Verbal Prepositions in Norwegian: Paths, Places and Possession

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Acknowledgements

Writing a dissertation is in many ways like a journey through the jungle, where you are fighting your way through dark, unknown territory. On the way, you will have to defend yourself against beasts and monsters of various types. This dissertation is the result of such a journey, and while I take full responsibilities for the result, there are many people who have helped me on the way.

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Contents

Chapter 1

Setting the scene: Events, Participants, Paths, and Places

1.1 Introduction

The main aim of this chapter is to provide a basic introduction to some of the theoretical issues which will become important in the subsequent chapters. An important assumption which forms the basis for this dissertation is that the nature of argument structure is essentially syntactic, and as such conditioned by the same principles which govern syntactic structures in general (cf. e.g. Baker 1988, Hale and Keyser 1993).

This places this dissertation well within a Constructionist tradition which seeks to void the lexicon of most of its argument structure information (cf. Borer 2005, Ramchand 2005). Instead, the information traditionally thought to be properties of individual lexical items is treated as properties of syntactic structures themselves.

This chapter is organized as follows: I start by discussing the motivation which lies behind the choice of topics. Then I move on to laying out the theoretical framework which will be important in the subsequent chapters. In the last section, I give a short summary of the dissertation, where I present the main findings and conclusions reached.

1.2 The P chameleon

Some questions relating to the inventory of linguistic categories have proved notoriously hard to answer, and many of those questions centre

around the proper classification of the category P. Chomsky (1970) proposed the now well-known binary classification system of +/-V, +/-N, which divide the lexical categories verb, noun and adjective into classes with respect to distributional criteria. In this system, verbs are classified as +V, -N, nouns are -V, +N, and adjectives are +V, +N. However, Chomsky in his original proposal did not include the category P in this classification system, this was done later by Jackendoff (1977), who proposed that adpositions are classified as -V,-N, and hence fill the gap in the system.

However, the properties of adpositions make them particularly hard to classify. In some respects, they seem to belong in the verbal domain, in others, they seem to be more noun-like. Adpositions hence seem to stand with one leg in each camp with respect to the distinction between lexical and functional categories. In contrast to the typical lexical categories N, V, and A, which are considered open classes where new elements can be added, P is often treated as a closed class consisting of a small inventory of items, which makes them look like functional elements. However, in English the P class appears to be more open, in that new elements can be added to the inventory. Examples here include words like *regarding* and *concerning*, which syntactically are used in the same way as adpositions, but which originally were verbs (cf. Svenonius 2004a).

Moreover, adpositions are also meaningful items which can be used to denote spatial relations between participants in an event, which makes them look more like lexical elements. Authors like e.g. den Dikken (2003) argue that the category P is lexical, but projects a full-fledged structure of extended projections, but others again deny the existence of P as a lexical category, like e.g. Baker (2003). According to Grimshaw (1991), P is a functional head in the extended projection of the noun, where it plays a role similar to that played by complementizers in the extended projection of V. This analogy between adpositions and complementizers is nothing new; in English, for instance, the complementizer *for* is homophonous with the preposition *for*, and the inifinitival marker is homophonous with the preposition *to*, which made Emonds (1985) propose that adpositions and complementizers belong to the same category (cf. also the proposal by Kayne 2004).

While the fact that the inventory of adpositions in a language is rather small might indicate that P is best treated as a functional category, the lexical vs. functional-distinction depends very much on theory-internal criteria for what counts as lexical and what counts as functional, as argued e.g. by van Riemsdijk (1978). But since this distinction is not

crucial within the Constructionist framework assumed here, where the meaning of lexical items is treated as stemming from a fine-grained decompositional structure, I will not dwell more on that topic.

However, the topic of the proper classification of adpositions deserves more attention. As already mentioned, adpositions share important properties both with verbs and nouns, and attempts have been made to make them fit into one of these categories. In this dissertation, I hope to show that adpositions (specifically, prepositions) are chameleon-like in their behaviour and interact with the verbal predicational structure in different ways. In the next three chapters I will show three different ways in which adpositions and adpositional phrases do this, and I will argue that their flexibility with respect to the positions they can appear in and with respect to the types