of entailments matches the number of stages the DirPs represent and we therefore predict that one stage structures (i.e., unbounded DirPs) will have only one entailment:

- (132) Unbounded Goal DirP
 John will go towards the river \rightarrow
 a. John will be near the river
 b. John is not near the river

Certainly if John goes towards the river he will be nearer than he was to the river (as reflected by its semantic value in (108)), but this does not necessarily mean he will be *near*, in some contextually verifiable way, to the river. The only thing we can entail from (132) is that John is not *at* the river. The same is true for the unbounded

source DirP and, as for the rest of the unbounded DirPs, we can see that they also convey only one entailment:

- (133) Unbounded Source DirP
John will go away from the river \nrightarrow
a. John will not be near the river
b. John is near the river
- (134) John will go away from the river \rightarrow John is not at the river
- (135) Unbounded Route DirP
John will go through the woods (for hours)
a. \rightarrow John will be in the woods
b. \nrightarrow John is not in the woods
- (136) Unbounded Up
John will go up the hill
a. \rightarrow John will be on the hill
b. \nrightarrow John will be high on the hill
c. \nrightarrow John will be at the highest point of the hill
- (137) Unbounded Down
John will go down the hill
a. \rightarrow John will be on the hill
b. \nrightarrow John will be low on the hill
c. \nrightarrow John will be at the lowest point of the hill

Each entailment, then, is a description of a stage of the relevant path, and given that each path means what it means, each of a path's entailments will carry through the derivation of a sentence. Moreover, however, it seems that what these entailments may also indicate are 'states' of the Mover with respect to the LocPP property in the complement of DirP. In other words, each entailment refers to a possible location along the path that the Mover may hold with respect to not only the reference object, but the entire LocP+Reference-object complex. Thus, if a pair of entailments say that (i) John is not in the vault, and (ii) that he will be in the vault, we know that at the beginning of the path John will hold the property (or state) of not being in the vault, and that at the end of the path, John will hold the property (or state) of being in the vault, and therefore, that a change of state occurred at some point on the path between the two extremities. The fact that a change of state occurs allows for a result state meaning to be imparted which explains the impossibility of negating this result:

(138) *John ran into the house but didn't end up in the house

Where there exist three stages to a path (bounded route DirPs), two changes of state are denoted and again a result state is conveyed, but where only one stage is evident (unbounded DirPs), no change of state is conveyed.

(139) *John ran through the tunnel (in 15 minutes) but didn't reach the end

(140) Unbounded non-result DirPs

- a. John ran across the field (for 10 minutes) but didn't reach the other side
- b. John ran towards the river but didn't reach the river

Note that whether the (bounded) DirP in use is goal, source or route, the result state it represents is equal to the entailment linked to the final phase of the path, i.e., the phase including the endpoint.

We must be careful here to emphasise that it is not enough that an individual be a Mover along a path for there to be a recognisable change of state interpretation. While it is true that any kind of movement does, on some level, signal a change of state, what is important to the grammar is not only the movement, but also if there has been a criterial change in location, and that can only be judged to have taken place if the Mover has crossed from one phase of a path to another, i.e., the criteria for a change of state interpretation is that the movement must involve a change in location of the Mover with respect to the LocPP property contained within the DirPP. This should not be controversial as indeed even with a simple motion verb, which by definition signifies that some kind of movement is undertaken by its Agent, it is not enough, just because movement is involved, to therefore assume that the verb denotes a change of state and is thus resultative. In fact, motion verbs, as we know, are inherently atelic.

To clarify this further we will look at a concrete example of each, beginning with an unbounded DirP. Consider the sentence in (141):

(141) John swam towards the riverbank

The meaning of (141) involves movement of John along a path in the general direction of the riverbank. Furthermore, there is an entailment that *John* is not at the riverbank. This entailment is made explicit by the meaning of *towards x* repeated in (142), and is true of John throughout his entire progress along the path, from startpoint to endpoint. The particular LocPP that this movement is framed against is given by the phrase 'not at the riverbank'. As 'not at the riverbank' is true of the location (state) of John throughout his entire progress along the path, no change of state interpretation is possible and the phrase 'towards the riverbank' cannot be

considered a result.

$$(142) \quad \llbracket \text{towards } x \rrbracket = \{p: \text{for every } i \in [0,1] \text{ } p(i) \text{ is not at } x \text{ and } p(1) \text{ is nearer to } x \text{ than } p(0)\}$$

Now consider (143):

$$(143) \quad \text{John swam to the riverbank}$$

The meaning of (143) also involves movement along a path in the direction of the riverbank. However, in this case there are two discernible entailments, both that John was at the riverbank and that prior to this John was not at the riverbank. The first of these entailments is explicit in the denotation of *to x* repeated below, but is only true of a proper subpart of the entire path, including the endpoint:

$$(144) \quad \llbracket \text{to } x \rrbracket = \{p: \text{there is an interval } I \subset [0,1] \text{ including } 1 \text{ and consisting of all the } i \in [0,1] \text{ for which } p(i) \text{ is at } x\}$$

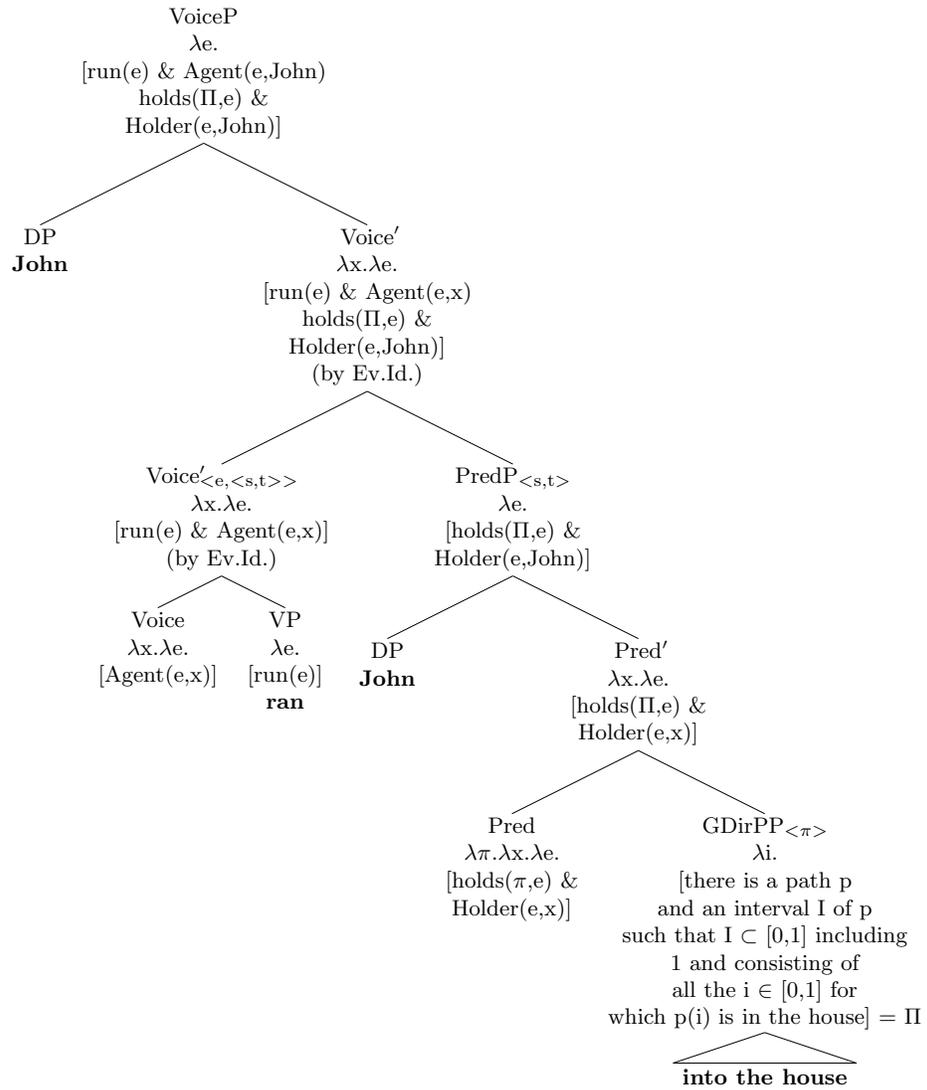
The particular LocPP that this movement is framed against is given by the phrase ‘at the riverbank’. As ‘at the riverbank’ is true of the location (state) of John for just a subpart of the path he traverses, a change of state interpretation is possible. The change of state is characterised as a change from John not holding the property of being at the riverbank to John holding the property of being at the riverbank. The phrase ‘to the riverbank’ is therefore result-denoting.

Motion verbs may combine with any kind of DirPP with the resulting expression being telic, if the DirPP is result-denoting (for the reasons discussed above) and atelic if the DirPP is non-result denoting. There is a question of how this composition is achieved in the semantics as the types do not match for functional application to apply. *Run* is of type $\langle e, \langle s, t \rangle \rangle$ while PredP is of type $\langle s, t \rangle$ (see tree in (146)). However, we can use another operation here, namely event identification (Kratzer 1996):

$$(145) \quad \text{Event Identification} \\ \langle e, \langle s, t \rangle \rangle \quad \langle s, t \rangle \quad \longrightarrow \quad \langle e, \langle s, t \rangle \rangle$$

Event identification (Ev.Id.) allows us to add further information to the event described by the verb, and was initially posited by Kratzer as a mechanism for joining the external argument onto a verb using Voice. Event identifying Voice and the verbal event adds the condition that the verb has an Agent. For the case in hand, however, event identification will need to be used twice, once to add the Agent onto *run*, and once to add the condition that the verbal event denote a path with a particular Mover:

(146) John ran John into the house



The running event in (146) is specified not only as Agentive, but also as one in which a path with a Mover is included, and furthermore, that this path has a two stage structure and is therefore result-denoting and telic.

In summary, the most important conclusion we can draw from this analysis is that we can use the Holds relation to transfer prepositional aspect. If a path has a stage structure with two or three phases, it is result-denoting, but if a path has a single stage structure it is not. We will now turn to formulating an analysis along these lines for *get*.

3.7.1 Merging *get*

Merging *get* calls for a different story. *Get*, as we know, denotes Cause as defined below, (147). As such, it obligatorily denotes a change of state reading in which the caused eventuality (e' in (147)) is denoted by the result phrase in its complement. The complement must be result-denoting or else nothing has been caused.

$$(147) \quad \llbracket \text{Get} \rrbracket = \text{Cause} = \lambda f_{\langle s,t \rangle} . \lambda e . \exists e' . [\text{CAUSE}(e, e') \ \& \ f(e')]$$

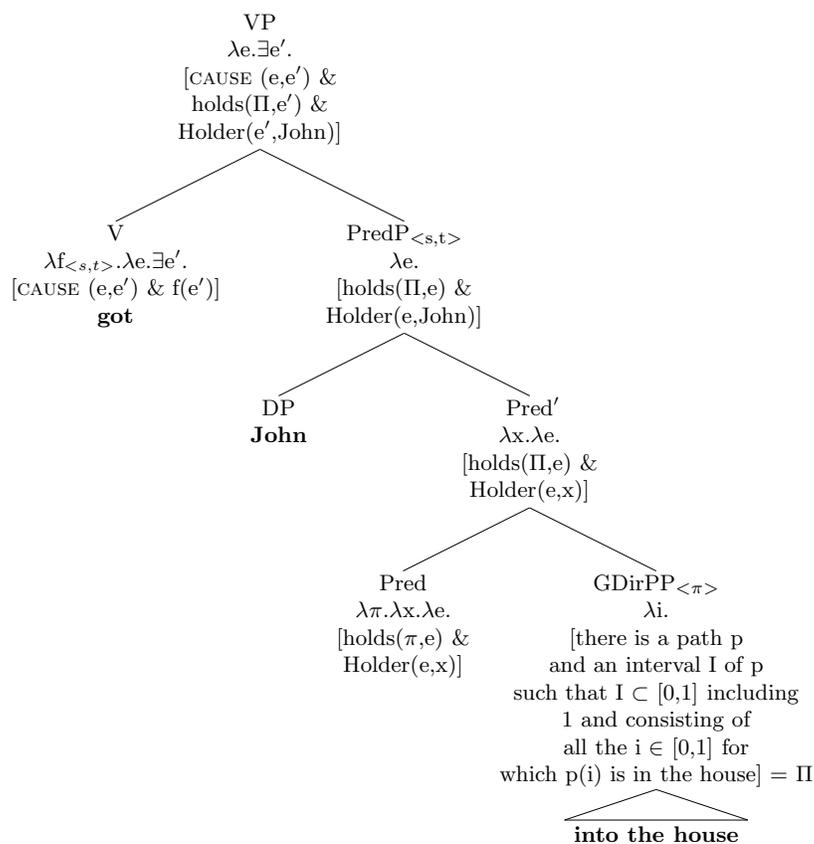
This proviso explains why unbounded paths are unacceptable in the complement of *get*. We have seen that the stage structure of a bounded path p leads to particular entailments holding true of p , and that because of this, certain paths are able to denote that the Mover changes state, as it were, with respect to the entire LocPP against which the movement is framed, giving rise to the interpretation of the DirPP as a result phrase. For unbounded paths, however, the Mover, although he moves, remains fixed with respect to the LocPP against which the movement is framed, and as a result, there is no change of state involved and the DirPP cannot be result-denoting. Therefore, in conjunction with *get* there is an aspectual clash and the sentence crashes⁷:

- (148) a. *John got towards the riverbank
 b. John got to the riverbank

The formal structure for a grammatical prepositional *get* construction is as below:

⁷A parallel may be drawn here between the adjectival and prepositional domain, namely that unbounded DirPs may be considered the i-level predicates of the path prepositional domain (and by extension, the bounded DirPs as the stage-level predicates). However, while it has been left to the conceptual module of the way we view the world to account for the respective i-levelhood and s-levelhood of each adjective, in the spatial domain of paths, the notion is logically represented from the perspective of boundedness.

(149) John got into the house



It is essential here that the ‘getting’ event is not identified with the path denoting eventuality as they each represent two separate eventualities, namely the causing event and the caused eventuality.

At the point in the derivation represented by (149) one of two things can happen. Either the subject of the small clause will re-merge in Spec TP giving us a true A-type *get* construction, or an Agent of the ‘getting’ event can be introduced which will either result in a B-type construction (Agent \neq SC Subject), or an agentive A-type construction (Agent = SC Subject).

There remain a few loose ends to resolve which will be done in the following two sections. Firstly, we have still not returned to the problem of why *at* will not combine with *get*, and secondly, there is a question of how to rule out the copula with DirPPs (*John is into the house). We will begin with *at*.

3.8 The problem with *at*

Based on evidence from sentences such as those in (150), the discussion thus far has implied that there is no DirP use for *at*. As we will see, this is not entirely true, although it does appear to be a special case.

- (150) a. The boat drifted at the foot of the hill
b. *The boat drifted to at the (foot of) hill
c. *The boat drifted from at the (foot of) hill
d. *The boat drifted at the foot of the hill via the pier

As a DirP:

In specific contexts, and in conjunction with specific verbs and nominal complements, *at* can act as a DirP, with a similar meaning to *towards*, but with a necessarily short path - one cannot, for example, run *at* something that is not in ones sight. The broad feeling that its use as a DirP imparts is either one of danger or excitement, or one of aim and subsequent movement towards a target:

- (151) a. The infantry charged/ran at the enemy
b. The protestor fired the arrow at the target/threw the stone at the policeman

Thus, if it is difficult to construe the verb in one of these contexts, (152), or if the nominal complement is not of the right type, i.e., a nearby concrete object, (153), the sentence crashes:

- (152) *The infantry strolled/swam at the enemy

- (153) *The infantry charged/ran at France

As already shown, *towards* is ungrammatical with *get* because it is unbounded and therefore has a single stage structure that prevents it from being result-denoting leading ultimately to an aspectual clash when used in a *get* construction. *At_{DirP}* has a meaning similar to *towards* so is ungrammatical with *get* on the same grounds.

As a LocP:

As a LocP *at* is also ungrammatical with *get*, (154).

- (154) a. *John got at the hospital
b. *Mary got John at the hospital

It is possible that the reason for this is linked to the notion of axial parts (see Svenonius 2006 and references therein for in depth discussion of axial parts and vector

spaces). Briefly, an axial part is a region of an object which is determined by the object's axes. For example, the front, back, top, bottom, sides and ends of a car are all axial parts of the car. Prepositions often pick out spaces that are characterised by an extension of the Ground's (or reference object's) axial dimensions out into surrounding areas. Thus, if John is in a hospital then he is deemed to be *inside* the hospital, or more crudely, in from the sides of the hospital. However, if he is in front of the hospital, he is in an area projected out from the front axial dimension of the hospital.

At, on the other hand, does not appear to work this way. If John is at the hospital, he is in the general vicinity of the hospital, but it is left unspecified as to exactly where, with respect to any axial part of the hospital, he is. For this reason, *at* allows us to situate an individual at a location with no discernible axial parts, (155-a) or with respect to a point in time, (155-c):

- (155) a. John is at the wedding
 b. *John is behind/inside/below/beyond/in front of the wedding
 c. John killed Bill at midnight
 d. *John killed Bill behind/inside/below/beyond/in front of midnight

Interestingly, *in* can sometimes work like *at*, but to do so, the Ground must be a bare nominal:

- (156) a. John is in hospital/school
 b. John is in the hospital/school
 (c. John killed Bill in the afternoon)

Example (156-b) means that John is inside the hospital while (156-a) is used in a more abstract sense to infer that John is not well and therefore interned at the hospital (and therefore also somewhere in the vicinity of the hospital). It is possible that the abstract sense is licensed only in the absence of an axial part which otherwise constricts the meaning to a strictly spatial interpretation. *Get* is not compatible with the abstract meaning:

- (157) a. *John got in hospital/school
 b. John got in the hospital/school

This is not to say however that *get* is not compatible with any abstract readings:

- (158) a. John got behind with his homework
 b. John got over the moon with his test results

In fact it is even compatible with *at* under a strictly abstract reading (with the rough meaning of *to annoy*):

(159) John got at his classmates all afternoon

The point is that if there is any spatial part to the reading of the SC complement, *get*, for whatever reason, needs to locate the subject of the SC with respect to an axial part of the prepositional object, and locative *at*, because it does not operate on axial parts, is ungrammatical with *get* for this reason.

As a LocP in the complement of a DirPP:

Two AT DirPs are identified in the table in (106), repeated below:

(106) Bounded DirPs

| | AT | ON | IN | NEAR | ON/ABOVE |
|---------------|-----|--------|---------|------|----------|
| Goal | to | onto | into | | |
| Source | | off | out of | | |
| Route | via | across | through | past | over |

They are *to*, and *via*. Given our explanation for the ungrammaticality of locative *at* with *get* we would also expect neither of these two prepositions to combine with *get* but as we know, this is not true for *to*. We have provided no formal explanation for why *get* will only combine with prepositions that operate over axial parts (and we will not formulate one either for space reasons), but speculatively, we might be able to sidestep the problem of *to* by stipulating that for some reason, when embedded in a DirPP, the axial part requirement of *get* is relaxed or blocked. This, of course, transfers the problem to why it is that *via* is not compatible with *get*? *Via* has both bounded and unbounded readings:

(160) John ran via the river for 5 minutes/in 5 minutes

For the unbounded reading, there is implicit knowledge that the path via the river is only a section of a longer path with no specified startpoint or endpoint and that this section is entirely located alongside the river and took John 5 minutes to run. The startpoint, endpoint and any other points not alongside the river are not grammatically important. For the bounded reading, the start and endpoints **are** grammatically important and there is implicit knowledge of them. The path from start to end took 5 minutes to run passing by the river for an unspecified length of time. To use bounded *via* with motion verbs, there is no need to specify the endpoint, but to use it with *get*

there is:

- (161) a. *John got via the river in 5 minutes
b. John got here via the river in 5 minutes

Hence *via* is compatible with *get* but, at the very least, an endpoint location must be overtly defined for compatibility. This differs from other bounded route DirPPs which do not need the endpoint overtly defined:

- (162) John got across/through the river in 5 minutes

I will presume that this is because, unless otherwise stated, there is a minimal assumption that the endpoint in these examples is defined by the boundary edge of the reference object. Indeed, it is enough that John be touching the riverbank from inside the water to felicitously utter (162). For *via* such a minimal assumption is impossible as to pass *via* a location means to pass by it fully, on the way to another location, not merely on the way to one of its edges. Thus, the naming of an endpoint is required to ensure that the DirPP denotes a result.

It is unclear why no requirement of this sort is necessary when *via* is used in the complement of a motion verb.

3.9 DirPPs as copula complements

We have thus far not looked at why it is the case that DirPPs are said to be ungrammatical with the copula (Zwarts 2005), while LocPPs are not:

- (163) a. John is in the house
b. *John is into the house

The question is pertinent as in the adjectival domain this was not an issue, (164), and moreover, as *get* under the present analysis simply adds a causative layer to copula constructions, the set of *get* constructions should constitute a subset of the set of *be* constructions meaning that, in principle, there is no reason why, if a DirPP is compatible with *get* it should not be compatible with *be*.

- (164) a. John is cold
b. John got cold

To begin with, I would like to suggest that in fact it is only in a small number of cases that *be* is not compatible with a DirPP, and that there is a principled reason for this.

(165) John is (somewhere) up the hill/towards the bank/away from the fire/past the station/out of the house.

(166) *John is to the river/onto the roof/via the motorway

We will continue to assume that both copula phrases and the copula itself are stative. Given our analysis of prepositional path structure and the effect this has on possible change of state interpretations, the most obvious prediction is that only single path structures should combine with the copula (recall that the subject of an unbounded DirPP does not change state with respect to the LocPP property against which the path is framed). The table in (167) shows that this is clearly the wrong prediction to make (the superscripts on *up*, *down*, *via*, *across*, *over* and *through* are there to indicate if the preposition is to be understood under its bounded (b) or unbounded (u) interpretation).

(167) DirP compatibility with *be*

| | Be | *Be |
|---------------|--|--|
| Goal | towards | to, into, onto |
| Source | away from, off, out of | from |
| Route | along, across ^b ,
over ^b , past, through ^b | via ^{u,b} , across ^u ,
over ^u , through ^u |
| | up ^{u,b} , down ^{u,b} | |

I believe that the correct prediction to make is that, being stative, the only thing that *be* requires in the spatial DirPP domain, is that its subject be at the particular location described by the final spatiotemporal stage of the path. Seen in this way, there is no *a priori* reason why *be* should be incompatible with any of the DirPs as all contain at least one stage. The onus now falls upon explaining why those that are ungrammatical with *be* are so.

As we know, the denotations of all of these prepositions contain a LocPP complement which, by definition, describes a location with respect to a reference object.

With this in mind, consider for now just the prepositions *into*, *out of* and *through*^b. The syntax of all three of these prepositions includes a LocPP which describes the location *in the house*. However, only in the first is this location included as part of the final spatiotemporal stage of the path it describes. Thus, if John walks into a house, then John ends up in the house. On the other hand, if John walks out of a house or through a house then he does not end up in the house. Therefore, only in the case of *into* is the DirPP reducible to a LocPP which continues to describe the same location

as the final stage of the path denoted by the DirPP. An equivalent argument can be made for *onto* vs *off* and *across*^b.

What of *through*^u and *across*^u and why are these incompatible with *get*? The reason is exactly the same. If John walks through a forest or across a field, then under an unbounded interpretation, he is in the forest or on the field respectively, and these locations are the same as the locations described by their respective LocPP complements.

Thus, the generalisation is that if we can ‘reduce’ the DirP to its LocP complement without changing our understanding of where the subject is located, then using the DirP will be infelicitous.

The generalisation predicts that both *up*^u and *up*^b (as well as *down*^u and *down*^b) should be compatible with *be*, each one resulting in a distinct meaning. The prediction is borne out:

- (168) John is upstairs =
- a. John is somewhere higher up in the building than the utterer [Most salient reading]
 - b. John is at the top of the building
- (169) John is up the stairs =
- a. John is somewhere higher up in the building than the utterer
 - b. John is at the top of the building [Most salient reading]

The argument for *via*^u is as follows. For the length of time when John is ‘via’ an entity *x*, he is *at x*, so *via*^u is reducible to *at*. However, for *via*^b the reason for its incompatibility with *be* is related to a fact about its meaning discussed earlier. The endpoint is grammatically important, but undefined, and no minimal assumption about it can be made (unlike for *across*, *over* and *through*), so the location that *be* wants to pick out for the subject is simply not available.

Finally, I have no good explanation for *from* as the generalisation predicts that it should be compatible with *be*. It is possible that interference with the *comes from* meaning of *is from* plays a part such that no spatial interpretation is permitted:

- (170) John is from Mars/ the hospital [*spatial reading]

3.10 Chapter summary

In the introduction, it was shown that the prepositional domain divides broadly into two types of preposition, locative Ps (LocPs) and directional Ps (DirPs), and that

both LocPs, not including *at*, and DirPs, not including those that are unbounded, are compatible with *get*. Furthermore, it was suggested, following (Zwarts 2005) and based on examples like (171), that *be* cannot take a DirP complement.

(171) *John is into the garden

The challenge in this chapter was, therefore, not only to successfully apply the analysis to the grammatical examples of *get* with prepositional complementation, but also to provide principled reasons why potentially problematic ungrammatical examples are, indeed, ungrammatical, but cannot be considered as worthy counter-examples to the analysis.

In sections 3.3.1 through 3.3.3, the two types of PP complements were probed, in the same way that adjectival *get* constructions were in the previous chapter, for the presence of Cause, Agents and implicit Agents, and it was shown that, once again, the true A-type variants pattern as non-agentive causatives, supporting the semantic denotation of *get* defended throughout the thesis.

In section 3.4 a deeper investigation of some of the features of LocPs and DirPs was conducted which revealed a potential misdiagnosis, namely that it can seem entirely plausible that all LocPs in the complement of *get* should be considered as covert DirPs. This possibility was, however, quickly discounted with due consideration of examples such as (172), which include a reading unarguably linked to a locational interpretation.

(172) The log got across the road
(The log bisects the road = LocP reading)

With this settled, in section 3.5 the analysis was applied to *get* with a LocP complement in terms of a property of locations in which it was suggested, perhaps somewhat unorthodoxly, that a location such as *in the house*, be seen as an atomic property of points *i*, in this case consisting of all the *i* that are located inside the relevant house.

Sections 3.6 and 3.7 were dedicated to resolving the issues surrounding *get* with DirPs, and it was proposed, somewhat analogously to the difference between standard adjectives and comparative adjectives, that DirPs be analysed as modificational heads that take LocPP complements and organise those sets of locations onto a path structure in various ways, including paths that show cumulative and non-cumulative ‘aspect’, and paths which give greater prominence to their startpoints, endpoints or routepoints. Unbounded DirPs were shown to be incompatible with *get* because they convey path structures with only one phase, leading to the problem of trying to combine a change-of-state denoting element with an element that imparts an obligatory no possible change-of-state meaning.

Finally, the problems associated with *at* and the apparent ungrammaticality of employing DirPPs in the complement of copula constructions were resolved in sections 3.8 and 3.9, respectively.

In the next chapter we will consider a problem that has been avoided thus far, namely the question of how to explain agentive A-type *get* constructions.

Chapter 4

Get and the reflexive anaphor

4.1 The Basic Data

Since near the beginning of chapter 2 I have pointed out and often referred to two distinct interpretations that exist for A-type *get* constructions. Where the ambiguity has been relevant to the discussion, I have called one variant a true A-type construction, and the other an agentive A-type construction. Implicitly, the former was so-called because its pronounced form corresponds more closely to its reading than the latter, which corresponds less precisely because it includes an extra θ -role without overtly including an extra argument. The two readings can be forced in varying ways. The true reading is forced either when (i), the subject is inanimate (inanimates resist agentive interpretations) or, by (ii), making sure the subject cannot be a controller of a purpose clause (PC) only plausibly controllable by an Agent:

- (1) True A-type *get* constructions
- a. The car got cold/totalled/into the road [Inanimate]
 - b. John_i got hidden to PRO_j hide him_i from the police [PC]

The agentive reading can be forced by either (i), making the subject a controller of a PC only plausibly controllable by an Agent, or (ii), employing an Agent-oriented adverb, or (iii), employing an instrumental phrase (the instruments in instrumental phrases may only be wielded by Agents, thereby subsuming their presence in the relevant utterances):

- (2) Agentive A-type *get* constructions
- a. John_i got hidden to PRO_i hide himself_i from the police [PC]
 - b. John intentionally got dry [Adverb]
 - c. John got onto the roof with a catapult [Instrument]

It has been assumed that agentive A-type *get* constructions may be reliably paraphrased with the addition of a reflexive anaphor in the Spec PredP position with Φ -features matching the sentential subject:

- (3) a. John got arrested = John got himself arrested
- b. John got dry = John got himself dry
- c. John got on(to) the roof = John got himself (on)to the roof

Given their similarity in meaning, the two variants may plausibly be related by positing that the former is also reflexive and therefore includes a null reflexive anaphor equivalent to the overt reflexive anaphor of the latter. For whatever reason, the anaphor may be dropped, so accordingly we will refer to this phenomenon as anaphoric object drop (henceforth AOD), and the verbs that allow AOD as AOD verbs. The phenomenon is repeated in other areas of the grammar. Levin (1993) classifies the set of *dress* type verbs which have in common that they allow for AOD:

Dress verbs: bathe, change, disrobe, dress, exercise, preen, primp, shave, shower, strip, undress, wash

- (4) Examples of AOD:
 - a. John dressed (himself)
 - b. Mary washed (herself)

The same alternation can also be seen with some of Levin's (1993) *load* and *push/pull* verbs:

Load* || *push/pull verbs: jam, cram, load, pack || jerk, pull, yank

- (5) Load verbs
We loaded (ourselves) onto the wagon
- (6) Push/pull verbs
I jerked (myself) free

Furthermore, I have also suggested (section 3.7) that the phenomenon is available for motion verbs with DirPP complements:

- (7) John walked (himself) into the river

I would also like to argue here that in the right context, transitivised unaccusatives also demonstrate AOD:

- (8) John froze (himself) stiff

We can show that *John* is an Agent here even without an overt reflexive using the familiar PC test we have seen elsewhere:

- (9) a. John_i froze himself_i stiff PRO_i to hide himself_i from motion detection
b. John_i froze stiff PRO_i to hide himself_i from motion detection

Although more difficult to construct suitable PC test contexts for, observationally it seems reasonable that other unaccusatives of the same kind (i.e., alternating unaccusatives) can also be agentive with a dropped reflexive:

- (10) Before my very eyes it was as if...
a. ...the magician evaporated (himself) to nothing
b. ...the magician broke (himself) in two
c. ...the magician melted (himself) to liquid

Additionally, there is arguably something equivalent going on in at least another two of the verb classes defined in Levin (1993), namely the sets of *wink* and *floss* verbs for which the alternation is restricted to a particular anaphoric (in a part-whole sense) body-part:

***Wink* || *floss* verbs:** blink, clap, nod, point, shrug, squint, wag, wave, wink ||
brush, floss, shave

- (11) Wink verbs
I winked (my eye)

- (12) Floss verbs
I flossed (my teeth)

We will turn now to a deeper inspection of this data to generate a better understanding of when anaphors may be dropped. We will begin, however, with a brief look at proxy readings as an insight into the properties of *self*anaphors. In what follows all exemplified A-type *get* constructions are to be understood in their agentive incarnation.

4.2 Probing the data

4.2.1 Introduction to proxy readings

It has not gone unnoticed in the literature that there is, in fact, a difference in the set of possible interpretations the two counterparts of each of the verbs listed above can have. All meanings available in the reflexive-less variant are available in the reflexive

variant, but the reflexive variant shows proxy readings (Jackendoff 1992) unavailable in the reflexive-less variant (Reuland and Winter 2009).

- (13) Context: Ringo washes a wax-work model of himself
- a. Ringo washed himself [✓ proxy]
 - b. Ringo washed [*proxy]

The same is true for *get* constructions:

- (14) a. John got himself stabbed [✓ proxy]
b. John got stabbed [*proxy]

Proxy readings: Those readings in which a close copy of the referent of a given argument is understood to stand proxy for that argument.

The standard example comes from Jackendoff (1992) in which Ringo Starr goes to a wax-work museum and sees a model of himself. Jackendoff points out that in such a context it is legitimate to say:

- (15) Ringo Starr saw himself

Under a proxy reading, *himself* in (15) refers not to the actual Ringo but to the wax model version of Ringo. The wax model is a copy of the real Ringo and sufficiently close in resemblance to stand in as a proxy for him. We will not look to define exactly how and in what ways a proxy is determined to be suitable in nature to act as such, but will just note that there must be certain restrictions. Thus, if John is carving a statue of himself, we may say *John is carving himself*. If, however, he is carving a statue of a book about himself, we cannot say *John is carving himself*. This is precisely because, for whatever reason, a book about John is not a close enough copy of John to stand as a suitable proxy for him. We will return later to proxy readings and what they can tell us about reflexive sentences.

4.2.2 Conditions on anaphoric object drop

On closer inspection, the AOD verbs in the previous section appear to split into two categories. The two categories are determined by the possibility of secondary result predication in the reflexive-less variant. What we will call the class of Inherent Reflexive AOD verbs are those AOD verbs that cannot successfully drop their anaphor in the context of a secondary result predicate. This class consists of the *dress*, *wink* and *floss* verbs:

- (16) a. John washed himself clean
b. *John washed clean

- (17) a. John winked his eye sore
 b. *John winked sore
- (18) a. John flossed his teeth raw
 b. *John flossed raw

On the other hand, what we will call the class of Non-inherent Reflexive AOD verbs are those verbs that can successfully drop their anaphor **only** in the context of a secondary result predicate¹. Thus, casting our eyes back over the relevant examples above, we should expect to see that they all include a secondary result predicate (underlined):

- (19) a. John got (himself) arrested
- (20) a. We loaded (ourselves) onto the wagon
 b. I jerked (myself) free
 c. John walked (himself) into the river
 d. John froze (himself) stiff

Condition 1: If not inherently reflexive, an AOD verb can only drop its anaphor in the context of a secondary result predicate.

More will need to be said, however, as many verbs other than the Inherent Reflexives cannot drop their anaphor in the presence of a secondary result predicate either:

- (21) a. John ate himself sick
 b. *John ate sick
- (22) a. John drank himself into a coma
 b. *John drank into a coma
- (23) a. John shouted himself hoarse
 b. *John shouted hoarse

The facts about what the mechanisms are that allow anaphoric drop are tricky and difficult to pinpoint. While it is possible to tease out some solid generalisations about secondary result predication in general, it is hard to come to an exact characterisation of the anaphoric drop phenomenon, although this is what I will try to do. For example, condition 2, which concerns secondary result predication, is fairly well accepted, but condition 3 again does not take us far enough with respect to a definitive description of exactly what circumstances license anaphoric object drop:

¹I will consider property denoting prepositional phrases as secondary result predicates along the lines of the analysis in chapter 3.

Condition 2: "...a resultative phrase may be predicated of the immediately postverbal NP, but may not be predicated of a subject or of an oblique complement."
(Levin and Rappaport Hovav 1995, p.34)

Condition 3: Anaphoric drop is only licensed if the reflexive object is θ -marked by the verb.

Logically, condition 2 should rule out all intransitives. However, unergatives sidestep ungrammaticality through the addition of a so-called fake reflexive (Levin and Rappaport Hovav 1995 from Simpson 1983) which allows the verb to conform to condition 2. The immediately post-verbal NP must be a reflexive, cannot be dropped and does not appear to be in a verbal θ -position:

- (24) a. John shouted himself hoarse
b. *John shouted Mary hoarse
c. *John shouted hoarse
d. *John shouted himself

Unaccusatives are said to satisfy condition 2 because their subjects are derived through movement from the immediately post-verbal NP position. They cannot take a nominal not in a verbal θ -position.

- (25) a. The water froze solid
b. *The water froze the lake solid

Condition 3 (in conjunction with condition 1) successfully accounts for the ungrammaticality of the reflexive-less examples in (21), (22) and (24), as well as ruling in all the reflexive-less variants in (20), but it cannot account for why a large number of transitive verbs are not AOD verbs.

Himself, in the *eat*, *drink* and *shout* cases, cannot be considered an argument of the verb as John is not being construed as literally eating, drinking or shouting himself, thus the reflexive is obligatory. As for (20), each of the reflexives is in a verbally θ -marked position:

- (26) a. We loaded the hay
b. I jerked Mary (in order to wake her up)
c. John walked the dog
d. John froze the ice

However, we are still left with non AOD transitive verbs for which we, as yet, have no explanation:

- (27) a. The cat licked himself clean
 b. *The cat licked clean
- (28) a. John tickled himself senseless
 b. *John tickled senseless

It looks like the relevant difference between the verbs in (27) and (28), in contrast to those in (20), is one of inherent resultativity. Specifically, in the above examples, *lick* and *clean* pick up resultativity through the use of a resultative SC. On the other hand, the verbs in (20) are resultative independently of the SC, suggesting the proviso we see in Condition 4:

- (29) a. *The cat licked himself in an hour
 b. *John tickled Mary in an hour
- (30) a. We loaded the hay in an hour
 b. I jerked Mary in a flash
 c. John walked the dog in an hour²
 d. John froze the ice in an hour

Condition 4: Anaphoric drop is only licensed if the verb is inherently resultative.

Conditions 3 and 4 also help to explain the otherwise strange judgements we find with motion verbs. Above we have only considered motion verbs with DirPP secondary result predicates, but they may also appear with an adjectival result predicate in which case the anaphor cannot be dropped:

- (31) a. John walked himself ragged
 b. *John walked ragged

In contrast to (20-c), Condition 3 suggests that the reflexive in (31) is not θ -marked by the verb, and in contrast to (30-c), Condition 4 suggests that *walk* is not inherently resultative. We therefore have two options, either (i), we write off the two conditions, or (ii), we posit that there are two verbs *walk*, one unergative and not resultative, and one transitive and inherently resultative³.

- (34) a. John walked
 b. John walked the dog

²We will look at the unergative forms of motion verbs like *walk* below, where it will be suggested that the class be split into two variants of which the transitive is inherently resultative.

³Possible counter-examples may be found with motion verbs like *jog* or *crawl* for which a transitive use is generally judged ungrammatical. This speaker, however, finds them acceptable

- (32) I jogged Mary (to the station)

- (33) I crawled the baby (into his playpen)

Intuitively, there is at least one difference between (34-a) and (34-b), namely that the walking is predicated of different entities. In the former, the Agent is the walker while in the latter, it is not even important that the Agent be able to walk:

(35) I walk the dog twice a day from my wheelchair.

Of course, if the same entity is referenced in both θ -positions, then it is essential that it be the walker as well as the one being walked, and I assume that it is simply pragmatically odd to express this without further qualification in the form of, for example, a secondary predicate. It is therefore not implausible that motion verbs come in two varieties, and that the unergative variant is unambiguously linked with the adjectival result predicate, while the transitive variant is unambiguously linked with the spatial result predicate.

In relation to *get*, Conditions 3 and 4, as they stand, do not even seem applicable. The function of the verbal element *get* is purely to add a causative dimension to the result phrase in its complement position, and therefore has no argument θ -marking properties. Seen in this way, the only way to save these conditions is to slightly loosen their restrictiveness:

Condition 3 (version 2): Anaphoric drop is only licensed if the reflexive object is θ -marked by the main predicate in its clausal domain.

Condition 4 (version 2): Anaphoric drop is only licensed if the main predicate is inherently resultative.

The propositional hub of the sentences in (20) revolves around the main verb, not the secondary result predicate. Ultimately they are sentences about loading, jerking, walking and freezing, not about being on a wagon, free, in a river or stiff. On the other hand, for the *get* constructions in (19), because of the lightness of *get*, the propositional hub of the sentences is centered on the denotation of the result phrase. For example, in *John got (himself) arrested*, the sentence is concerned with relating certain information concerning an arresting event. One of the bits of information happens to be that there was some cause, but it is not necessarily important what that cause was.

Taken in conjunction, Conditions 1, 3_{v.2} and 4_{v.2} explain the reflexive drop facts associated with *get*. I will not pursue an analysis of this, but before moving on it is worth pointing out that 1 and 3_{v.2} can be reduced to just one condition. For Condition 1 to hold we need only say that the anaphor must be a Holder argument of a small clause, i.e., appear in the Spec of PredP. Assuming θ -marking takes place under a Spec-Head configuration, Condition 3_{v.2} amounts to saying that the anaphor must also appear in a position θ -marked by the main predicate. For a *get* construction these two

positions coincide as the Spec of PredP. For other constructions, the second of these two positions is the object Theme position, Spec VP. Thus, for *get* constructions, we can provide the following über-condition:

Über-condition for *get*: Anaphoric drop is only licensed if the anaphor appears as a Holder argument and the main predicate is inherently resultative.

Furthermore, as all *get* constructions with anaphors will necessarily locate those anaphors low down in the structure (i.e., not in external argument position due to Condition A), and because all *get* constructions have a resultative interpretation that stems from the meaning of the main predicate, it follows that all *get* constructions should allow anaphoric drop, and this is indeed what we find⁴. For the other relevant verbs the condition needs to be stated as follows:

Über-condition for inherently resultative verbs: Anaphoric drop is only licensed if the anaphor appears as a Holder argument and raises to the Theme position of the main predicate.

We will now turn our attention towards formulating a novel theory of reflexivisation.

4.3 A look ahead and a look back

We will start this section by looking ahead to the analysis I will be positing, before looking back to some recent binding proposals.

4.3.1 The analysis in a nutshell

The analysis we will work towards justifying is as in the tree-structure in (38):

⁴The use of *all* here is misleading as it neglects to include *get* constructions such as those with complementiser phrases in their complement:

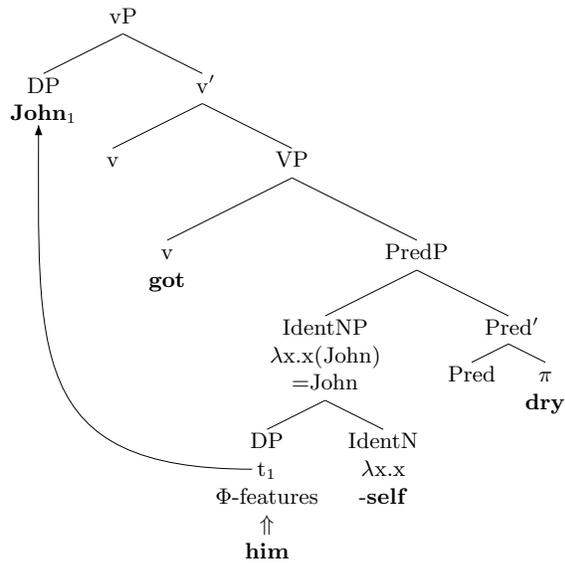
- (36) a. I get that you like her but why?
 b. *I get myself that you like her but why?

and Experiencer *get* constructions like the following (subscript Exp indicates that the argument is to be conveyed as an Experiencer):

- (37) a. The baby_{Exp} got herself covered in chocolate
 b. *The baby_{Exp} got covered in chocolate

However, the generalisation does hold for all the constructions considered in this thesis and some others.

(38) John got himself dry



The main observation to draw from this syntactic tree and keep in mind is that the anaphor is split into two components, one lexicalised as *self*, and the other as the antecedent which subsequently moves to the Spec vP position, leaving a trace behind lexicalised as an agreeing pronoun. The analysis, in particular the fact that the antecedent is base generated low down, borrows heavily from the analyses of Kayne (2002) and Zwart (2002). Therefore, before we set about looking for evidence to justify (38), we will take a brief look at both of these analyses as well as one other theory of pronouns, namely Kratzer (2009), the shortcomings of which support the analysis to be developed thereafter.

4.3.2 Pronominal binding

In the context of pronouns and their antecedents, Kayne (2002) proposes an alternative analysis for reflexive interpretations. The central idea is that the pronoun is base-generated with its antecedent in a ‘doubling’ constituent, such as $[_{DP} \text{John he}]$, from which the antecedent subsequently moves, for thematic (and case) reasons, to the subject position.

(39) thinks [John he] is smart \rightarrow John_i thinks [_{t_i} he] is smart

One immediate consequence of this proposal is that accidental coreference is effectively ruled out. A pronoun and its antecedent corefer precisely because they start out together, forming a constituent of their own. Where no coreference is intended, no doubling constituent enters the derivation. However, to stop over-generation (for

example, of a sentence such as (40)), certain conditions must be stated. These conditions follow from general restrictions in the Minimalist Program and are the following:

Condition1 (Kayne 2002, p.137, ex.11): Extraction of a phrase from within a doubling constituent like [*John he*] is limited to extraction of the Spec. (Based on Chomsky’s Phase Impenetrability Condition(2001) and previous prohibition of non-maximal phrase movement).

Condition2 (Kayne 2002, p.145): Unstressed pronouns must invariably move. (Based on Icelandic object shift and the obligatory movement of Romance clitics.)

So, to prevent the theory from potentially generating the ungrammatical (40), in which the pronoun, and not its antecedent, has moved to subject position, Kayne claims that *John* is in (or moved to from within the DP) the Spec position of the DP, and appeals to condition 1.

(40) *He_i thinks [John t_i] is smart

More needs to be said, however, to capture the general restriction in generating the reflexive readings of the examples in (41), which are, on the story so far, derivable in a similar fashion to (39):

- (41) a. cleans [John him] → *John_i cleans [t_i him]
 b. considers [John him] intelligent → *John_i considers [t_i him] intelligent
 c. thinks highly of [John him] → *John_i thinks highly of [t_i him]

To resolve this problem, Kayne appeals to Condition 2. Effectively, in the current context, this supposition forces the pronoun, and therefore, the whole doubling constituent (given that the pronoun is the head of the relevant phrase) to move. Where to exactly is not tackled beyond a stipulation that it be ‘above’ the subject θ -licensing position. This does the trick of counting out the examples in (41) while still counting in (39); the doubling constituent in the latter need only move as far as outside the embedded VP (e.g. to the Spec position of the embedded TP) from where *John* can still move up to the subject θ -position of the matrix predicate and be θ -marked. Crucially, however, in the case of the examples in (41) there is no embedded clause, and the doubling constituent therefore finds itself, after movement, too ‘high’ in the structure for *John* to subsequently move (‘downwards’⁵) into the subject θ -position (with the result that *John* remains without a θ -role, the subject θ -role is left unassigned and the derivation crashes).

The derivation, then, for *John thinks he is smart* looks as follows:

(42) John₂ thinks [_{TP} [t₂ he]₁ [_{VP} t₁ is smart]]

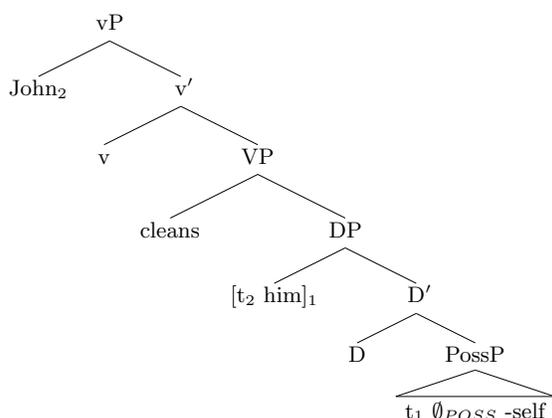
⁵A general restriction on rightward movement to a non-c-commanding position is assumed.

The examples in (41) can be rescued with the addition of *-self*:

- (43) a. John cleans himself
 b. John considers himself intelligent
 c. John thinks highly of himself

What is it then about *self* which allows these sentences to generate successfully? Kayne (op. cit) posits that the presence of *-self* permits a possessive-style DP structure in which the doubling constituent may move to a higher Spec position within the DP itself, fulfilling the requirement of the pronoun to move, while maintaining the necessity (for the sake of convergence) of the antecedent to remain ‘lower’ than the subject θ -position, (44):

- (44) John cleans himself



Kayne’s proposal, then, reduces both condition B and condition C effects to movement, eliminating said conditions as two of the fundamental elements of UG. It ceases to be relevant to express either that pronouns must be free in their local domain, or, that R-expressions must be free in general, if, where coreference is desired in a given interpretation, the pronoun/anaphor is merged with its antecedent, receiving coreference in that way, subsequently obligatorily moving under the constraints stated above.

4.3.3 Anaphoric binding

Following on from Kayne (2002), Zwart (2002) proposes a less strong version of the same theory, in which doubling constituents are responsible for locally bound anaphors only, with all other cases of coreference accidental (e.g. long distance binding).

A syntactic relation existing between one element and another is generally thought

to be possible under one of two structural conditions, namely *sisterhood* and *c-command*, represented in Zwart (2002) as below:

- (45) a. Sisterhood: α merges directly with β
 $[\alpha, \beta]$
 b. C-command: α merges with a constituent γ containing β
 $[\alpha[\gamma[\dots\beta\dots]]]$

Zwart's (following Kayne's 2002) proposal is that coreference is one type of syntactic relationship built on the stronger version, sisterhood. The doubling constituent is a representation of direct merger (sisterhood) of a (pronominal) variable referential element (henceforth *PRONOUN*) with an R-expression (its antecedent), resulting in a 'special' feature being acquired by the pronoun marking it as coreferential with the antecedent. It is strictly under these conditions only that coreferentiality may occur.

- (46) A *PRONOUN* α is coreferential with β iff α is merged with β
 (Zwart 2002, p.274 ex.18)

As Zwart shows, even when we apply Kayne's original proposal only to local anaphoric binding, we can account for condition B and condition C effects (as well as seven other properties of anaphor binding including (i), the restriction of binding to A-positions, (ii), the fact that antecedents are limited to a unique argument - i.e., there are no cases of split anaphoric relations, and (iii), the fact that anaphors are obligatorily bound). In the case of condition C, the merger of two R-expressions together will still not result in the two corefering, as neither is a variable referential element, and thus a sentence like (47) is ruled out:

- (47) *John_i likes John_i

In the case of condition B, examples such as those in (48) will also never occur. Recall that what is merged with its antecedent is a variable referential element, pronominal in nature but not a pronoun. When this kind of merge takes place, the *PRONOUN* is marked as being coreferential with its antecedent, and the system returns the anaphor *himself* at spell out.

- (48) *John_i loves him_i

A natural question to ask at this point is why Zwart only wants to include anaphoric binding? Why does he stop short of including pronoun binding as Kayne (2002) does in his proposal? By 'stopping short' in this way, Zwart loses an important result of Kayne's proposal, namely the elimination of accidental binding. However, as Zwart shows, Kayne's analysis cannot explain examples such as *John thinks that he is a*

genius. The problem here is that, for the antecedent to reach the subject position, which is an A-position, it has to pass through an \bar{A} -position, the Spec of CP. \bar{A} -to-A movement is disallowed (improper).

(49) $[_{TP} \text{John}_2 \text{ thinks } [_{CP} t_2 \text{ that } [_{TP} [t_2 \text{ he}]_1 [_{VP} t_1 \text{ is a genius}]]]]$

As such, Zwart (2002) loses the elimination of accidental coreference, but avoids having to explain cases of illegitimate movement. Kratzer (2009) manages to capture so-called accidental coreference data, but as we will see, there are problems for the reflexive anaphor data in particular, so I suggest a move back towards a Zwart (2002) style analysis restricted to *self* anaphor examples only, motivated by evidence for a complex view of these anaphors.

For Zwart, the term *himself* is simply a spell out of some pronominal-like variable referential element when that element's coreferentiality feature is satisfied by an antecedent merged as its sister. There is nothing complex about the anaphor, and nothing special about its *self* part. In what follows I will take a closer look at the anaphor in particular, analysing it as a complex element consisting of two components, a referential pronoun-type part (*my, him, her* etc), and a nominal *self* part. Furthermore, I will look at the roles both components play and in doing so, I will shift the focus of the analysis of anaphors towards an analysis of *self*, showing that anaphors are realised as a result of conditions on the use of *self* in English.

4.3.4 Binding through feature transmission

First and second person pronouns in the main case carry an indexical (referential) interpretation, but in certain constructions they permit of a bound variable reading. Under these readings they are termed "fake indexicals".

- (50) a. Only I remember my first appointment
Bound interpretation: Only I am an x such that x remembers x 's first appointment. (He doesn't remember his)
Indexical interpretation: Only I am an x such that x remembers **my** first appointment. (He doesn't remember mine)
- b. Only you remember your first appointment
Bound interpretation: Only you are an x such that x remembers x 's first appointment. (He doesn't remember his)
Indexical interpretation: Only you are an x such that x remembers **your** first appointment. (He doesn't remember yours)

Traditionally, this has been problematic from a semantic point of view as, unlike for third person pronouns, there is no obvious way to assign both a variable and an indexical reading for 1st and 2nd person pronouns.

- (51) For all variable assignments g admissible in a context c :
- a. $\llbracket I_5 \rrbracket^{g,c} = g(5)$ if $g(5)$ is the speaker in c , undefined otherwise
 - b. $\llbracket you_5 \rrbracket^{g,c} = g(5)$ if $g(5)$ is the addressee in c , undefined otherwise
 - c. $\llbracket he_5 \rrbracket^{g,c} = g(5)$ if $g(5)$ is a single male, undefined otherwise

The assumption is that the utterance context c constrains the admissible assignments of a given variable. For 3rd person pronouns this does not present a problem under either an indexical or a bound variable reading; c may either determine a fixed referent for 5, e.g. John, and all occurrences of 5 will thereafter pick out *John* as their referent with the result that he_5 will be a referential pronoun, or alternatively, c may not determine any referent at all for 5 and a bound variable interpretation will result.

For *I* and *you*, however, the problem is that in any given c there is intuitively just one speaker and one addressee, so c will always pick out those particular individuals (or plural individuals in the case of a plural 1st or 2nd person pronoun) as the respective referents for these pronouns. Crucially, this is what should never allow there to be a variable option. In other words, within an utterance context c , the participants (speakers and addressees) are pre-determined by their 1st and 2nd person roles in c and therefore referentially fixed. At the same time, c may have various different individuals playing the 3rd person role.

The fact that we do see instances of bound 1st and 2nd person pronouns has pushed some semanticists towards the idea that pronouns must be able to acquire the features that determine their surface forms either before (for referential pronouns) or after (for bound variable pronouns) semantic interpretation has taken place. It is this intuition that ultimately drives the minimal pronoun approach of Kratzer 2009 (K2009) (following on from Kratzer 1998).

A minimal pronoun (MP) enters a derivation with just an index feature (giving it the semantic type $\langle e \rangle$) which is interpreted at the semantic interface as a variable. In the PF branch of the derivation (beyond the ‘reach’ of the semantics module) MPs pick up Φ -features, that will ultimately determine how they are pronounced, through a process of Feature Transmission under Binding (to be defined). In contrast, a referential pronoun enters a derivation with all of its features already present and thus interpretable at the point of semantic interpretation. Referential and bound pronouns sound the same because the same features are involved in their make-up. Furthermore, each possible combination of features (constrained by the particular

semantics of each feature - see table (60)) triggers a vocabulary insertion rule (table (59)). Many times more than one combination can trigger the same insertion rule leading to systems in which homonyms may be commonplace, e.g. English *they* which spells out either [female], [male] or [thing] in the absence of [singular] (features are considered privative in K2009).

Traditionally, the antecedent DP has been invoked as the binder to an MP in need of Φ -features, but in K2009, it is assumed that little *v* is responsible for binding. This is because in data like the following from German, (52) and (53), we find the same nominal antecedents in both but only the former permits a bound variable reading (indicated by the smiley symbol \smile . The frowning symbol \frown indicates that no bound variable reading is possible:

- (52) Wir sind die einzigen, die t unseren Sohn
 1PL be.1/3PL the.PL only.ones who.PL $\boxed{1}$ PL.POSS.ACC son
 versorg-en
 take.care.of- $\boxed{1}$ /3PL
 ‘We are the only ones who are taking care of our son’ \smile
- (53) Wir sind die einzigen, die unser Sohn t
 1PL be.1/3PL the.PL only.ones who.PL $\boxed{1}$ PL.POSS.NOM son
 versorg-t
 take.care.of- $\boxed{3}$ SG
 ‘We are the only ones who our son is taking care of’ \frown

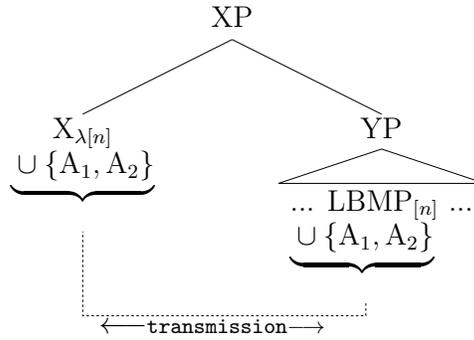
Binding from *v* has the desired effect of correctly ruling out the bound variable reading in the latter example, while correctly ruling in the bound variable reading in the former, because only in the former does the embedded *v* agree with the first person possessive (compare the boxed features). Binding from a nominal antecedent would incorrectly predict both (52) and (53) to be able to convey a bound variable reading - in both examples, *unser(en)* has an appropriate DP antecedent in the form of *wir*.

Feature transmission under binding is defined in K2009 as the following:

Feature transmission under Binding: The Φ -feature set of a locally bound pronoun unifies with the Φ -feature set of the head that hosts its binder

“Unifies” means that the feature sets of the two objects in the transmission “chain” will merge, both objects acquiring any additional features found on the other. Thus, we have the following kind of Feature Transmission operations under Binding:

- (54) The locally bound minimal pronoun (LBMP) has feature set A_1 . Head *X*, which hosts the LBMP’s binder, has feature set A_2



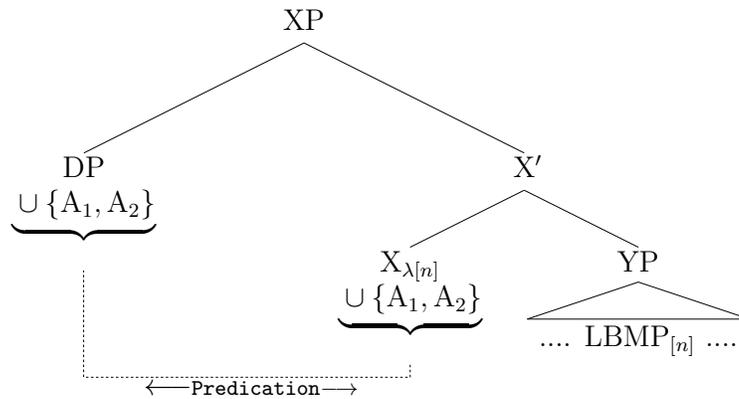
Feature Transmission under Binding is an operation that must occur after semantic interpretation. At least some of the features that the LBMP acquires from the head hosting its binder are interpretable at the semantics interface, but crucially, they must not be interpreted there or a kind of referential interpretation would be expected (given an appropriate index feature and assignment function). Thus, at the semantics interface the pronoun is still of a minimal form and interpreted as a variable bound by v .

When v hosts a binder, it acquires its features through Predication, a kind of spec-head agreement operation defined as follows:

Predication (spec-head agreement under Binding): When a DP occupies the specifier position of a head that carries a λ -operator, their Φ -feature sets unify

Thus, Predication produces the following kind of feature transmission operation:

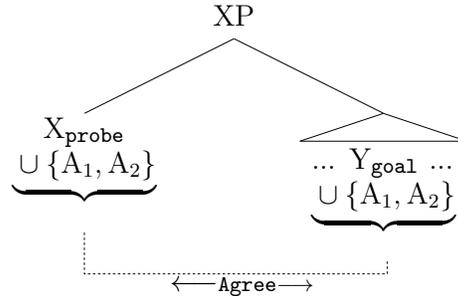
(55) DP has feature set A_1 . Head X has feature set A_2



Feature acquisition for functional heads not hosting binders is also required (e.g. between T and a DP in T's c-command domain) and is assumed to use the same kind of feature unification, namely transmission:

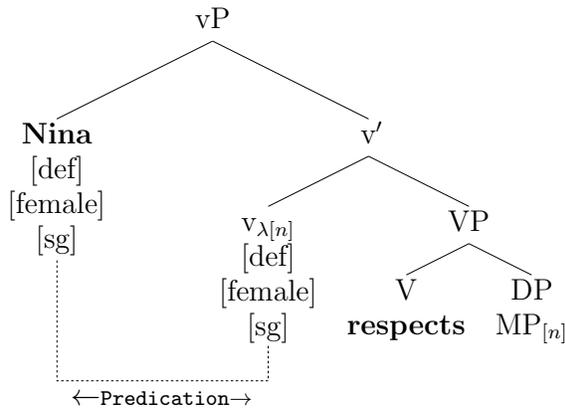
Agree: The Φ -feature set of an unindexed head α that is in need of Φ -features (the probe) unifies with that of an item β (the goal) if β is the closest element in α 's c-command domain that has the needed features

(56) Y, the goal, has feature set A_1 . Head X, the probe, has feature set A_2 .



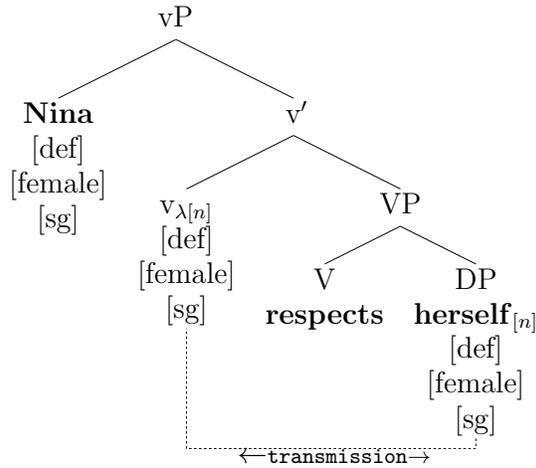
How, then, does the analysis work in practice? For *self*-anaphors, the story goes as follows. The head v hosts a λ operator which binds a minimal pronoun in a local configuration. When the specifier DP is merged, v acquires the features of that specifier via Predication, an operation that occurs before semantic interpretation:

(57) *Nina respects herself* before semantic interpretation



The pronoun, being minimal, is bound and will thus acquire the features of the head hosting its binder via Feature Transmission under Binding, in this case, the features of v .

(58) *Nina respects herself* after semantic interpretation



A nice consequence of this analysis is that there is no need to rule out sentences such as **Nina respects myself* as there is no way to build them in the first place. Given the ‘chain’ of feature unification posited, the only way to get a 1st person pronoun into object position is to start with a 1st person pronoun in the specifier of vP.

The exact shape of a pronoun will depend on two factors: firstly, on the features it possesses (e.g. *he* vs *she* for {[def],[male],[singular]} vs {[def],[female],[singular]} respectively, etc), and secondly, on its final position in the syntactic structure (e.g. {[def],[male],[singular]} is spelled out as *he* in subject position, *him* as a locally free object or a non-local object, *himself* as a locally bound object or *his* as a possessor subject).

The vocabulary insertion rules posited in K2009 for English personal pronouns are as follows:

(59) English personal pronoun insertion rules

| | | |
|---------------------|---|------|
| [1st] [singular] | → | I |
| [2nd] | → | you |
| [female] [singular] | → | she |
| [male] [singular] | → | he |
| [thing] [singular] | → | it |
| [1st] ([2nd]) | → | we |
| elsewhere | → | they |

And the compositional feature semantics are as shown below:

(60) Pronominal feature semantics (K2009)

| Pronominal features | Example | Semantic Type |
|----------------------|---|---------------|
| Index Feature | Numerals (2, 5, 7, etc.) | <e> |
| Descriptive feature | [male] = $\lambda x.x$ is \geq one male | <e,t> |
| Definiteness feature | [def] = $\lambda P.\sigma x P(x)$ | <<e,t>,<e>> |
| Participant feature | [1st] = The speaker(s) in c | <e> |
| Number feature | [Singular]= $\lambda x:x$ is an atom.x | <e,e> |
| Group feature | [group] = $\lambda x. x$'s group for c | <e,e> |
| Sum feature | [sum] = $\lambda x\lambda y. x \oplus y$ | <<e>,<e,e>> |

Other assumptions are that number and definiteness features have their own projections in the syntax (and are therefore always interpreted by the semantic component) and that during spellout, Halle's (1997) subset principle applies, i.e., "a vocabulary item can be inserted into a position if the item matches at least a subset of the features present in that position and there is no other vocabulary item that is a better match" (K2009, pp. 203-04)

Leaving out all but one further complication, these are the basic nuts and bolts of the analysis in K2009. The further complication I would like to highlight is one pointed out in Rullmann 2004. For examples such as the one in (61-a), which has a bound variable reading of the form 'you are the only person who has the property λx [x remembers the first appointment of x and me]', the pronoun *our* has no way of picking up its 1st person feature - the antecedent *you* has a 2nd person feature but no 1st person feature. The same problem but in reverse is true of (61-b) where *I* lacks a 2nd person feature to transmit to *our* (via *v*).

- (61) a. Only **you**_{[2nd]} remember **our**_{[1st][sum][2nd]} first appointment
 b. Only **I**_{[1st]} remember **our**_{[1st][sum][2nd]} first appointment

To solve this, Kratzer has to allow for the possibility that minimal pronouns may be born with more than just an index feature, namely that they may be born with a [sum] feature and a participant feature. For example (61-a), the pronoun *our* will be 'built' as follows. It must enter the derivation as $[_N\{\text{[sum][1st][n]}\}]$ and grow into $[_{Num}[_D[_N\{\text{[sum][1st][n]}\}]]]$ before semantic interpretation⁶. During spellout, the head of the Num projection acquires a [2nd] feature via Feature Transmission under Binding from its binder *v*, and the whole pronoun will look as follows: $[_{Num} [_2nd] [_D[_N\{\text{[sum][1st][n]}\}]]]$. By the subset principle, the resultant pronoun is expected to be *our*.

⁶Recall that features are privative so the lack of a [singular] feature heading the number projection implies plurality. There is no [def] feature as participant features are directly referential.

A further problem related to *self*-anaphors involves K2009's spellout rules for English personal pronouns (see table (59)). The relevant generalisation is that, whether singular or plural, [2nd] is spelled-out homomorphically. This is correct for all syntactic environments except one, namely for locally bound objects, i.e., for *self*-anaphors, where plurality is inflected on the *self* morpheme, *yourselves*_{pl} vs *yourself*_{sg}. We will consider this fact as the first piece of evidence that *self* anaphors should be considered as complex units.

Given these problems, the analysis in K2009 no longer appears tenable in a local binding context. Ideally, we would like to maintain K2009's analysis for long-distance binding, so we will work towards a novel theory of reflexivisation that will not only resolve the two problems noted above, but also allow us to factor in an explanation for the proxy reading data and partially unite occurrences of *self* across several of its distributions. We will begin by looking for more of this kind of evidence.

4.3.5 Back to proxy readings

As a brief reminder of the proxy data, consider the following examples⁸:

- (64) Context: Ringo sees a wax-work model of himself
 Ringo saw himself [✓ proxy]

Wash is an example of a so-called inherent reflexive which means that we can drop the *self*-anaphor and still maintain a reflexive reading. (65-a) and (65-b) are normally considered interpretationally identical, but from a proxy perspective, this is not so:

- (65) Context: Ringo washes a wax-work model of himself
 a. Ringo washed himself [✓ proxy]
 b. #Ringo washed [*proxy]

A first approximation of a generalisation to explain this might say:

Proxy Generalisation (version 1): Proxy readings are unavailable in a reflexive sentence without the presence of the *self*-anaphor

However, assuming a semantic unification of the occurrences of *self* in (66) and (67), there is evidence that this first version of the generalisation is incorrect. Consider the following examples:

⁸# signifies that the sentence is grammatical, but not on the intended reading, the intended reading here being a proxy reading.

- (66) Context: Ringo mutilates a wax-work model of himself
- a. Ringo mutilated himself [✓ proxy]
 - b. #Ringo self-mutilated [*proxy]
 - c. #Ringo is a self-mutilating troublemaker [*proxy]
 - d. #Ringo practises self-mutilation [*proxy]
- (67) #John's very self was in danger [*proxy]

In (66-b) to (66-d) respectively, *self* is attached to a verb, an adjective and a noun, while (67) demonstrates an occurrence of bare *self*. In each case no proxy reading is available. The most relevant example is (66-b), which is reflexive in meaning but will not admit of a proxy reading. We might therefore hypothesize the following amendment (in boldface):

Proxy Generalisation (version 2): Proxy readings are unavailable in a reflexive sentence without the presence of **the pronominal part of** the *self*-anaphor

Additional support comes from use of the impersonal pronoun *one*:

- (68) Context: TV game show competition in which each contestant must dress an identical statue copy of himself or herself. A member of the audience explains to his friend:
- a. You have to dress **yourself** in as many clothes as possible in just 5 minutes!
[✓ proxy]
 - b. One has to dress **himself** in as many clothes as possible in just 5 minutes!
[✓ proxy]
 - c. #You have to dress in as many clothes as possible in just 5 minutes!
[*proxy]
 - d. #One has to dress **oneself** in as many clothes as possible in just 5 minutes!
[?? proxy]
- (69) Context: Several people are carrying exact model replicas of themselves
- a. If you slipped on this icy path, you could break yourself into pieces
[✓ proxy]
 - b. #If one slipped on this icy path, one could break oneself into pieces [?? proxy]
 - c. #If one slipped on this icy path, he could break himself into pieces [✓ proxy]

Use of *oneself* to refer to each person's wax-work equivalent is very degraded. However the term *one* works with respect to referentiality in these kinds of contexts, the important point is that this is good evidence for the view that the anaphor is complex, each part bringing to the table its own bit(s) of semantics.

If accurate, version 2 of the Proxy Generalisation, and the evidence used to motivate it, assumes two things, firstly, that a *self* anaphor is complex, consisting of a nominal *self* element attached to a pronominal element, and secondly, that the *self* we see in (66-b) (and (66-c), (66-d) and (67)) is the same as the *self* we see in (66-a).

-Evidence for the assumption that *self* anaphors are complex:

Language internally, elsewhere in the grammar both of the proposed components occur independently of one another:

- (70) a. Mary likes **him**
 b. Mary likes **my** dog
 c. John's very **self** was in danger
 d. Too much **self**-admiration is not an admirable quality

In reflexive sentences, plural agreement is marked on both the pronominal element and the nominal *self* component, which would be unexpected if *self*-anaphors were one lexical unit:

- (71) a. **We** are dressing **our-selves**
 b. ***We** are dressing **our-self**
 c. ***We** are dressing **my-selves**

Related to the above, 2nd person plural forms are identical to 2nd person singular forms across all other pronoun types (we have already seen that this fact causes problems for K2009's analysis):

- (72) Differences are boxed:

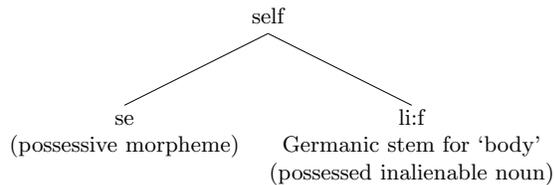
| Pronoun Type | Singular | Plural |
|--------------|----------|---|
| Subject | you | you |
| Object | you | you |
| Possessive | your | your |
| Reflexive | yourself | yoursel ves |

Cross-linguistically, Postma (1997) shows that in many languages, anaphors are formed of a possessed inalienable noun and a possessive pronoun:

- (73) saf-t **ra:s-i:** fe-l-mra:ya
 saw-1 **head-my** in-the-mirror
 ‘I saw myself in the mirror’
 (Postma 1997, p.295 ex.1b) (Morrocan Arabic)

English *self*-anaphors are plausibly similar in that, etymologically speaking, *self* is feasibly composed of the incorporation of a possessive morpheme *se* into the Germanic stem ‘body’, *li:f*, which then attaches to, in the main case (not true in the 3rd person), a possessive pronoun (Postma 1997) - e.g. **my-self**.

- (74) Possible etymology of *self* (Postma 1997):



-Evidence supporting the semantic unification of *self* across (at least some of) its various distributions:

Based on speaker judgments, the occurrences of *self* exemplified below have identical reflexivisation properties (they both reflexivise the verb by picking out the external argument as their value and fulfilling the internal argument role of the event described by the verb) and thus, availability of proxy readings aside, (75-a) and (75-b) mean the same thing, (76):

- (75) a. John mutilated himself
 b. John self-mutilated

- (76) John $\lambda x.[x$ mutilated $x]$

A plausible analysis for (75), which follows from this unification assumption, would be that the *self* part of the anaphor in (75-a) raises and attaches to the verb to derive (75-b). Evidence from the nominal domain supports this. As Grimshaw (1990) shows, nouns vary as to whether they are able to take arguments or not. There are therefore two noun types, those that can and those that cannot. She calls the former complex event nominals (CENs), and the latter, result nominals (RNs). CENs are obligatorily argument taking, (77), while some nominals are ambiguous between being CENs, in which case they must take an argument, and being RNs, in which case they may not take an argument, (78). Others are unambiguously RNs so are obligatorily non-argument taking, (79). An example of each follows with a table summarising this:

- (77) Complex event nominal (argument taking)
- a. *The mutilating
 - b. The mutilating of the patients
- (78) Ambiguous
- a. The mutilation [RN]
 - b. The mutilation of the patients took a long time [CEN]
- (79) Result nominal (non-argument taking)
- a. The mutant
 - b. *The mutant of the patients is otherwise charming
- (80) Noun type summary (Grimshaw 1990):

| Noun Type | Event-denoting | Argument-taking |
|-----------|----------------|-----------------|
| CEN | ✓ | Obligatory |
| RN | × | Prohibited |

If a given noun is both a count noun and in its singular form, modifiers like *constant* and *frequent* are able to force an event reading, an interpretation only available with CENs. In (81-a), *mutilation* is used as an RN. (81-b) demonstrates that, when used as an RN, no event reading is possible. The sentence can be ‘rescued’, however, if we add an argument - equivalent to using the CEN variant of *mutilation*, (81-c).

- (81) a. The mutilation is terrible! [RN]
- b. *The constant mutilation is terrible! [RN]
 - c. This constant mutilation of the patients is terrible! [CEN]

Crucially, we may also, ‘rescue’ (81-b) if we combine self with the nominal:

- (82) This constant self-mutilation is terrible!
- (83) This constant mutilation of himself is terrible!

In (82), it appears that no argument is taken by the nominal yet an event reading is possible. This parallels nicely with the verbal example in (75) and shows that, in principle, the proposed raising style analysis is worth pursuing.

The kind of raising being sanctioned here is atypical. Standardly, an argument moves for case and/or thematic reasons, and moves to an unoccupied argument position (A-position), (84-a). However, in the case of *self*, the target position is the occupied head of a VP, an \bar{A} -position, (84-b).

There are then two separate strategies for spellout. It can either be m-bound in-situ by a pronominal element whose only purpose is to provide an element for *self* to affix to (proxy readings become accessible as a side-effect) or, less-commonly, incorporate into the predicate in which case no pronominal is needed. Both these strategies are in evidence in (66), the relevant examples repeated here in (90):

- (90) a. Ringo mutilated himself
 b. Ringo self-mutilated

Notice that this leaves a problem for morphologically free (m-free) occurrences of *self* (see (67), repeated below in (91), (92) and (93)), namely that they violate the *self* generalisation:

- (91) John's very self was in danger
- (92) a. John's very self was in jeopardy
 b. The frequent mutilation of one's self is deplorable
 c. The self
- (93) a. So, he sat your good self down, and then what happened?
 b. I called out to your good self earlier, but you didn't hear me

The examples in (93) show m-free *self* possessed and in object position. Note that without modification of *self* by the adjective, the object looks like the anaphor *yourself* and, as expected, disjoint reference (i.e., where the subject and the object refer to different entities) rules both examples out as ungrammatical, (94).

- (94) a. *So, he sat yourself down, and then what happened?
 b. *I called out to yourself earlier, but you didn't hear me

Example (92-a) shows m-free *self* in subject position, with an r-expression as the possessor. As the complement of a complex event nominal (in the sense of Grimshaw 1990), (92-b), we see the same phenomenon of possession, and (92-c) is often used as a technical term in psychological and philosophical literature to refer to the concept of one's identity in the relevant sense. Leaving to one side the latter as a special case (for now - we will say something more about this use of *self* in section 4.6 below), we may generalise that when *self* is to be used unaffixed, it must be possessed and modified. There is something grammatically odd about the string "possessor 's possessee" when possessee = *self*, that is not odd for, say, "possessor 's possessee" when possessee = inalienable body-part or alienable concrete object:

- (95) *John's self was in danger

(96) John's foot was in danger

(97) John's table was smashed to pieces

I will return to a solution to this problem in section 4.6 once I have laid out in more detail the analysis I would like to propose.

In all other cases, *self* must be m-bound (examples (87) to (89)). Crucially, there is one more insight we can take from the examples in (87) to (98), namely that *self* must always corefer with an antecedent. While in English we are not too concerned about the 'owner' of a particular body-part like an arm or a hand, it is important to establish who a particular *self* is.

- (98) a. John mutilated the arms
b. The hands are waving at me

In the cases of morphologically free *self*, it is with the possessor that *self* corefers. For those cases where *self* is obligatorily affixed, it is the subject which corefers with *self*.

In summary, there are essentially five problems here that are in need of an explanation. First, how can we explain the proxy generalisation? Second, if reflexive anaphors are complex, what are they made-up of? Third, what kind of mechanism is the language using to ensure that *self* always corefers with some antecedent? Fourth, why is m-free *self* obligatorily modified? Finally fifth, why is *self* obligatorily possessed when not affixed, and morphologically bound elsewhere?

| <u>Self</u> | | <u>Role</u> |
|-----------------------|---|-------------------------|
| Morphologically Free | → | Possessed |
| Morphologically Bound | → | Anaphoric and elsewhere |

In the next section I will set out the analysis and show that with it, we are able to resolve all five of these problems.

4.4 The analysis

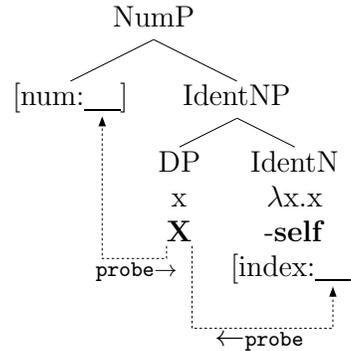
4.4.1 Identity - reflexivisation without binding

I will claim that *self* is the phonological spellout of an NP projection headed by a 'special' kind of N which I will call IdentN. IdentN is born with a small set of unvalued Φ -features - a number feature and an index feature - each needing to be locally valued under an agree relationship. IdentN, I will claim, is the identity function $\lambda x.x$, (99), so by its very semantics, requires a DP sister to saturate its open argument. This

DP sister also serves as an appropriate goal for IdentN’s features to probe and gain a value, (100)⁹.

(99) $[[\text{IdentN}]] = \text{-self} = \lambda x.x$

(100) *X-Self*



(101) If Spec IdentNP is filled with X_{DP} , then $[[\text{IdentNP}]] = [[X]]$.

Example (101) states that in an IdentN Phrase, the semantic value of IdentNP is the same as the semantic value of the element in its specifier. In other words, merging for example, *John* with *IdentN* returns *John* as the value of IdentNP. In English, then, IdentN (*self*), and not the whole complex ‘pronoun’-*self*, is the reflexive element, and it is locally ‘bound’ syntactically through an Agree relationship and semantically through an identity relationship. It is important that the features inherited by *self* are inherited under an Agree relationship, rather than through feature transmission (FT) via a local *v* head as proposed in Kratzer (2009), because *self* always agrees with its antecedent in person, a fact not necessarily true for binding under FT:

(102) Only *I* mentioned *my/our* audiovisual capabilities

(103) Only *I* mentioned *myself*/**ourselves*

The DP merged with IdentN will subsequently move to a higher position in the sentential structure passing through the spec of vP where it picks up its Agent θ -role, and reflexivity is born; IdentN provides a way for the grammar to mark coreference between two elements across a single clause with intervening verbal structure, avoiding condition B effects¹⁰.

⁹We will assume that at spellout, after moving to morphologically bind with the pronoun, the complex [pronoun-self] will need to move again to Num where in the presence of a plural feature it will lexicalise as pronoun-selves, and pronoun-self otherwise. The whole complex is of type $\langle e \rangle$ so we will assume it is definite.

¹⁰As we will see, under this analysis, Binding Theory is actually obviated - sentences that violate Conditions B and C are not generable, and Condition A is no longer required as a stipulation. In truth, then, IdentN does not avoid condition B, but rather, its existence cancels the need for a Binding Theory in general.

In summary, IdentN enters the derivation highly underspecified, gaining index and number under a sisterhood relationship with what will become its antecedent in the linguistic discourse. The lack of a valued number feature is important as *self* is marked for number depending on the number of its discourse antecedent. Valuation of the index feature by its sister syntactically marks it as referential to the same individual(s) as its valuer. The fact that *self* enters the derivation with an unvalued index feature makes *self* a bit like a bound variable pronoun in that it starts as a kind of minimal nominal element. It does, however, carry certain semantic encyclopedic knowledge that marks it out as non-pronominal.

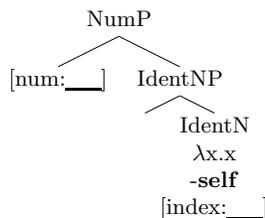
Given what we have so far, we can immediately explain why a sequence such as *X-self* (e.g. *Johnself*, where *John* has been merged with IdentN) is not attested. Firstly, if the reason, R, that the grammar contains a morpheme such as *self* is to provide coreference between it and its antecedent across intervening structure, then R is self-defeating whenever the antecedent remains in-situ. Secondly, assuming, as we are, that *self* is the spellout of IdentN, then the value of *self* is identical to the value of its antecedent, and a sequence such as *Johnself* is semantically equivalent to referring to *John* twice, an unnecessary and uneconomic strategy, except in those cases where reference to the same entity in different argument positions is desired. In other words, *John* would be preferred to *Johnself* in all cases where no intervening structure is involved.

To demonstrate how the analysis works, in the following section I will go through a derivation for a simple anaphoric utterance, before taking a look back at problems 1 - 5 to see how, and to what extent, they are resolved by the analysis. Following that, I will show to what extent the analysis may be extended to cases of possessed, m-free *self*, and finally how it plays out in a *get* construction.

4.4.2 Anaphoric *self* - e.g. John saw himself

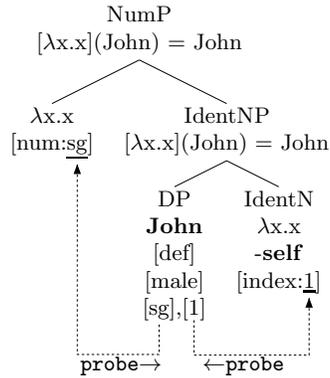
IdentN enters the derivation looking for an antecedent of type <e> to saturate its argument position, and value its features (104).

(104) IdentN enters the derivation



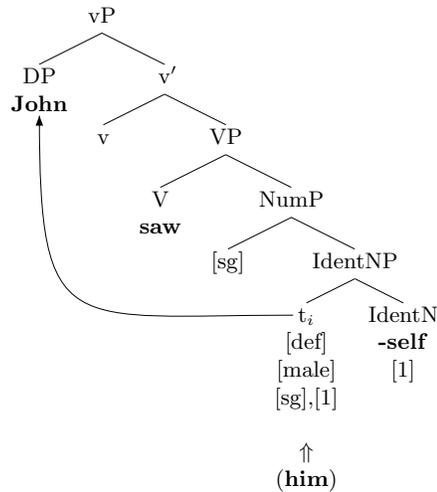
The relevant DP merges with IdentN, saturating its open argument, semantically valuing IdentNP, (105). In the syntax, IdentN probes the DP goal and an agree relationship is established between the two elements. Coreference holds between the spellout of IdentN (*self*) and the argument in its specifier.

(105) Merger of IdentN with its antecedent *John*



Subsequently, V, v and T are merged in the normal way and the antecedent is attracted up to the spec TP position via Spec vP where it picks up its agentive role in the sentence, (106) (T has been omitted below for space reasons). Move of the antecedent is required because *-self*, which remains low down (only maximally moving as far as Num), takes the verb-internal θ -role and accusative Case both assigned by *see*. The result is the valuation of the item that both *self* and *John* refer to (i.e., John) as having two roles in the sentence, one as Theme (Undergoer, Patient) and the other as Agent.

(106) Antecedent moves to sentential subject position. *John saw (him)self*



On the story so far the pronominal element of the anaphor is still missing. How therefore can we analyse the presence of the pronoun? Its role appears to be two-fold. Firstly, it functions as an affixee for *self*, and secondly, as we saw above in the passage on proxy readings, it can have semantic import, namely that its presence allows access to those particular readings. However, when no proxy reading is intended, the pronoun has no real semantic relevance. Given the classic Y-model of grammar, in which only the syntactic component (and crucially, not the phonological component) may feed the semantics, we must assume that the pronoun is generated in the syntax when a proxy interpretation is intended, but not necessarily so elsewhere. In other words, elsewhere the pronoun may be just the result of some dumb phonological process there to provide *self* with something to affix to. This is what is represented in the above tree structure. Assuming that the copy of *John* ‘left behind’ remains featurally contentful, we may posit that the requirement for *self* to affix to something forces spellout of those features with an appropriate vocabulary item, namely in this case, the [male], [singular] pronoun.

Analysed like this, reflexivisation is strictly dependent on the presence of IdentN in the derivation and achieved through Move and Agree, not binding¹¹. English *self* obviates the need for a binding theory as formulated in Chomsky (1981) and Chomsky (1986). Coreferentiality is, crucially, dependent on the merger of a DP antecedent with IdentN in a sisterhood relationship, and so the sequences *John_i saw him_i* (condition B violation) and *John_i saw John_i* (condition C violation) are not generable - neither contain IdentN. Condition A is redundant as it no longer needs to be stipulated. The empirical data falls out naturally from the system - it is not the case that anaphors are obligatorily bound in their c-commanding domain, but rather, that IdentN needs an antecedent in order to acquire a semantic value at the phrase level and have its features valued in an agree relationship. This antecedent moves up through the structure to the matrix subject position, acquiring an agentive role on the way. It is merge (as the sister of IdentN) followed by movement that gives the impression of binding.

‘Accidental’ coreference, as found in (107) where *he* refers to the same entity as *John*, is explained through the Kratzerian theory of FT under binding (Kratzer 2009), briefly reported on earlier.

(107) John_i said that he_i saw himself_i in the mirror

A syntactosemantic analysis will be needed for those times when a proxy interpretation is intended because in these cases the pronominal part of the anaphor con-

¹¹However, some kind of binding is still required for cases of cross clausal coreference such as *John_i said that he_i saw himself_i in the mirror*

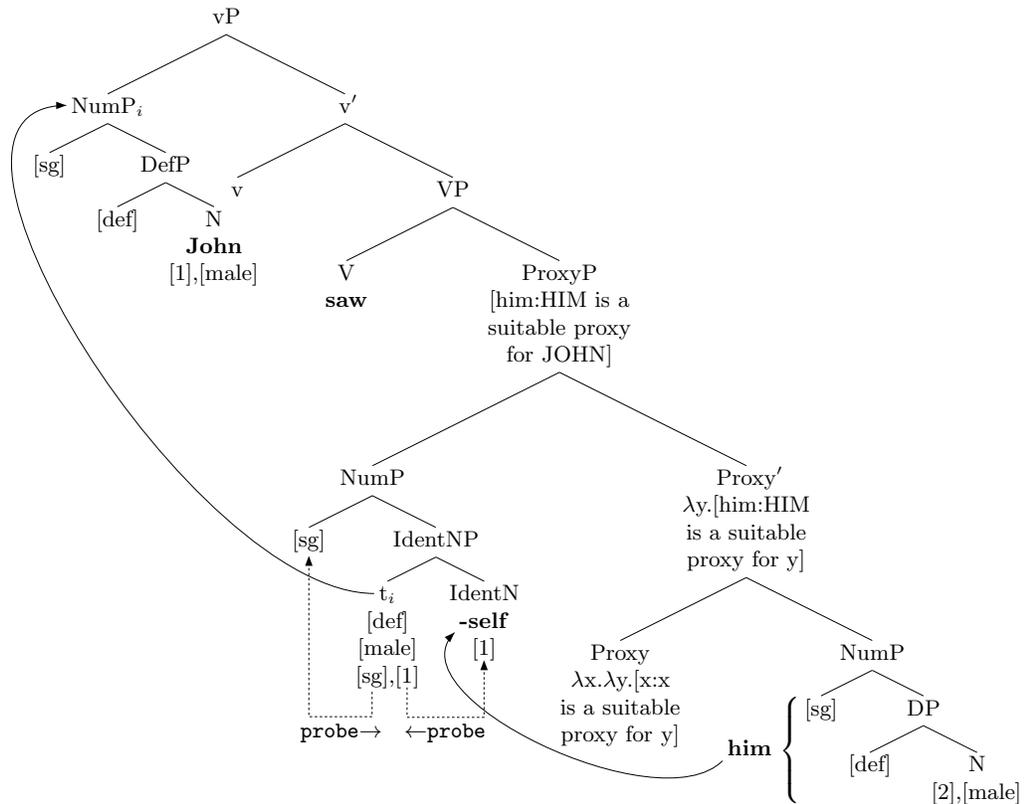
tributes to the overall semantics. The difficulty is that under a proxy interpretation, the referential status of the anaphor as a whole becomes less clear. Anaphors, unlike pronouns, are “referentially defective nominal elements” (Reuland 2010, p.15), and it follows that they only have bound variable interpretations (Büring 2005). However, in the proxy cases being looked at here, the referent of (at least the pronominal part of) the *self* anaphor is disjoint from the referent of the antecedent, the former being a proxy of the latter. This gives proxy interpretations linked to reflexive pronouns a strange position in the grammar in that the anaphoric element is both coreferential with the antecedent, **and** referential to some other salient individual (with the restriction that that other salient individual be a close copy of the antecedent). On some level, then, the anaphor must gain referentiality of its own while maintaining a certain joint reference with its antecedent so as to felicitously license the use of *self* in the first place. This much is clear or else we would just as well expect to get the intended proxy reading out from (108):

(108) John_i saw him_i

Remembering that it is, strictly speaking, the presence of the pronoun, and not *self*, that is important for accessing these types of meanings, one possible way to implement a syntactosemantic analysis is to assume a functional projection, call it Proxy, of type $\langle e, \langle e, e \rangle \rangle$, a kind of transitive functional element which relates an individual x to an individual y , returning x as a value just in case x is a suitable proxy for y , (109). Then the pronominal part of the anaphor can be born fully referential, referring directly to the proxy of the subject, and also provide a suitable affixee for *self*. Structurally we have the following:

(109) Proxy = $\lambda x. \lambda y. [x: x \text{ is a suitable proxy for } y]$

(110) John saw himself_{pxy}



An analysis along these lines is certainly not problem free. Specifically, one difficulty is that the number of arguments needing case and a θ -role increases by one, with no apparent matching increase in case or θ -role assigners. The θ -role issue may not be too difficult to resolve if we assume (more or less as we do in (109)) that the function of Proxy is to denote a thematic relation that holds between the argument y in its specifier and the argument x in its complement just in case x is a suitable proxy for y (however that is determined). We might therefore abbreviate (109) as (111):

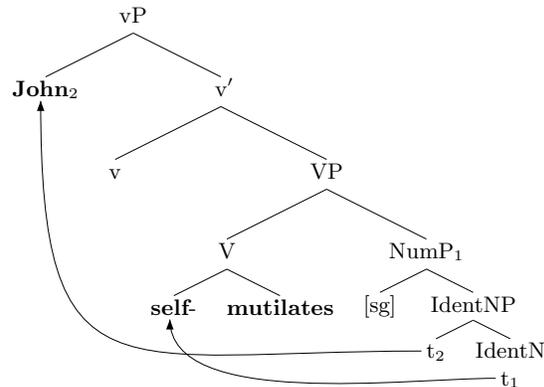
(111) Proxy = $\lambda x.\lambda y.[x: \text{proxy}(y,x)]$

The Case assignment problem remains, however, with no necessarily straightforward solution. One potential option available is that the verb assign Case in the normal way to ProxyP (which is, after all, of type $\langle e \rangle$, the type of individuals), but this would require a theory of how Case can filter down into lower structure to mark two separate objects without marking the antecedent, which would in all likelihood end up being quite stipulatory. A second option could be to assume that Proxy can assign case. Again, however, this is pure stipulation. In a third option, we might posit that the movement of *him* to *-self* may allow the case feature to be shared between the

two. However, probably the best option to pursue would involve appeal to possessive structure as this provides a natural way to sneak in an extra Case assigner. A different syntactic formulation would of course be needed. We will pursue this no more as it is not strictly crucial within the context of this thesis.

The requirement for *self* to be morphologically bound may sometimes be resolved in another way, namely when *self* moves to the verb, as in the utterance *John₂ [t₂ self]₁-mutilates t₁*:

(112) John self-mutilates



John is both mutilating and being mutilated, so starts low in the structure to value IdentN. No pronoun need be overtly realised as *self* is able to move and affix to V (or v) to fulfill its requirement to be morphologically bound. The antecedent moves to the matrix subject position again passing through spec vP where it picks up an agentive role in the sentence.

Although *self* nominalisations are quite common, this option is, admittedly, quite rare. It is, however, quite revealing that we are all able to intuitively guess what *self-V* might mean even if the particular *self-V* we are considering is not in general use.

- (113) a. Self-admiration
 b. John admires himself
 c. *John self-admires

- (114) a. John kicked himself
 b. *John self-kicked

There is more to be said here, particularly about IdentN with dominating possessive structure, but for now, as an intermediate summary, I would like to revisit what we labelled as problems 1 to 3 above, to show how they have been resolved.

4.5 Intermediate summary

It will be advantageous to look at these problems outside of their numerical order, so we will begin with problem 2, and then look at problem 3 before finally considering problem 1.

4.5.1 Problem 2 concerning the make-up of a *self* anaphor

Having gathered relevant evidence to demonstrate that it is, at least in principle, plausible to analyse a *self* anaphor as complex, we formally split it in two. The two components are a *self* part, which enters the derivation as an identity function looking for an individual to both value its index and number features and semantically identify with, and a pronominal part, which spells out the Φ features of the moved antecedent in the best way it can, presumably as a non-referential item to which *self* can attach to satisfy its requirement to be m-bound.

4.5.2 Problem 3 concerning *self* and coreferentiality

Problem 3 asked what kind of mechanism the language uses to ensure that the reflexive anaphor corefers to some object also picked out by its antecedent. The solution was to posit that *-self* merges with its antecedent, which thereby formally identifies with *self*, valuing its features (including an index feature), which ensures that both the antecedent and *self* refer to the same individual no matter where in the structure they are spelled-out.

4.5.3 Problem 1 concerning the Proxy Generalisation

Problem 1 was simply, how does the analysis resolve the Proxy Generalisation?

Proxy Generalisation (version 2): Proxy readings are unavailable in a reflexive sentence without the presence of **the pronominal part of the *self*-anaphor**.

Where proxy interpretations are intended, the analysis deals with the fact that the pronominal part of the anaphor is semantically referential to an individual other than the antecedent of *self*. As this will need to feed into the semantic component, we tentatively posited a possible syntactosemantic solution in which the verb takes a 2-place functional projection I called Proxy. This takes in a referential pronoun x and an individual y , and returns x iff x is a suitable proxy for y . x can then move to m-bind *self*. As pointed out, a potential sticking point revolves around the assignment of the verb's case and θ -role. The former was resolved by positing that the function of Proxy is to assign a Proxy θ -role to its complement. We suggested that one way out for the

Case problem might be to claim that Proxy can assign a kind of Proxy case to its complement, and another might be that movement of the referential pronoun to *self* allowed it to share Case with *self*. A third solution was to posit that as ProxyP is of type <e>, the type of individuals, perhaps structural Case may be assigned directly to it. However, this lead to the problem that without some theory of how, and under what conditions, Case and thematic roles may percolate down into lower structure to value *self* and the referential pronoun, without valuing the antecedent, the feasibility of such a solution is indeterminable. The most likely solution was reasoned to involve an appeal to possessive structure but it was not fleshed out in any detail. In summary the main benefit we gain from consideration of proxy readings is the support it lends to the complex anaphor hypothesis.

We will now return to the analysis in order to extend it to cases of possessed m-free *self* and provide answers to problems 4 and 5.

4.6 IdentN and Possession

Problem 4 asks why m-free *self* must be obligatorily modified. Accepting that *self* is the spellout of an identity function, we might wonder what the significance of the modificational adjective is? My intuition is that the adjective is necessary in order to break the identity relationship that otherwise holds between *self*, as the embodiment of IdentNP, and its antecedent, by doing what it is precisely invoked to do, that is, modify the NP. In set-theoretic terms, before modification, *John* and IdentN refer to the same set of objects. After modification, the set of objects denoted by IdentN is reduced to those which are also in the denotation of the adjective. Once identity is broken, *self* is coerced into something like a body-part reading. Body-parts share a part-whole relationship with their owner, the body-part being an inalienable sub-part of the whole represented by the owner. *Self*, being the identity function, shares a kind of ‘whole-hood’ relationship with its antecedent. *John* cannot own or possess his *self* as he would his arm, but rather, *John* is his *self* in a way that he is not, say, his arm. Thus, **John’s self* is ungrammatical. However, with the string *John’s* ‘modified’ *self*, *self*, being modified, now no longer shares its identity with *John*, and the string is grammatical. *Self* is re-analysed as a kind of body-part, the maximal body-part, and the requirement for m-binding is relaxed.

This reanalysis of *self* is supported in the following paradigm. In subject position, even when possessed by a pronoun in the second person singular, morphologically free *self* forces third person singular agreement morphology on the verb, (115-a) - (115-c), just as a possessed body-part would, (115-d):

- (115) a. How **are** you today?
 b. *How **are** your good self today?
 c. How **is** your good self today?
 d. How **is** your arm today?

Furthermore, *self* is now, like other referential items, free to take on a proxy interpretation (Reuland and Winter 2009), (116).

- (116) a. **Possessed body-parts**
 John_i washed his_i hands [✓ Proxy]
 (John washed the hands of a statue of himself)
- b. **R-expressions**
 John broke Mary in half [✓ Proxy]
 (John dropped a statue of Mary which broke in half)
- c. **Concrete nouns**
 Look at the clouds [✓ Proxy]
 (Looking at clouds in a painting)
- d. **Possessed maximal body-part?**
 John is speaking to his good self [✓ Proxy]
 (John has a split personality and is currently conversing with his good side)

This just leaves problem five, namely why is *self* obligatorily possessed when not affixed, and morphologically bound elsewhere? As already highlighted earlier, it seems important in English that a particular *self* be identified with an antecedent in a way not always so strictly important to any other category of nominal, including body-part nouns. The analysis here is sensitive to this distinction, enshrining it, as it were, in the semantics of *self*. This obligatory identification with another entity, added to the m-binding requirements of *self*, is reminiscent of obligatory possession data.

The World Atlas of Language Structures (WALS¹².) categorises 43 languages in its 244 strong language sample (almost one in every six) as demonstrating obligatory possession (OP). English is, of course, not one of them. However, the phenomenon of identity we have suggested as applicable to *self* demonstrates something at least similar to OP.

According to WALS, OP nouns are found “only in languages where possession is head-marked in the form of affixal morphology”, and their defining characteristic is that they cannot stand alone, i.e., without the affixal morphology. In present

¹²Found online at <http://wals.info/>.

terminology, they are obligatorily m-bound and never occur m-free. It continues, “other languages have derivational processes that turn obligatorily possessed nouns (or some of them) into nouns that need not be possessed, which we will call optionally possessed nouns. [...] Commonly for derivationally produced optional possessibility [...] the secondary free noun can then itself be inflected for possession, producing a semantic difference that is sometimes described in the literature as an opposition of “alienable” to “inalienable” possession.” Additionally, OP nouns are most commonly found to be body-part nouns. Some of the available WALS data is shown in table (117) for Acoma, a language spoken in the US state of New Mexico and one of two members of the Keresen family of languages:

(117) Acoma data (Miller 1965)

| | | |
|----------------------------------|-----------|---|
| Bound stem | -jaza | ‘horn’ |
| Possessed | záça | ‘his horn’
(e.g. a stag’s own horn) |
| Derived
m-free noun | háçani | ‘horn’, ‘a horn’ |
| Possessed
m-free noun | k’aháçani | ‘his horn’
(e.g. a horn belonging to a person) |

My proposal, therefore, is that English *self* is an example of an OP noun albeit with a few differences to account for the impoverished inflectional nature of English. *Self* is conceptualised as forming a kind of ‘wholehood’ relationship with its identifier. It is therefore not an inalienable possessee as such, but more like an inalienable identifiee. English does not formally mark identification, but like possession of the possessed noun stems in Acoma, identification forces *-self* to have an m-binding requirement to be m-bound, producing *myself* or *self-mutilate*. Derived m-free *self* is what we see being used in psychological and philosophical literature to refer to the conception of one’s identity in the relevant sense. Possibly, it is derived in the sense that it surfaces as the fully fledged r-expression *the self*. Finally, possessed m-free *self* is found in constructions such as *John’s very self* (an analysis of which we will turn to next) in which a modifier must be employed, as discussed, to break the inalienable identity relationship (presumably, in an analogous fashion, one of the functions of the inflectional morphology in Acoma must be to, in some way, break the inalienable possession relation that otherwise holds). The crucial difference here between English and the Acoma example is that the breaking of identity results in inalienable possession, not alienable possession. The parallels are summarised in table (118).

(118) ‘-self’

| | |
|------------------------------|--|
| Bound stem | -self |
| Identified | pronoun-self (myself)
or self-V (self-mutilate) |
| Derived m-free noun | the self |
| Possessed m-free noun | X’s modifier self
(e.g. John’s very self) |

In Acoma, the m-free noun is derived from the m-bound stem and can then itself be inflected for possession again:

(119) m-bound stem → m-free noun → possessed m-free noun

In our analysis of possessed m-free *self*, we will diverge from this theory of how the Acoma nouns derive from one another instead positing the following order:

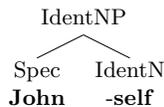
(120) m-bound stem → possessed m-free noun

The analysis developed in section 4.4 for IdentN, works well for possessed, morphologically free *self* too. We will look at two types of examples, those in which the whole possessive DP is found in subject position *John’s very self is in danger*, and those in which only the antecedent appears in subject position *John sat his good self down*.

4.6.1 Possessed *self* in subject position - e.g. John’s very self (is in danger)

The derivation for an utterance like *John’s very self* begins, as before, with anaphoric *self*. IdentN enters the derivation subsequently merging with an antecedent which must later move up to a higher position in the structure (recall that IdentN is present only to provide coreference across intervening structure).

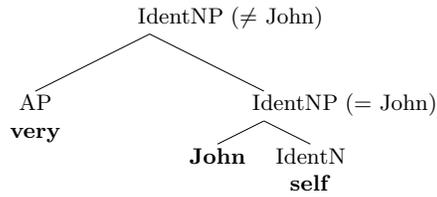
(121) *John* merges with IdentN¹³



At this point there exists an identity relationship between *self* and the antecedent *John* which must be broken before possessive structure can be merged. This is achieved through adjectival modification of IdentNP:

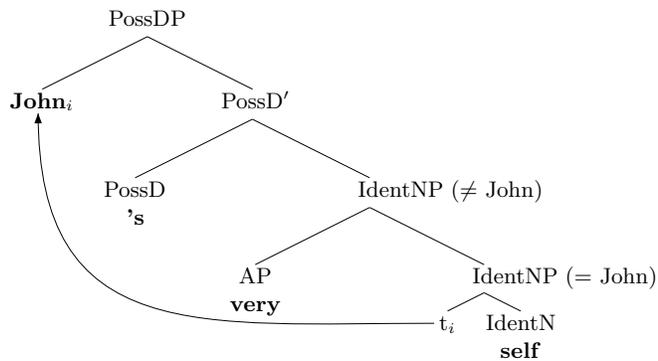
¹³We will ignore NumP from now on and assume its presence. Nothing beyond valuation of the feature [NUM] hinges on this.

(122) Adjectival modifier merged



In the next stage of the derivation, possessive structure is merged in the form of a Possessive DP and the antecedent is attracted to its specifier position yielding the sequence *John's very self*:

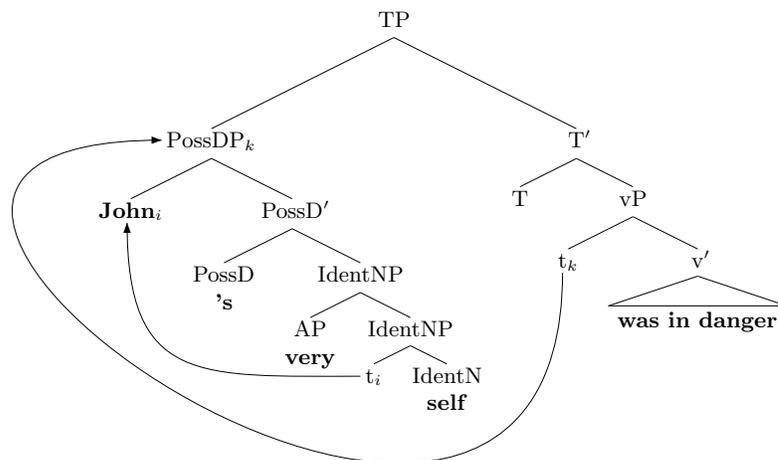
(123) Possessive structure is merged and the antecedent moves to the Spec PossDP position



With the identity relation effectively broken, *self* functions as a kind of inalienably possessed body-part and no longer requires morphological binding. Thus, no pronoun is licensed and IdentNP is instead dominated by Possessive DP structure.

The complete structure for the whole sentence *John's very self was in danger* looks as follows, with the subject moving from Spec vP to Spec TP:

(124)



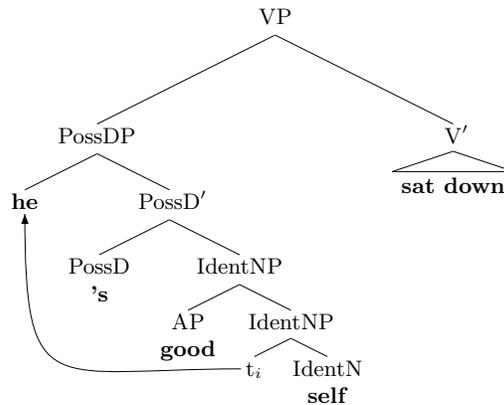
4.6.2 Possessed *self* in object position - e.g. John sat his good self down

Recall that for these types of constructions there is no coreference constraint holding between the matrix subject and IdentN.

- (125) Disjoint reference allowed in possessive contexts:
- a. So, he sat your good self down, and then what happened?
 - b. I called out to your good self earlier, but you didn't hear me

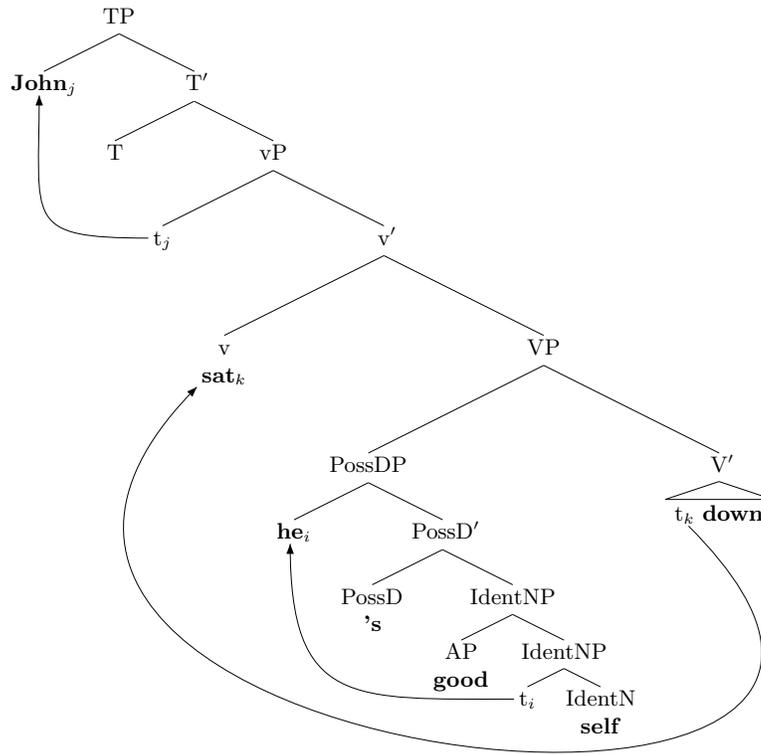
In *John sat his good self down*, the constraint holds only, and as expected, between *his* and *self*. Therefore, we will assume that one or other of the binding strategies outlined in K2009 is able to deal with the binding that must occur between the subject *John* and the possessor/possessee denoted by the object. A derivation along the lines of what we saw above in 4.6.1 for *John's very self* gets us as far as the object *his good self* which we can embed in the verbal object position.

- (126) his good self sat down



The rest of the functional structure can then be merged in the normal way:

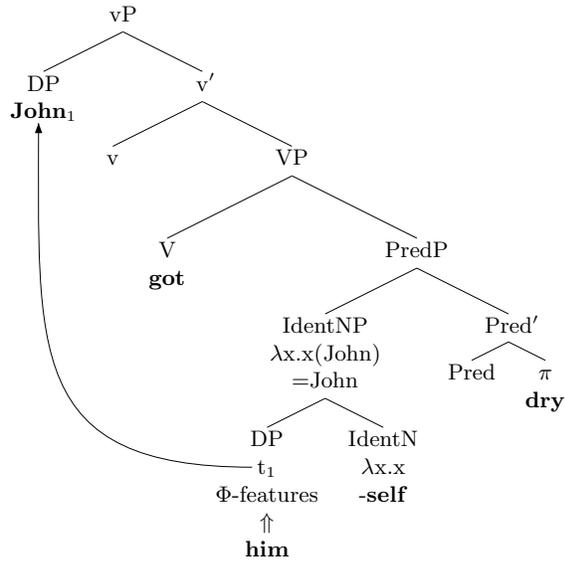
(127) John sat his good self down



4.7 Returning to *get*

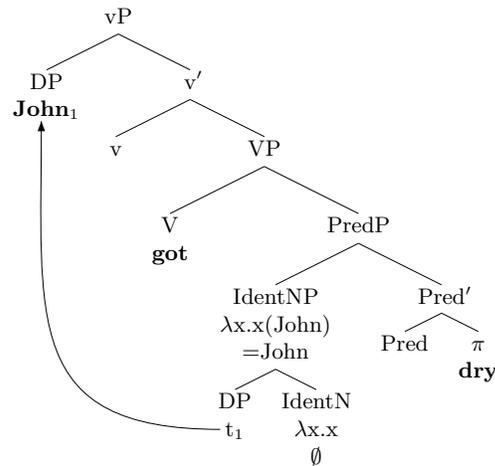
We began section 4.3 with a tree structure representing the proposed analysis of a *get* construction like *John got himself dry*. The tree structure is repeated below:

(38) John got himself dry



We are now in a position to explain this analysis. The property of being dry is predicated of an eventuality of which IdentNP is a Holder. IdentN receives a semantic value under identification through merge with its sister antecedent, the r-expression *John*. *John* syntactically values *self*'s number and index feature through an Agree relationship mediated by Probe-Goal theory before raising to Spec vP where it is θ -marked as the Agent before it moves on again to the sentential subject position for nominative Case marking. The m-binding requirement of *self* triggers spellout of the Φ -features of the copy 'left behind' by the antecedent in whatever way possible, in this case, as the pronoun *him*.

It was shown that these *get* constructions meet the conditions governing the licensing of anaphoric drop (section 4.2.2). Thus, we will assume that IdentN may be realised as a null element no longer forcing spell out of the m-binding pronoun at PF.



As will be seen, this analysis will play an important role in the next chapter where it will be shown that for passive *get* constructions, one and the same nominal argument can need θ -marking up to three times.

4.8 Chapter summary

In this chapter we considered agentive A-type *get* constructions as variants of reflexive B-type *get* constructions but with their anaphor phonologically dropped, although still syntactically and semantically present. A description of the conditions under which anaphoric drop is possible was provided in section 4.2.2 to cover all constructions, including *get* constructions, that demonstrate this property.

It was then noted that (i), a proxy interpretation for the referent of the anaphor is only possible when the anaphor is not dropped, and that (ii), it is possible to demonstrate that this proxy reading is dependent only on the presence of the pronominal element of a reflexive anaphor. These insights inspired an analysis of reflexive anaphors in the style of Kayne's and Zwart's 2002 papers which advocate a movement based approach to pronoun-antecedent relations, differing from these contributions in that the anaphor is to be seen as complex, not simplex, consisting of two semantically and syntactically separable components, namely a pronominal part, e.g. *him*, *my* etc., and a *self* part.

This novel analysis, as well as being able to unify many uses of *self* across the grammar of English, and therefore explain data suggestive of a split into two components of this kind, has the advantage of not being susceptible to some of the problems faced by Kratzer's (2009) analysis of binding strategies when applied specifically in local configurations. Furthermore, it maintains some of the important results gained by

Kayne's and Zwart's 2002 papers, such as, the consequence that much of Chomsky's binding theory no longer needs to be stipulated, but rather, follows naturally once the grammatical relationship between the pronoun and its antecedent is established under a sister-hood relationship.

In the final section, the analysis was applied to a *get* construction.

Chapter 5

Get and passive complementation

5.1 Introduction to passive *get*

We will begin this chapter with an introduction to the data that will be covered herein. The basic aim is to provide an analysis for constructions like those in (1) of a comparable form to the analyses for adjectival and prepositional *get* constructions already discussed.

- (1) a. John got arrested
- b. John got (himself) arrested
- c. Mary got John arrested

With respect to the verb *be*, passives come in two basic varieties, namely the eventive passive and the adjectival passive:

- (2) a. Eventive passive
 The ship was sunk
 (i.e., someone sank it)
- b. Adjectival passive
 The ship is sunk
 (i.e., it is in a state of having become sunk but no Agent of the sinking event is implied)

By framing the eventive example in the past tense, and the adjectival example in the present tense, salience of the desired interpretations is facilitated. This is because in English, a standard eventive reading is disallowed in the present tense, while a stative reading is less preferred over an eventive reading (where both are possible) in the past tense. However, both readings are still possible if the tenses are swapped, (3) and (4), in which case, the eventive passive takes on an obligatory habitual reading (where John is deemed to be the regular opener of the door), while modification

of the adjectival passive is helpful in order to express the stative reading without interference from the eventive one:

- (3) Eventive passive
The door is opened (by John)
- (4) Adjectival passive
The door was more/very/so opened (*by John)

More, *very* and *so* can modify adjectives but not events, (5), so help to clarify that the intended use of a passive is adjectival. *More* creates a comparative scenario, while *very* and *so* intensify the meaning of the adjective.

- (5) a. *Mary more/very/so kicked John
- b. *John was more/very/so kicked by Mary

Despite the identical forms of the predicate (sunk_{adj} vs $\text{sunk}_{\text{verb}}$, $\text{opened}_{\text{adj}}$ vs $\text{opened}_{\text{verb}}$), in the verbal passive there is an expressed diagnosable event and an understood Agent of that event, the so-called implicit Agent. On the other hand, for adjectival passives there is no implication of an Agent. There is, however, a diagnosable implication of an event that forms part of our knowledge about how the state denoted by the adjective came about. For example, the state of the door being open, denoted by (4), came about through an opening event, and the ship in (2-b) is deemed to be in a sunken state having necessarily been through a sinking event. Importantly, it is not relevant who initiated the sinking or opening events. These facts are reflected in the bracketed information included under the examples in (2).

Thus, we can say that the verbal passive denotes an event proper and licenses an Agent-naming *by* phrase, while the adjectival passive denotes a kind of result state and cannot license a *by* phrase. Tests for eventivity vs stativity that we have used before help to bring this out:

- (6) Event-denoting
What happened was that the ship was sunk by John.
- (7) State-denoting
Look! The ship is sunk (*by John)

Note that there is a third type of construction which uses the (purely) stative form *sunken*. We have already seen an analysis for these constructions in chapter 2 where adjectives like *sunken* were shown to be i-level and therefore incompatible with *get*:

(8) Stative adjective
The ship is/was sunken

(9) *The ship got sunken

These stative adjectives are purely stative in that they do not imply the result state of an event. They can therefore be interpretatively distinguished from their resultative counterparts using manner adverbials (Embick 2004)¹.

(10) a. The apple remained rotten → *The apple remained quickly rotten
b. The apple remained rotted → The apple remained quickly rotted

A description of the manner in which the rotting event took place may be appropriately added by a manner adverbial in the case of resultative adjectives, but as no event is implied with a purely stative adjective, the adverb is infelicitous.

Embick (2004) also provides another way to tell the two adjective types apart. In the complement of a creation verb, such as *create* or *build*, resultative adjectives should be ruled out as contradictory, as they denote the result of an event not described by the creation verb. Pure statives are unproblematic:

(11) a. The ship was built sunken (for the aquarium's underwater display)
b. *The ship was built sunk

For *sink*, *open* and *rot*, then, there are two forms across the three constructions (Kratzer 2001 and Embick 2004). The first, (*sunken*, *open*, *rotten*) is adjectival and stative. The second, (*sunk*, *opened*, *rotted*) is also adjectival and stative, but is result-denoting too - it denotes the result of an implied event. These two forms are morphologically differentiated but the third form, the passive participle, is identical to the resultative adjective. On the other hand, it is verbal and non-stative. This is summarised in (12):

¹ *Remained* and not *be* is used to force a stative reading over an eventive one, i.e., to block the passive participle.

(12)

| | Stative
Adjective | Resultative
Adjective | Passive
Participle |
|-------------------------|------------------------------|----------------------------------|-------------------------------|
| Form | SUNKEN | SUNK | SUNK |
| | OPEN | OPENED | OPENED |
| | ROTTEN | ROTTED | ROTTED |
| Stative/Eventive | stative | stative
(implied event) | eventive |
| Agentive | No | No | Yes
(implicit) |

The resultative adjective and the passive participle are always identical in form, but much of the time so is the stative. This is the case for, for example, both *closed* and *twisted*:

- (13) *Closed* and *twisted* as passive participles
- The statue was twisted by the sculptor
 - The door was closed by John
- (14) *Closed* and *twisted* as resultative adjectives
- The statue remained quickly twisted
 - The door remained quickly closed
- (15) *Closed* and *twisted* as stative adjectives
- The statue was carved twisted
 - The door was built closed

| | Stative
Adjective | Resultative
Adjective | Passive
Participle |
|-------------|------------------------------|----------------------------------|-------------------------------|
| Form | CLOSED | CLOSED | CLOSED |
| | TWISTED | TWISTED | TWISTED |

Returning to our examples with *get*, with respect to compatibility with the resultative adjective and the passive participle, it is often argued that it may only combine with one or the other, effectively dividing previous analyses into two types. Fox and Grodzinsky (1998), Taranto (2004) and Alexiadou (2005) argue for an analysis with resultative adjectival complementation, while Haegeman (1985) and Butler and Tsoulas (2006) argue in favour of verbal complementation. The nature of the analysis

proposed in this study means that if both can be viewed as properties that may be related to an eventuality, then there is no *a priori* reason why both should not be compatible with *get*. Based on diagnostic evidence, I believe that both types of complement may be used in the complement of *get*, and so I will provide an analysis for both. Reflecting the terms generally used with equivalent *be* constructions, in what follows, a *get* construction with a resultative adjective in its complement will be called the ‘adjectival *get* passive’, while one with a passive participle in its complement will be called the ‘plain *get* passive’. The expression ‘passive *get* (constructions)’ will be used as a cover term for both types, and the resultative adjective, like the passive participle, will often be referred to as a participle.

As we have already covered purely stative adjectives in the complement of *get* (chapter 2) they will not feature in the discussion here. Instead, we will provide an analysis first for the plain *get* passive, sections 5.4.1 to 5.4.5, and then one for the adjectival *get* passive, sections 5.4.6 to 5.4.8. We will begin, however, with an introductory look at the shape the analyses will take, before demonstrating that for these constructions too, *get* may be realised without an Agent.

5.2 Looking ahead

Applied to passive *get* constructions, the analysis we have been defending will have to take on the following form. The complement of *get* will need to be the usual PredP headed by Pred of type $\langle \pi, \langle e, \langle s, t \rangle \rangle \rangle$. This in turn will force us into analysing the passive participle/adjective phrase as a property. I am not aware of any other analysis for the passive that follows this line so something novel will need to be said in this respect. The Holder argument in the specifier of PredP will merge as normal², raising, in cases of true A-type constructions, to the sentential subject position, but remaining in-situ for agentive cases of which there are two varieties, the anaphoric variety (\mathcal{A}), and the bi-argumental variety (\mathcal{B}). In variety \mathcal{A} , the Spec PredP argument is merged as IdentN with its sister antecedent raising to be θ -marked as the Agent in the Spec of vP. Effectively, this allows both a Holder and an Agent θ -role to be interpreted on a single referent. In variety \mathcal{B} , nothing special need be said. The Holder argument is merged as per normal, and likewise an Agent in Spec vP. Both are θ -marked in-situ and hold disjoint reference. Assuming that this can all be shown in a homogeneous way to the procedures we adopted to do so for adjectival and prepositional complementation (chapters 2 and 3, respectively), there remains just one major problem to resolve, which we will introduce next.

²This is not strictly true, for reasons to be set out below, but we will assume it as fact for now.

Consider, for now, just the true A-type passive constructions (although the problem holds for all passive *get* and *be* constructions). The issue revolves around the single (Holder) argument:

- (16) a. John got arrested
b. John was arrested

On an intuitive level, just as in its *be* passive equivalent, the subject, *John*, is interpreted as the Theme of the arresting event. This is unproblematic on standard accounts of the passive in which, in one way or another, the subject picks up its thematic role from the verb before raising for Case reasons (Áfarli 1989, Baker, Johnson, and Roberts 1989, Jaeggli 1986 among others³).

The traditional reasoning is that, somehow or other, the passive morphology ‘absorbs’ accusative Case and the external θ -role.

Burzio’s Generalization (1986): All and only the verbs that can assign a θ -role to the subject can assign accusative Case to an object⁴.

Thus, although not overtly, the passive phrase is considered structurally complex (the Theme object is merged internally), and the passive construction a raising structure.

The property style analysis outlined above, however, assigns a Holder θ -role to the nominal in Spec PredP position. This has so far been of no issue (thematically speaking) as of the two types of complementation we have considered thus far, adjectival and prepositional, only the latter has been structurally complex with, crucially, the internal argument (what we have referred to as the Ground/reference object), remaining internal to the property phrase.

The situation for passive complementation is critically different as the Theme argument needs a way not only to escape from the property phrase, but also, to receive more than one θ -role, that of both Theme and Holder.

Diagrammatically, a first approximation of the analyses we will work towards for the two types of passive is represented in (17):

³See Collins 2004 for a different approach.

⁴By subject, Burzio means external subject (Agent).

when we can reliably demonstrate that *get* means Cause, it may be realised with no Agent.

5.3 Three characteristics that demonstrate Cause with no Voice

In 1.6 it was shown that in Japanese and Finnish, Cause may be syntactically realised with no external argument but that in English, Cause and Voice must be syntactically realised together as a ‘bundle’ of two semantically distinct heads (Pylkkänen 2008). This section runs contrary to these recent proposals by establishing that, in the same way Pylkkänen does for Finnish and Japanese, one member (passive *get*) of a set of constructions in English (the set of *get* constructions), does show evidence of realising Cause and Voice separately.

5.3.1 There is a causing event in the structure

To show conclusively that Cause really is a part of the structure of passive *get* is not as straightforward as it was for adjectival and prepositional *get* constructions. There is a principled reason for this, namely that the passive complement may be event denoting in and of itself. Thus, the familiar tests for dividing up sentences into eventive vs stative are rendered defunct as it can be argued that the reason they pattern as any eventive verb does is because the tests are picking up on the passivised event, not *get*. It is, of course, still necessary to show that they do pattern as eventive sentences, so we will briefly run through the familiar tests:

- (18) Pseudoclefting
 - a. What happened was John got arrested
 - b. What happened was Mary got John arrested
- (19) Progressive
 - a. John is getting arrested
 - b. Mary is getting John arrested
- (20) True Present Tense
 - a. *Look! John gets arrested
 - b. *Look! Mary gets John arrested

However, there is at least one other way to single out the event denoted by *get*, which we have already seen in use in an earlier chapter section (1.6), namely to explicitly refer to the cause it denotes:

- (21) a. By selling drugs, John got arrested by the police
 b. By deliberately leaving incriminating evidence at the crime scene, burglar A got himself/burglar B arrested by the police

The phrases *by selling drugs* and *by deliberately leaving incriminating evidence at the crime scene* are both licensed in a *by* phrase of the kind that qualifies an event in some way. For a causative event this effectively means that the *by* phrase will pick out and name a suitable cause. These kinds of *by* phrases are therefore licensed under two conditions. First, there needs to be an event for it to qualify, and second, the *by* phrase must qualify the event suitably. Should either or both of these conditions not be met, the sentence will crash (on a conceptual level):

- (22) ✓ Event. ✓ By phrase suitability.
 a. By giving him drugs, Mary made John an addict
 b. By being careless, John broke the vase
 c. By reading him his rights, the policeman officially arrested John
- (23) ✓ Event. *By phrase suitability
 By selling drugs, John was arrested by the police
- (24) *Event. ✓ By phrase suitability
 By spending lots of time with her, John loved Mary
- (25) *Event. *By phrase suitability
 By selling drugs, John loved Mary⁵

The *by* phrases used for the *get* constructions in (21-a) and (21-b) are not suitable to qualify the arresting event, but they are suitable to qualify the ‘getting’ event, and do so by naming an appropriate cause; in the former example, the cause of John’s arrest was his selling drugs, while in the latter, burglar A was the Agent of an event of deliberately planting incriminating evidence which was the cause of his/burglar B’s arrest.

Another argument has already been outlined in chapter 2, but is worth briefly repeating here as it involves passive *get* constructions in particular. The intransitive variants of causative/inchoative alternation verbs are argued to be purely inchoative (Levin and Rappaport Hovav 1995 although see Chierchia 1989 for an alternative view), and divide into two types, internal CoS verbs and external CoS verbs. If *get* introduces a causative layer into the semantics of a proposition, we would not expect it to be able to combine with the internal CoS type as the Cause is inevitably destined

⁵The cause is deemed unsuitable here only on the assumption that the act of drug dealing is not attractive or appealing to John.

to be external. The prediction is borne out:

- (26) a. External CoS
The ice got frozen
b. Internal CoS
*The seed got germinated

The causative layer added by *get* can be added irrespective of whether its SC complement is already causative, in which case it adds an even more external Cause into the eventuality, hence the interpretational difference between (27-a) and (27-b):

- (27) a. John broke the vase
b. The vase got broken by John

In the a. example, *John* causes the breaking event, but in the b. example, some cause or other with no named Agent causes *John* to cause the breaking event.

Finally, the familiar test with *again* also leads to the same conclusion, namely that *get* is Cause. Consider the *get* construction *the vase got broken*. Under the analysis I have proposed, we are forced into viewing this *get* construction as consisting of two eventualities, the causing event, denoted by *get*, and the caused eventuality, denoted by *get*'s complement *the vase broken* (before raising of *the vase*). *Again* is able to modify either eventuality in the following way:

- (28) The vase got broken again
a. Causing event is repeated: [Repetitive reading]
Something happened again, and as a result, the property of being broken holds of an eventuality of which the vase is a Holder.
b. Caused eventuality is repeated: [Restitutive reading]
Something happened and as a result, the property of being broken that held of an eventuality of which the vase was a Holder, was returned.

The evidence that *get* means Cause is fairly strong. Next we will look at the role of the subject.

5.3.2 The matrix subject is not an external argument

The point of this section is to demonstrate that the subject of passive *get* cannot always be considered an Agent.

As before, the lack of subject agentivity can only be posited for A-type constructions, and is associated with just one of the two possible readings A-type constructions impart, (29-a), the other reading being the agentive one, (29-b):

- (29) Thematic relations for *John* in *John got arrested*
- a. Either, John is both the Theme of the arresting event and the Holder of the property of [John arrested],
 - b. or, John is the Theme of the arresting event, the Holder of the property of [John arrested] and the Agent of the Causing event denoted by *get*.

The easiest way to show that the two readings are present is to construct a PC within an appropriate context and manipulate binding facts to enforce an interpretation one way or the other.

Context 1 Imagine a scenario in which John is an undercover policeman working for the mafia. Imagine also that he has a rival mafioso after him, wanting to kill him. At some point in time, if the police do not intervene, the rival mafioso will kill him. To avoid blowing his cover, the police decide to arrest him. In this situation we might say (30)⁶:

- (30) John_{*i*} got arrested (by the police_{*j*}) PRO_{*j*} to prevent him_{*i*} from being killed

Due to conditions on binding, the pronoun *him* in the purpose clause must be free and PRO must therefore be controlled by the implicit Agent ‘the police’.

Context 2 Imagine now a second scenario in which John is a mafioso and wanted for arrest by the police. Imagine again that he has a rival mafioso after him wanting to kill him. At some point in time, his only escape from being killed is if he gives himself up to the police. He will suffer arrest but escape being killed. In this situation we might say (31):

- (31) John_{*i*} got arrested (by the police_{*j*}) PRO_{*i*} to prevent himself_{*i*} from being killed

In this example, we have used condition A to manipulate PRO into having joint reference with the embedded anaphor *himself*. This, in turn, forces an interpretation in which PRO must be controlled by *John*.

A-type passive *get* constructions are felicitous in both scenarios, and contrast strongly with the *be* passive which may only be used to describe Context 1:

- (32) John_{*i*} was arrested (by the police_{*j*}) PRO_{*j*} to prevent him_{*i*} from being killed

- (33) *John_{*i*} was arrested (by the police_{*j*}) PRO_{*i*} to prevent himself_{*i*} from being killed

Context 2, in which the binding conditions force an agentive reading, is not describable with the *be* passive. This is expected under our analysis as *be*’s only real function is to act as a hook for tense.

⁶The indexes on both PRO and its controller are highlighted in boldface.

As discussed in the previous chapter, leaving proxy readings aside, example (31), the agentive variant, may be paraphrased with an overtly reflexive *get* construction. The non-agentive variant may not:

- (34) John_i got himself_i arrested (by the police_j) PRO_i to prevent himself_i from being killed
- (35) *John_i got himself_i arrested (by the police_j) PRO_j to prevent him_i from being killed

Thus, use of the anaphor in this position may serve as a test for agentivity. Other tests for agentivity involve the use of Agent-oriented adverbs and instrumental phrases, as demonstrated in section 2.2.2.

A further way to demonstrate that the non-agentive (true) reading exists is to use a subject that cannot be considered an Agent within the given context. This is very often possible to achieve with inanimates which only ever plausibly demonstrate agentive traits in contexts in which they may be deemed teleologically capable (Folli and Harley 2007). We looked at examples of teleological capability also in section 2.2.2 where it was reasoned that teleologically capable arguments, while felicitous in *get* constructions with non-resultative adjectival complementation, are infelicitous as the Agent of Cause in agentive *get* constructions. As subjects of passive *get* constructions they are, however, unproblematic. The examples here are borrowed from that section:

- (36) a. *Only Ariel non-bio got the clothes cleaned properly
b. The clothes got cleaned properly only by Ariel non-bio
- (37) a. *The sun got the clothes dried to the bone in just 10 minutes
b. The clothes got dried to the bone in just 10 minutes by the sun

I will discuss these examples no further except to point out that they strongly indicate a general restriction on inanimates as the Agent of a causative event which causes another agentive event. That is, if an inanimate is deemed to be the Causer of an event, there can be no intermediate Causer in the causal chain. The examples in (38) are reasoned to be non-agentive on the grounds of them having an inanimate subject, and this can be shown to be the case when subjected to agentivity testing:

- (38) a. The car got totalled
b. The toast got burned
- (39) Anaphor inclusion test
a. *The car got itself totalled
b. *The toast got itself burned

Intentionality cannot be proportioned to the inanimate object (the grammatical reading assigns the intentionality to the implicit Agent of the SC eventuality):

- (40) Agent-oriented adverb test
- a. #Intentionally, the car got totalled
 - b. #Deliberately, the toast got burned

The instrument cannot be wielded by the inanimate object (in the grammatical reading, it is the implicit Agent of the SC eventuality that wields the instrument):

- (41) Instrumental phrase test
- a. #The car got totalled with a sledge hammer
 - b. #The toast got burned with a blowtorch

In the interests of completeness, I will briefly show that B-type passive *get* constructions are, in the majority of cases, strictly agentive.

- (42) Mary got John fired
- a. Mary intentionally got John fired
 - b. Mary got John fired with a sexual harassment claim against him

Those cases that are not agentive were briefly considered in chapter 2, but do not fall under the auspices of this thesis so were not discussed in any great detail. They include sentences like those in (43-a) and (43-c) and are distinguished from agentive passive *get* constructions on at least two grounds. The first is that they must contain a pronominal element co-indexed with the matrix subject, and the second is that their matrix subject is deemed an Experiencer⁷. These distinguishing factors are represented below:

- (43)
- a. John_i got his_i car stolen [Experiencer Subject]
 - b. John got the car stolen [Agent Subject]
 - c. John_i got the paint spilled on him_i [Experiencer Subject]
 - d. John got the paint spilled [Agent Subject]

Finally, we turn to consideration of implicit Agent facts.

5.3.3 There is no implicit external argument

To show that no implicit argument is associated with *get* in a true passive *get* construction is less straightforward than it was for the adjectival and prepositional counterparts. This is mainly because the SC actually can contain an implicit argument

⁷Experiencer B-type passive *get* constructions also have a standard agentive reading.

that is associated with the Agent role of the embedded passive event, as is standard to most *be* passives. A plausible implicit Agent is represented overtly in the bracketed portion:

(44) John was arrested (by the police)

(45) John got arrested (by the police)

We can show that this implicit argument is not associated with *get* because it is still available even when *get* has an overt Agent of its own:

(46) Mary got John arrested (by the police)

The presence of this implicit Agent renders the PC test useless⁸. Recall that the test is designed to point out that no implicit argument is around to control a PRO in a purpose clause, which works well for cases of *get* with adjectival complementation:

(47) *The car got dirty PRO to settle the score

However, for passive *get* constructions, PRO simply picks up on the embedded implicit Agent:

(48) The car got dirtied (by the thugs_i) PRO_i to settle the score

For the other two tests that I have used elsewhere, there are subtle fixes to this problem. The first of these tests has to do with entailments. Implicit Agents, when around, are semantically entailed. (49) is starred because there is an implicit Agent responsible for doing the scratching whose existence cannot therefore be negated. As was shown before, unaccusatives act as controls for this:

(49) Passive

*The car was scratched, but no-one scratched it

(50) Unaccusative

The ice melted but no-one melted it

For the counterpart *get* construction, it is easy to make a false comparison with the sentence in (51). What is negated in (51) is the existence of the ‘scratcher’, which, by (46), is expected to lead to ungrammaticality.

(51) *The car got scratched but no-one scratched it

The correct comparison sentence is (52), which, because it asserts the non-existence of any implicit Agent for the ‘getting’ event, it is grammatical.

⁸This is not strictly true. If we can force the adjectival *get* passive reading, control into a PC should be impossible. We will see arguments of this nature in section 5.4.6 when attempting to show that an adjectival *get* passive is possible.

(52) The car got scratched but no-one got it scratched

Example (52) means something like: no-one actively did something to get the car scratched by a third party, the scratching was just something that someone did spontaneously when the chance presented itself.

Finally, if we accept that *by* phrases are able to pick out implicit Agents (as they are for passives), we would expect that if an implicit Agent associated with *get* were present, we would also be able to pick it out with a *by* phrase. For passive *get* this, unfortunately, means doubling up on *by* phrases (to ensure that at least one of them is not associated with the passive event) which may lead to parsing problems, but assuming not, the only explanation for the ungrammaticality of (53) is that *get* is realised without an implicit Agent.

(53) *The car got scratched by the thugs by the gang-leader
≠ The car got scratched by the thugs and the gang-leader did something that caused the scratching event performed by the thugs to occur.

We are now in a position to once again claim that *get* means Cause, that it may project without an Agent, and that one may be added when desired. We will turn next to the analyses.

5.4 The analyses

For both plain passive *get* and adjectival passive *get*, I will first show that passive participles and resultative adjectives are indeed felicitous in their respective complement structures, and then proceed step by step through a derivation of a relevant example, as a way to introduce and work through the two analyses. I will begin with the plain *get* passive.

5.4.1 Evidence for the presence of a passive participle

As seen in section 5.1, there exist two main differences between resultative adjectives and passive participles, namely that the former are stative and non-agentive, while the latter are eventive and implicitly agentive. Given that for both types of passive *get* construction under consideration, the participles are embedded inside a causative event, despite their difference in this respect (i.e., concerning their stative/eventive status), it is difficult to argue for the presence, in a given example, of one type over the other on the basis of this distinction. This problem is further exacerbated by the fact that adjectival participles, despite being stative, imply an event. Therefore, the majority of the arguments that will be used, will relate to the other difference,

namely agentivity. Crucially, however, it is important to be clear that, if demonstrated to be the case, the presence of an Agent does not argue against the possible use of a resultative adjective. It just means that, for the case in hand, a resultative adjective is not present. The strategy, therefore, for demonstrating that a resultative adjective may be used will be to force the use of an adjectival participle by employing modificational lexical items that target adjectives. For robustness, the examples can then be submitted to agentivity testing. If the result is ungrammatical, we can be confident that the participle in use is adjectival. These arguments will be presented in section 5.4.6.

Four tests for agentivity have already been used on various occasions in this work. They are the instrumental phrase test, the Agent-oriented adverb test, the purpose clause test and the presence of a *by* phrase test. To this we will add one more, namely what we will call the adverb of intent test. This fifth test consists of the addition of the phrase *on purpose*. A control example for all five tests is given below with *be* passives (in the order listed above). Erring on the side of caution, we will use an inanimate subject so that when the test is performed on a *get* construction, we can be sure that the Agent that is picked up on is not an Agent of the ‘getting’ event:

- (54)
- a. The ship was sunk with an explosive device
 - b. The ship was intentionally sunk
 - c. The ship was sunk PRO to collect the insurance payout
 - d. The ship was sunk by the enemy captain
 - e. The ship was sunk on purpose

Replacing *be* with *get* has no effect on grammaticality, which I take to mean that the participle complement in all of these cases are verbal passives:

- (55)
- a. The ship got sunk with an explosive device
 - b. The ship got intentionally sunk
 - c. The ship got sunk PRO to collect the insurance payout
 - d. The ship got sunk by the enemy captain
 - e. The ship got sunk on purpose

These tests and their interaction with adjectival participles will be returned to in section 5.4.6. Next, though, an analysis of the plain *get* passive will be set out.

5.4.2 Motivating IdentN

We will begin by considering the θ -role problem specifically outlined in section 5.2. Recall the initial representation of the analysis we gave for a true A-type passive *get*

of null NPs aligned themselves with the various sorts of overt NPs with respect to two features, namely anaphoricity and pronominality. Anaphoricity (A) relates to an NP's propensity to be referentially dependent and locally bound, while pronominality (P) has to do with an NP's requirement to be free in its local domain (the NP in question may or may not be referentially dependent). A and P interpreted as binary features lead to the following typology:

(56) Typology of Nominals

| | Lexical | Empty |
|----------|-----------------|--------------|
| [+A, -P] | Lexical anaphor | NP-trace |
| [-A, +P] | Pronoun | pro |
| [+A, +P] | | PRO |
| [-A, -P] | R-expression | wh-trace |

Movement was hypothesised to leave a trace behind which would share its θ -role and Case with the moved element via a chain, but the empty category (the trace) was, ultimately, deemed to be of a distinct nominal category with its own properties. For example, the empty category in (58-a) is an anaphor while its antecedent is an r-expression:

(57) John_i was arrested [_{NP} e]_i

The theory was later superseded by the copy theory of movement which is considered superior partly because it gives us reconstruction, as it were, for free. In the copy theory, an NP is merged into the structure at the appropriate level and then a copy is re-merged, where necessary, to act as an antecedent. Both copies are available at the semantic interface but, at spellout, deletion rules allow only one (the structurally 'higher' one, at least in English) to be pronounced.

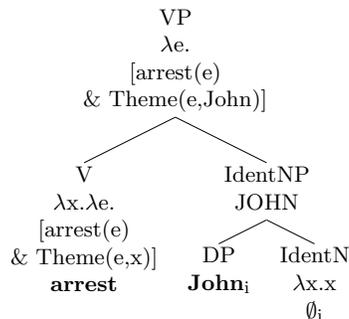
(58) a. Semantic Interface
 John_i was arrested John_i
 b. spellout
 John_i was arrested ~~John_i~~

That NP-traces and lexical anaphors appear at the same level in the typology (table (56)) is, of course, no accident as they do share similar features. They are both anaphors in that they display the same locality effects, and are therefore both subject to Condition A. Under the copy theory of movement, this insight is effectively lost. The nominal IdentN, however, recaptures this, building it directly into the semantics

as a way of obviating the need to stipulate Condition A.

Returning to the analysis, invoking IdentN in the complement of the verbal projection gives us the following for the VP:

(59) [arrest [John_i \emptyset_i]]



There exist two important differences between the two IdentNs we have now posited. The first difference relates to the fact that one is lexicalised by *self*, while the other is obligatorily phonologically null. The second difference is that the overt IdentN is in a Case position whereas, assuming Burzio’s generalisation, covert IdentN cannot be. I will formally relate the two by claiming that the obligatory lack of phonological content is a direct result of the position not being Case marked. As such, the element IdentN is not ‘fussy’ about being Case-marked.

5.4.3 Merging the passive participle with an event

Recall that IdentN merges with a DP (the antecedent) and is formally identified with that DP both semantically and syntactically, the latter via feature valuation, and is assigned a θ -role and Case (when available). The antecedent DP is then free to raise and receive Case and θ -marking elsewhere in the structure. Given firstly, that accusative Case is licensed by an Agent-selecting little *v*, and that no accusative Case is licensed in passive structures, and secondly, that the Agent is implicit, we will assume that a defective form of little *v* is projected, called Pass-*v*. It is defective in that it can neither project a specifier in which to realise its Agent nor assign accusative Case.

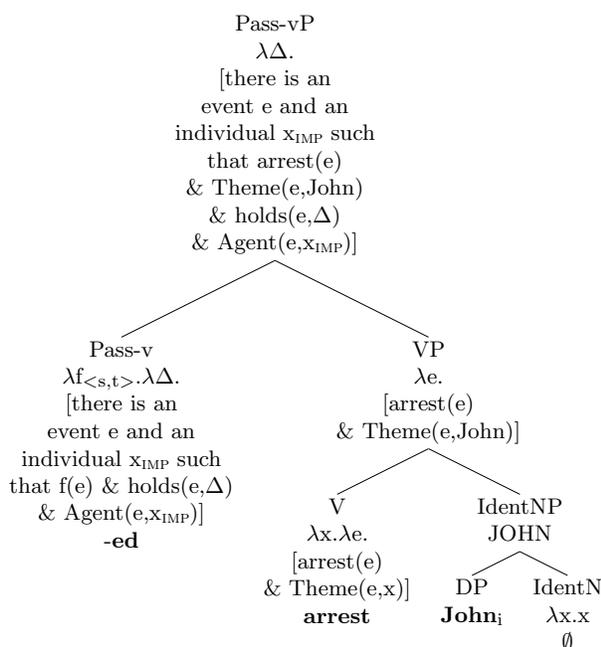
Although, there is no A-position available for it, the Agent role is semantically accessible as a kind of implicit agentive argument that can only be lexicalised as the argument of a *by* phrase (in whatever way that works) when required by the speaker. Therefore, one of the syntactic functions of the passive participle is to ‘absorb’ the external argument, which we will assume takes place ‘internally’ by saturating its own Agent argument with an implicit individual x_{IMP} (see (60)).

The VP in the complement of Pass-v is a predicate of events of type $\langle s,t \rangle$. Recall that Pred's function (as the next functional head to be merged after Pass-v) is to turn a property of some sort (e.g. *in the car*, *dry* etc.) into a predicate of eventualities to which an individual may be related as the Holder argument of the relevant eventuality. Thus, if the property is one of a state of being, e.g. *ill*, Pred takes that property and relates it to an eventuality of which an argument, e.g. *John*, may in turn be related as a Holder. This gives us the interpretation that John is the Holder of an eventuality of which a state of illness holds.

Given that we are dealing with (non-stative) events here, and that events may be viewed as spatiotemporal objects, we will posit that the main semantic role of Pass-v is to turn the VP event in its complement into a property of space-time such that the event is true of a spatiotemporal interval Δ . Its semantic value is given in (60), below, and integrated into the tree structure in (61):

$$(60) \quad \llbracket -ed_{\text{Pass-v}} \rrbracket = \lambda f_{\langle s,t \rangle} . \lambda \Delta_{\pi} . [\text{there is an event } e \text{ and an individual } x_{\text{IMP}} \text{ such that } f(e) \ \& \ \text{holds}(e, \Delta) \ \& \ \text{Agent}(e, x_{\text{IMP}})]$$

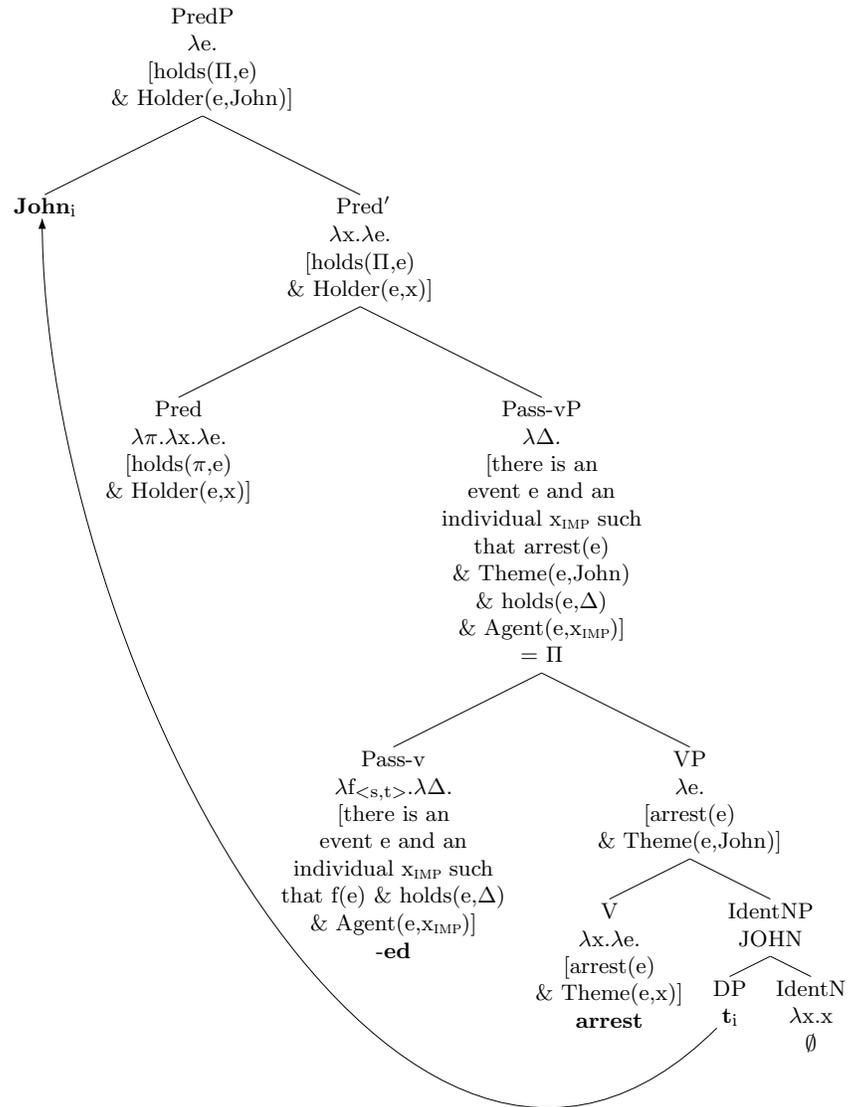
$$(61) \quad [\text{arrested } [\text{John}_i \ \emptyset_i]]$$



5.4.4 Merging Pred

Now that we have something of type π , that is also conceptually the right kind of thing to predicate of an eventuality, we can merge Pred with (61) and project a ‘landing’ site for the antecedent in which it is marked as the Holder of that eventuality:

(62) [John_i [arrested [<John_i> ∅_i]]]



PredP says that a spatiotemporal interval Δ , in which the event of John being arrested by an unspecified Agent of some sort took place, holds of an eventuality of which John is the Holder.

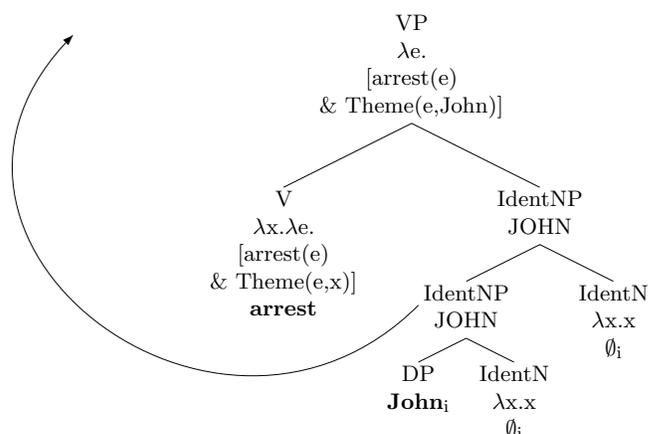
For the *be* passive this is all that really needs to be stated. The rest of the functional heads in the sequence will merge into the structure, one by one, up to TP. *Be* sits in T, and is inflected for tense, and in the specifier of TP *John* re-merges and is Case marked.

5.4.5 Merging *get*

Merging *get* with no little *v* simply adds in a causative layer to the syntax/semantics, but no Agent, and allows T to mark tense without needing to invoke *be*. Again, the Holder argument will re-merge in Spec TP for nominative Case marking. The more interesting cases are those of agentive *get* constructions. Taking B-type constructions first, the external argument is introduced by little *v*, via event identification, and accusative Case is licensed, case-marking the Holder argument in-situ. The Agent is merged in Spec vP and re-merged in Spec TP for nominative Case marking.

The agentive A-type construction mirrors a reflexive B-type construction differing only in that the *self* anaphor is not phonologically spelled out. In both variants, IdentN will need to appear in the Spec of PredP to continue the coreference that exists between Theme, Holder and Agent through the structure. This necessitates the use of IdentN in two places in the structure, both of which require the same antecedent DP. Movement of the antecedent DP from the lower IdentNP to the higher IdentNP would violate Chomsky's Extension Condition (Chomsky 1993, 1995), so I will assume that the higher one is initially merged as the antecedent specifier of the lower IdentN before moving to Spec PredP:

(63) IdentNP merges in Spec IdentNP



This raises a potentially tricky look-ahead problem. How do we know to merge two IdentNs into the structure at such an early stage of the derivation? Certainly, a structure with three or more IdentNs each successively merged inside the Spec of a dominating one, would crash on a θ -assignment basis (after all, each IdentN, not to mention the antecedent DP, needs θ -marking and as yet, I am unaware of any sentential construction, other than *get*, which is complex enough to license even 3 let alone 4 θ -roles to one referent). However, in the case of these particular constructions, no strong phase boundary (CP) is crossed, so one possibility is that the issue is

resolved at the phase level. Unfortunately, this opens the analysis up to possible over-generation, and I would ideally like the theory to be crash-proof. Adopting an alternative to the way that syntactic structures are built may also resolve this issue. Within a top-down view of syntax, in which sentences are built up from left to right (Phillips 1996, Richards 1999), and in which the structure can be incrementally interpreted (Steedman 1996, Kempson, Meyer-Viol, and Gabbay 2001), the number of IdentNs needed and their positions in the sentence, is no longer problematic.

The structure for *John got himself arrested* up to the matrix vP level is shown in (64), on the next page:

5.4.6 Evidence for the presence of an adjectival participle

As discussed earlier, adjectival passives in their simplest incarnations look just like eventive passives. Both are formed with *be* and both use the same form for the main predicate. However, one is eventive and agentive where the other is stative and non-agentive.

(65) Eventive passive
The dress was ripped by John (John ripped the dress)

(66) Adjectival passive
The dress is ripped (*by John) (The dress is in a state of having been ripped)

The bracketed description of the meaning of the adjectival passive is accurate in as much as it reflects the perfective aspect of the phrase, but it is inaccurate in that it incorrectly asserts that the adjectival passive is no more than a perfect form of the verbal passive (Kratzer 2001). This however, can be shown to be incorrect, as the adjectival passive (68) includes a reading not available with the verbal passive (67). Verbal passives include an implicit Agent with disjoint reference to the Theme argument such that (67) can only be interpreted as meaning that someone other than John has washed John, despite the fact that the verb *wash* is otherwise inherently reflexive. On the other hand, (68) is compatible with reflexive action. It appears unimportant just who washed John. The important information is that there was a washing event, now completed, the result of which was John being in a washed state.

(67) John has been washed

(68) John is washed

Therefore, if *get* is compatible with the adjectival passive, we would predict that reflexive interpretations should be available. Certainly, (69) is compatible with reflexive action, but it might be argued that this is simply because there is a null anaphor in the Holder position between *get* and *washed*. In fact, however, the possible presence of the anaphor is irrelevant. What is important is not whether the ‘getting’ of John washed was done by John on himself, but whether the washing was performed by John on himself, and this is certainly one of the readings that (69) has.

(69) John got washed

The same is true for agentive *get* constructions. In both (70) and (71), the Holder subjects may or may not be interpreted as washing themselves:

(70) Mary got John washed (Mary did something such that John is washed)

- (71) Did you get the kids washed and ready for bed? (i.e., did you do something such that the kids are washed and prepared for bed?)

Other evidence in support of the claim that resultative adjectival complementation is compatible with *get* can be found with respect to the agentivity tests set out in section 5.4.1 in which it was claimed that successful agentivity diagnosis supports the claim that the verbal passive participle combines with *get*. These are the relevant examples repeated:

- (55) a. The ship got sunk with an explosive device
b. The ship got intentionally sunk
c. The ship got sunk PRO to collect the insurance payout
d. The ship got sunk by the enemy captain
e. The ship got sunk on purpose

Recall also that *more*, *very* and *so* modify states but not events, (4) and (5), so force the use of an adjectival participle:

- (4) Adjectival passive
The door was more/very/so opened (*by John)
- (5) a. *Mary more/very/so kicked John
b. *John was more/very/so kicked by Mary

Therefore, if passive *get* constructions allow this kind of modification, we have good evidence that they accept resultative adjectives:

- (72) a. The car got very damaged in the race (by continually being pelted with stones)
b. The door got more opened as the day proceeded (by continually being pushed further and further back)
c. The water reserve got so emptied that nearly all the water was gone

All the above examples are grammatically sound, and furthermore, they can include a cause-naming *by* phrase picking up on the cause denoted by *get*. For concreteness, it is also worth demonstrating that once modified in this way, it is no longer possible to detect an implicit Agent:

- (73)
- a. *The ship was very sunk with an explosive device
 - b. *The ship was intentionally very sunk
 - c. *The ship was very sunk PRO to collect the insurance payout
 - d. *The ship was very sunk by the enemy captain
 - e. *The ship was very sunk on purpose

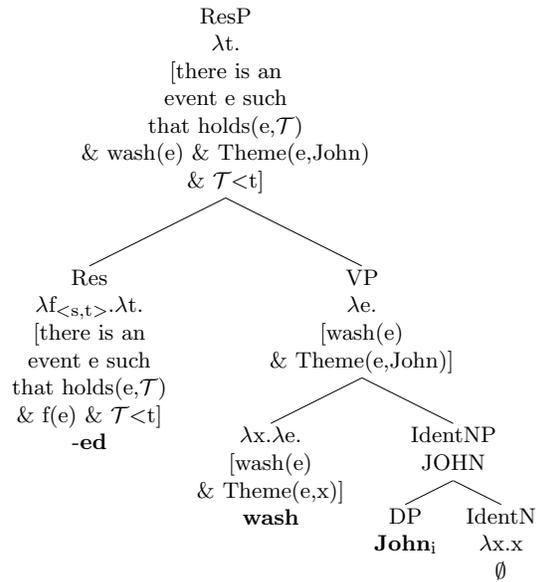
The tests strongly support the claim so we will therefore move on to an analysis of the construction.

5.4.7 Merging the adjectival participle with an event

Eventive passives were analysed as properties of spatiotemporal intervals Δ . Here, however, we are dealing with states with a perfective aspect interpretation, that are also the result of an event. It is therefore reasonable to posit that they are made up from events but are properties of time, independent of space. Therefore, I will follow Kratzer (2001) and analyse the adjectival passive as a property of times that is true of all times t that occur after the event in question has culminated. We will call the head that forms the resultative adjective Res, and the interval of time during which the event takes place \mathcal{T} . The semantic value of Res is shown in (74), and its integration into a syntactosemantic tree is shown in (75). Note that although it merges with an event, no implicit Agent enters the definition, and the participle cannot be considered as an instantiation of little v . Indeed this would be the wrong way to analyse as ResP is adjectival in nature.

$$(74) \quad \llbracket -ed_{Res} \rrbracket = \lambda f_{\langle s, t \rangle} . \lambda t_{\pi} . [\text{there is an event } e \text{ such that } \text{holds}(e, \mathcal{T}) \ \& \ f(e) \ \& \ \mathcal{T} < t]$$

(75) ResP for [washed John]

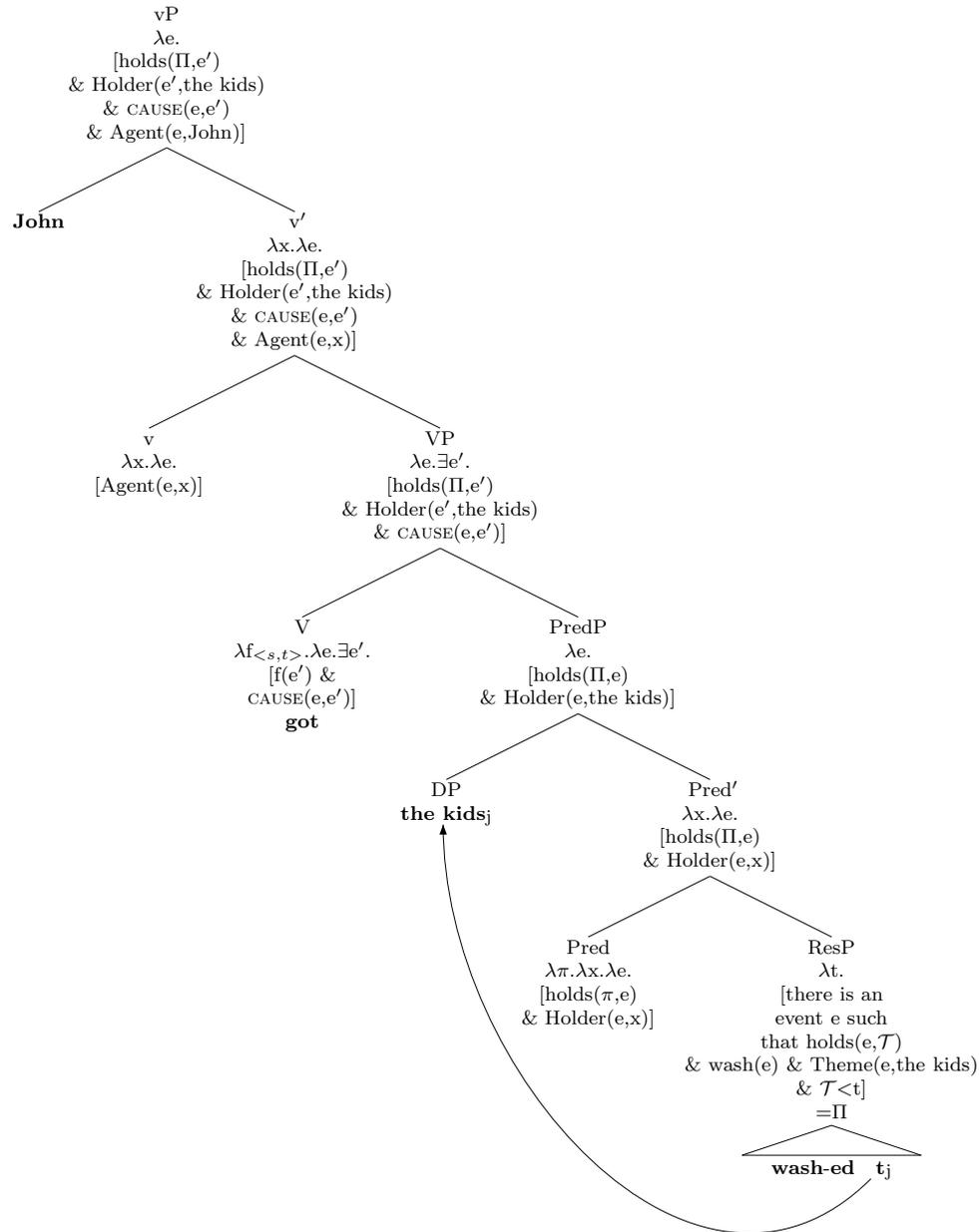


The completed washing event of which John is the Theme is true of any time t so long as t is preceded by \mathcal{T} , the interval of time during which the event ran its course. Again, IdentN is merged as the complement of the event to allow the Theme object to ‘escape’ the ResP.

5.4.8 Merging PredP and *get*

The merging of PredP, and then of *get*, runs as before. The same thematic relations are established along the way, but the interpretation, of course, differs from before. For example, no Agent of the small clause internal event is implied, which allows inherently reflexive events, such as washing events, to be interpreted reflexively. The tree provided is for the B-type sentence *John got the kids washed*, with the interpretation, John was the Agent of some event which caused a situation in which the kids are the Holder of an eventuality of which a property of times holds such that for any time t preceded by \mathcal{T} , the running time of the washing event, the kids are washed.

(76) John got the kids washed



While a participle such as *arrested* can be interpreted as an adjective (77), in a *get* construction, the resultative interpretation is likely to be less salient than the eventive passive interpretation for several reasons. These include, the framing of the construction in the past tense (to suit the eventivity of *get*), the fact that arresting events resist the kind of modification we have seen applied to force adjectival readings, (78), and the fact that arresting events are always carried out by a fairly salient Agent, i.e., a member of the police force, even if that Agent is not directly or implicitly

referred to.

(77) Look! John is arrested (*by the police)

(78) *John got more/very/so arrested

We will now briefly look at some events that do not combine with *get* before summarising the main points of the chapter.

5.5 Verbal i-level predicates

I would briefly like to look at some potentially problematic data that in fact receives a natural explanation within the theory proposed. Following Carlson (1977), three basic types of i-level predicates are evidenced in the grammar of English:

I-level adjectives: *intelligent, human, female* etc

Stative Verbs: *love, hate, know, owe* etc

Predicative NPs: *be a man, be a doctor* etc

As we saw in chapter 2, i-level adjectives will not combine with *get*. The reason given for this has to do with the kind of concepts that these adjectives denote: they are all, in some way, permanent, intransitory properties. Thus, if someone is female, their femaleness is intrinsic to them as individuals. The same is true for humanness and intelligence; at least that is how we generally perceive these qualities. For other attributes, such as emotions like happiness and anger, there is an intrinsically temporary, transitory nature attached to the concept. People's moods can alternate between different emotional states on a regular basis.

I chose, following Adger and Ramchand (2003), to implement this difference in the syntax and semantics of two distinct Pred heads, one which relates a property directly to an individual, (79-a), and another which relates a property to an eventuality of which an individual may be a Holder, (79-b). On an intuitive level, the meaning of *get* involves some kind of transition into a new state, or acquisition of a new property, a fact that leads to a conceptual mis-match when one tries to use an i-level adjective in *get*'s complement. Positing that *get* has the same semantic value as Pylkkänen's (2008) Cause head provided a natural way to account for the incompatibility of 'intransitory' concepts in *get*'s complement structure. This intuitive mis-match is reflected in the semantic type mis-match between *get* and an 'intransitory' PredP. For type reasons it is only 'transitory' PredP with which *get* may merge: *get* is looking for something of type $\langle s,t \rangle$, and of the two PredPs, only 'transitory' PredP is of this type.

- (79) a. ‘Intransitory’ $[[\text{Pred}]] = \lambda\pi.\lambda x.[\text{holds}(\pi,x)]$
 b. ‘Transitory’ $[[\text{Pred}]] = \lambda\pi.\lambda x.\lambda e.[\text{holds}(\pi,e) \ \& \ \text{Holder}(e,x)]$

With respect to the *get* constructions under investigation here, the s/i-level distinction is once again shown to be important as it correctly predicts that stative verbs should not be compatible with *get*:

- (80) Stative verbs and *get*
 a. *John got loved/hated
 b. *John got known
 c. *John got the car owned

The concepts denoted by stative verbs are the kinds of eventualities that we naturally conceive of as intransitory. If we express that we love someone, or know someone, even though, at least in the first example, we can change our mind, the conceptual property is judged as an intransitory characteristic of our individual identity, and when the property is of this sort, it can be related directly to an individual using the Pred head in (79-a).

There is also a question of what kind of construction the examples in (80) are, eventive passive or adjectival passive? As stative verbs, they never pattern as events, (81), and thus, we can only deduce that the sentences are examples of the adjectival passive.

- (81) a. *What happened was, John was loved
 b. Look! John loves Mary

As adjectives, they can be counted out as complements of *get* on the same grounds as adjectives like *female*, *human* and *intelligent*. It is, however, interesting that they license a *by* phrase:

- (82) John is/was loved by Mary

I will not be providing an analysis of this except to say that, in these particular cases, the *by* phrase is not picking up on an Agent, and indeed, the constructions fail all of the other tests for agentivity⁹:

⁹I assume that the following examples can be explained as special idiomatic cases rather than actual instrumental *with* phrases:

- (83) John was loved with all of Mary’s heart/hated with all of Mary’s guts

- (84) a. *John was loved with a shower of gifts
b. *John was intentionally loved
c. *John was loved PRO to prove a point
d. *John was loved on purpose

5.6 Chapter summary

I began this chapter by demonstrating that what looks like one construction, the *be* passive, is actually ambiguous between two constructions, the verbal passive and the adjectival passive, where the latter looks like a special, quasi-eventive form of the adjectival constructions analysed in chapter 2. For passive *get* constructions, it was proposed, contra previous analyses, that under the general analysis being defended, there was no reason why both types of passive should not be compatible with *get*. Diagnostic evidence in support of this position was provided later, in sections 5.4.1 and 5.4.6. Before that, however, one complication in particular was anticipated, namely a thematic problem relating to the fact that sentences like those in (85) would need to assign more than one thematic role to one and the same argument.

- (85) a. John got arrested
b. John got himself arrested

Before providing a solution to this, it was demonstrated for these *get* constructions too, firstly that *get* means Cause, and secondly that, despite this, we are able to project *get* without necessarily projecting an Agent.

Analyses of both the plain *get* passive (PGP) and then the adjectival *get* passive (AGP) formed the bulk of the rest of the chapter in which it was reasoned that, as events, PGPs are properties of spatiotemporal intervals Δ , and as states with perfective aspect, AGPs are properties of times t and independent of a spatial dimension. The solution to the thematic assignment problem was resolved with the ‘technology’ developed in Chapter 4, namely by invoking IdentN in the object position of the two types of participle. There was, however, one caveat, specifically, that on the occasions when a given sentence assigns three θ -roles to a single argument, an IdentNP would need to be merged into the specifier of the IdentN in object position (and then subsequently raised). This is potentially problematic from a look-ahead perspective, but it was suggested that top-down syntax with incremental interpretation may resolve this.

In the final section, we briefly considered stative verbs and provided an explanation of their deviance in *get* constructions.

Chapter 6

Conclusion

On the odd occasion that I have been asked what it is that I do with *get*, I have happily launched myself into a virtual monologue about all the things it can and cannot mean, about how it can take an extra argument, about how it has ‘hidden’ meanings and so on. On the even rarer occasion that I have not been cut off in my tracks, I have found that it is impossible to talk about *get* without also mentioning *be*. It takes an extra argument as opposed to *be*, which cannot. It has hidden reflexive and causative meanings as opposed to *be*, which does not. The reason for being able to only talk about *get* with reference to *be*, I hope, has become clear, and is expressed in the following sentence. *Get* is essentially a quasi-functional, quasi-lexical linguistic tool that a speaker employs relatively freely to add a causative layer into an otherwise copula construction. Some of the consequences of such a statement have been discussed through the course of this work, and have been shown to relate keenly to the ways in which people think in theoretical linguistics about such notions as causation, argument structure, predication, passivisation, reflexivity and property-hood. Further consequences that impinge on other such important notions will undoubtedly come to light in future work on the topic, of which there are many potential avenues.

For example, extension of the analysis into the domain of nominal complementation is one such possible direction, that seems, on first inspection, to have something to say about possession, definiteness effects and double object constructions:

- (1) a. John got the doctor \nrightarrow John BECOME a doctor
b. John got the present \rightarrow John HAVE the present
- (2) a. John got the car \neq John got a car

- (3) John got the vet the dying animal =
- a. John got the dying animal **for** the vet
 - b. John got the dying animal **to** the vet

On the other hand, extension into the domain of infinitival complementation seems to have something to say about PRO, if indeed the following meaning patterns are related to the presence of PRO:

- (4) Mary got John arrested by the police **necessarily means that** John got arrested by the police (under a true *get* passive reading only)
- (5) Mary got John PRO to kill Peter **does not necessarily mean that** John got PRO to kill Peter

There is also scope here for future investigation of property types. Locations are seen as spatial properties that can be organised into structured, directional, spatial properties in the form of paths with intervals. Likewise, states of being are seen as properties of an individual's characteristics, and they too may be organised into structured properties of characteristics in the form of scales with intervals. The same is also true for spatiotemporal intervals, which may be seen as properties of space-time that can be organised into structured temporal properties (independent of space?) as was seen for passives and adjectival passives.

Turning our attention back inwards, various problems were encountered and resolved through the course of the thesis. I will briefly revisit some of them here. In chapter 2, a distinction was drawn between stage level (SL) and individual level (IL) adjectival predicates, which has implications for the feasibility of any particular analysis of *get*. This is the case because *get* systematically 'rejects' IL but 'accepts' SL predicates in its complement. The solution to this was found through appeal to an analysis of Scottish Gaelic copula constructions detailed in Adger and Ramchand 2003, and formed the basis on which all the other constructions considered would then be analysed.

In chapter 3, the problem of how to transfer prepositional aspect to a non-motion verb like *get* was encountered. The solution revealed itself through due consideration of the entailments that hold between path intervals and locations. These entailments filter up through the meanings of directional prepositional phrases such that suitability in the complement of *get*, as a change-of-state verb, could be pinpointed to relate directly to the differing characteristics that paths denote. Specifically, it was shown that in order to be compatible with *get*, a path must be bounded, or non-cumulative, or multiple stage-denoting, 'three' sides of the same metaphorical coin.

In chapter 4, the problem of how to account for the availability of proxy readings

was considered, which inspired a new analysis of reflexivisation based on previous work by Kayne (2002) and Zwart (2002). However, my analysis differs in that it proposes both a complex view of *self* anaphors, for which ample evidence was provided, and the notion of a ‘doubling’ constituent (Kayne 2002) from a semantic viewpoint. The solution involves merging the antecedent with an underspecified nominal I call IdentN (pronounced as *self*), which forms a semantic identity relationship with its sister constituent, and ‘steals’ the available Case and θ -role, forcing raising of the antecedent.

Finally, in chapter 5, a thematic problem was noted, namely that for passive constructions, the Theme argument would need to be raised out of the internal make-up of the VP, in order to be considered as a Holder and in some cases an Agent too. As a solution, it was shown that the reflexive analysis is also able to cope with this problem, in the form of an IdentN which is obligatorily null because of its failure to receive Case marking.

Casting an eye back over the main aim of this thesis, the analysis is successful to the extent that the considered *get* constructions have been unified under one analysis. This analysis captures, in a principled fashion, not only the various characteristics of *get*, but also the similarities and differences that exist between it and the copula. However, it is also a limited analysis in that it may only be classified as counting ‘towards’ a unified characterisation of the syntax and semantics of *get* in all of its environments.

References

- Abney, Steven. 1987. The English noun phrase in its sentential aspect. Ph.D. thesis, MIT, Cambridge, Ma.
- Adger, David. 2006. Fracturing the adjective: evidence from Gaelic comparatives. In D Harbour, ed., *QMUL Occasional Papers in Linguistics*, QMUL, London.
- Adger, David and Ramchand, Gillian. 2003. Predication and equation. *Linguistic Inquiry* 34:325–59.
- Áfarli, Tor A. 1989. Passive in Norwegian and in English. *Linguistic Inquiry* 20:101–108.
- Alexiadou, Artemis. 2005. A Note on Non-Canonical Passives: The Case of the *Get*-passive. In Hans Broekhuis, Norbert Corver, Riny Huybregts, Ursula Kleinhenz, and Jan Koster, eds., *Organizing Grammar: Linguistic Studies in Honor of Henk van Riemsdijk*, 13–21, Berlin: Mouton de Gruyter.
- Bach, Emmon. 1986. The algebra of events. *Linguistics and Philosophy: An International Journal* 9:5–16.
- Baker, Mark C., Aranovich, Roberto, and Golluscio, Lucía A. 2004. Two types of syntactic Noun Incorporation: Noun Incorporation in Mapudungun and its typological implications. *Language* 81:138–76.
- Baker, Mark C., Johnson, Kyle, and Roberts, Ian. 1989. Passive arguments raised. *Linguistic Inquiry* 20:219–251.
- Bowers, John. 1993. The syntax of predication. *Linguistic Inquiry* 24:591–656.
- Bowers, John. 2001. Predication. In M. Baltin and C Collins, eds., *The Handbook of Contemporary Syntactic Theory*, 299–333, Oxford: Blackwell.
- Büring, Daniel. 2005. *Binding Theory*. Cambridge textbooks in linguistics, Cambridge: Cambridge University Press.
- Burzio, Luigi. 1986. *Italian Syntax: A Government-Binding Approach*. Dordrecht: Reidel.
- Butler, Jonny and Tsoulas, George. 2006. *Get*-passives, Raising and Control. Available at <http://www-users.york.ac.uk/~gt3/recent-mss/getpassives2.pdf>, university of Stuttgart and University of York.

- Carlson, Gregory Norman. 1977. Reference to kinds in english. Ph.D. thesis, University of Massachusetts at Amherst.
- Chierchia, Gennaro. 1985. Formal semantics and the grammar of predication. *Linguistic Inquiry* 16:417–433.
- Chierchia, Gennaro. 1989. A semantic for unaccusatives and its syntactic consequences. In Elena Agnostopoulou Alexiadou, Artemis and Martin Everaert, eds., *The Unaccusativity Puzzle*, 22–59, New York: Oxford University Press.
- Chierchia, Gennaro. 1995. Individual-level predicates as inherent generics. In Carlson Gregory N., Francis Jeffrey Pelletier, Manfred Krifka, Alice ter Meulen, Godehard Link, and Gennaro Chierchia, eds., *The Generic Book*, 176–223, Chicago, Il.: University of Chicago Press.
- Chomsky, Noam. 1981. *Lectures on Government and Binding*. Studies in Generative Grammar 9, Dordrecht: Foris.
- Chomsky, Noam. 1982. *Some Concepts and Consequences of the Theory of Government and Binding*. Cambridge, Ma.: MIT Press.
- Chomsky, Noam. 1986. *Knowledge of Language: Its Nature, Origins, and Use*. New York: Praeger.
- Chomsky, Noam. 1993. A minimalist program for linguistic theory. In Kenneth Hale and Samuel Jay Keyser, eds., *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, 1–52, Cambridge, Ma.: MIT Press.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Ma.: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz, ed., *Ken Hale: A Life in Language*, 1–52, Cambridge, Ma.: MIT Press.
- Collins, Chris. 2004. A smuggling approach to the passive in English, ms. Cornell University.
- Doron, Edit. 1999. Semitic templates as representations of argument structure. In *Proceedings of the 1999 Texas Linguistics Society Conference: Perspectives on argument structure*, Austin: University of Texas, Department of Linguistics.
- Dowty, David R. 1979. *Word Meaning and Montague Grammar: The Semantics of Verbs and Times in Generative Semantics and in Montague's PTQ*. Dordrecht: Reidel.
- Embick, David. 2004. On the structure of resultative participles in english. *Linguistic Inquiry* 35:355–392.
- Folli, Raffaella and Harley, Heidi. 2007. Teleology and animacy in external arguments. *Lingua* .

- Fong, Vivienne. 1997. The order of things: What directional locatives denote. Ph.D. thesis, Stanford University.
- Fox, D and Grodzinsky, Y. 1998. Children's passive: a view from the by phrase. *Linguistic Inquiry* .
- Grimshaw, Jane. 1990. *Argument Structure*. Linguistic Inquiry Monographs; 18, Cambridge: MIT Press.
- Haegeman, Liliane. 1985. The *get* passive and Burzio's generalization. *Lingua* 66:53–77.
- Hale, Ken and Keyser, Samuel Jay. 2002. *Prolegomenon to a Theory of Argument Structure*. Number 39 in Linguistic Inquiry Monograph, Cambridge, Ma.: MIT Press.
- Hale, Kenneth and Keyser, Samuel Jay. 1993. On argument structure and the lexical expression of syntactic relations. In Kenneth Hale and Samuel Jay Keyser, eds., *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, number 24 in Current Studies in Linguistics, 53–109, Cambridge, Ma.: MIT Press.
- Halle, Morris. 1997. Distributed morphology: Impoverishment and fission. In Yoonjung Kang Bruening, Benjamin and Martha McGinnis, eds., *PF: Papers at the Interface*, MIT Working Papers in Linguistics 30, 425–49, Cambridge, Ma: MIT: MIT Working Papers in Linguistics.
- Harley, Heidi. 1998. You're having me on: Aspects of *have*. In J. Guéron and A. Zribi-Hertz, eds., *La grammaire de la possession*, 195–226, Paris: Université Paris X - Nanterre.
- Heim, Irene and Kratzer, Angelika. 1998. *Semantics in Generative Grammar*. Oxford, UK: Blackwell.
- Higginbotham, James. 1985. On semantics. *Linguistic Inquiry* 16:547–593.
- Higginbotham, James. 1997. Location and causation, Ms., University of Oxford, Oxford.
- Jackendoff, Ray. 1992. Mme Tussaud meets the binding theory. *Natural language and linguistic theory* 10:1–31.
- Jaeggli, Osvaldo. 1986. Passive. *Linguistic Inquiry* 17:587–622.
- Kamp, Hans and Partee, Barbara. 1995. Prototype theory and compositionality. *Cognition* 57:129–191.
- Kayne, Richard S. 2002. Pronouns and their antecedents. In Samuel D. Epstein and T. Daniel Seely Generative Syntax 6, eds., *Derivation and explanation in the minimalist program*, Oxford: Blackwell.

- Kempson, Ruth, Meyer-Viol, Wilfried, and Gabbay, Dov. 2001. *Dynamic Syntax: The Flow of Language Understanding*. Oxford: Blackwell.
- Kracht, Marcus. 2002. On the semantics of locatives. *Linguistics and Philosophy* 25:157–232.
- Kratzer, Angelika. 1995. Stage-level and individual-level predicates. In Gregory N. Carlson and Francis Jeffrey Pelletier, eds., *The Generic Book*, 125–175, Chicago: The University of Chicago Press.
- Kratzer, Angelika. 1996. Severing the external argument from the verb. In Johann Rooryck and Laurie Zaring, eds., *Phrase Structure and the Lexicon*, 109–137, Dordrecht: Kluwer.
- Kratzer, Angelika. 1998. More structural analogies between pronouns and tenses. In Devon Strolovitch and Aaron Lawson, eds., *Proceedings of Semantics and Linguistic Theory (SALT) VIII*, 92–109, Ithaca, NY: Cornell University: CLC Publications.
- Kratzer, Angelika. 2001. Building Statives. *Proceeds of the Berkeley Linguistics Society* 26.
- Kratzer, Angelika. 2009. Making a Pronoun: Fake Indexicals as Windows into the Properties of Pronouns. *Linguistic Inquiry* 40:187–237.
- Krifka, Manfred. 1998. The origins of telicity. In Susan Rothstein, ed., *Events and Grammar*, 197–235, Dordrecht: Kluwer.
- Levin, Beth. 1993. *English Verb Classes and Alternations: A preliminary Investigation*. Chicago and London: University of Chicago Press.
- Levin, Beth and Rappaport Hovav, Malka. 1995. *Unaccusativity: At the Syntax-Lexical Semantics Interface*. Cambridge, Ma.: MIT Press.
- Lewis, David. 1973. Causation. *The Journal of Philosophy* 556–567.
- Link, Godehard. 1998. *Algebraic semantics in language and philosophy*. Stanford, Ca.: CSLI Publications.
- Marantz, Alec. 1997. *Restitutive re- and the first phase syntax/semantics of the VP*. Ms. MIT, Available online at: <http://web.mit.edu/marantz/Public/MorphBeer/RestitutiveRe.pdf>.
- Matushansky, Ora. 2008. On the attributive nature of superlatives. *Syntax* 11:26–90.
- Miller, Wick R. 1965. *Acoma Grammar and Texts*, volume 40 of *University of California Publications in Linguistics*. Berkeley: University of California Press.

- Parsons, Terence. 1990. *Events in the Semantics of English: A Study in Subatomic Semantics*. Cambridge, Ma.: MIT Press.
- Phillips, Colin. 1996. Order and structure. Ph.D. thesis, MIT.
- Postma, Gertjan. 1997. Logical entailment and the possessive nature of reflexive pronouns. In Hans Bennis, Pierre Pica, and Johan Rooryck, eds., *Atomism and Binding*, 295–322, Dordrecht: Foris Publications.
- Pylkkänen, Liina. 1999a. The syntax of internal and external causation. In *TLF 1999: Proceedings of the TLS Conference on Perspectives on Argument Structure*, University of Texas at Austin.
- Pylkkänen, Liina. 1999b. Causation and external arguments. In Liina Pylkkänen, Angeliek van Hout, and Heidi Harley, eds., *Papers from the UPenn/MIT Roundtable on the Lexicon*, 161–183, Cambridge, Ma.: MITWPL 35.
- Pylkkänen, Liina. 2008. *Introducing Arguments*. Linguistic Inquiry Monographs, Cambridge, Ma.: The MIT Press.
- Reuland, Eric. 2010. *Anaphora and language design*. Cambridge, MA: MIT Press.
- Reuland, Eric and Winter, Yoad. 2009. Binding without identity: Towards a unified semantics for bound and exempt anaphors. In *DAARC*, 69–79.
- Richards, Norvin. 1999. Dependency formation and directionality of tree construction. In B. Bruening V. Lin, C. Krause and K. Arregi, eds., *MIT Working Papers in Linguistics 34*, Cambridge, MA: MITWPL.
- Rullmann, Hotze. 2004. First and second person pronouns as bound variables. *Linguistic Inquiry* 35:159–68.
- Saeed, John. 1997. *Semantics*. Oxford: Blackwell.
- Schwarzschild, Roger. 2002. The grammar of measurement. In Brendan Jackson, ed., *Proceedings of SALT 12*, Ithaca, NY: CLC Publications.
- Schwarzschild, Roger and Wilkinson, Karina. 2002. Quantifiers in comparatives: A semantics of degree based on intervals. *Natural language semantics* 10:1–41.
- Simpson, Jane. 1983. Resultatives. In Beth Levin, Malka Rappaport, and Annie Zaenen, eds., *Papers in Lexical-Functional Grammar*, 143–157, Bloomington: Indiana University Linguistics Club.
- Steedman, Mark. 1996. *Surface structure and interpretation*. Linguistic inquiry monographs; 30, Cambridge, Ma.: MIT Press.
- Stowell, Tim. 1981. Origins of phrase structure. Ph.D. thesis, MIT, Cambridge, Ma.
- Svenonius, Peter. 2006. The emergence of axial parts. *Nordlyd: Tromsø working papers in linguistics* 33:49–77.

- Svenonius, Peter. 2007. Spatial p in english. In Guglielmo Cinque and Luigi Rizzi, eds., *The cartography of syntactic structures vol.6*, Oxford University Press.
- Svenonius, Peter. 2008. Spatial p in English. lingBuzz/000001.
- Talmy, Leonard. 1983. How language structures space. In Herbert Pick and Linda Acredolo, eds., *Spatial Orientation: Theory, Research and Application*, 225–282, New York: Plenum Press.
- Taranto, Gina. 2004. An event-structure analysis of causative and passive *GET*, to appear in *Linguistics*.
- Tenny, Carol L. 2000. Core events and adverbial modification. In Carol Tenny and James Pustejovsky, eds., *Events as Grammatical Objects: The Converging Perspectives of Lexical Semantics and Syntax*, 285–334, Stanford, Ca.: CSLI.
- Truswell, Robert. 2007. Locality of *Wh*-movement and the individuation of events. Ph.D. thesis, University College London.
- von Stechow, Arnim. 1996. The different readings of *wieder* “again”: A structural account. *Journal of Semantics* 13:87–138.
- Wechsler, Stephen. 1989. Accomplishments and the prefix *re-*. In *NELS 19*.
- Zwart, Jan-Wouter. 2002. Issues relating to a derivational theory of binding. In Samuel David Epstein and T. Daniel Seely, eds., *Derivation and Explanation in the Minimalist Program*, 269–304, Oxford: Blackwell.
- Zwarts, Joost. 2005. Prepositional aspect and the algebra of paths. *Linguistics and Philosophy* 28:739–79.
- Zwarts, Joost and Winter, Yoad. 2000. Vector space semantics: A model-theoretic analysis of locative prepositions. *Journal of Logic, Language, and Information* 9:169–211.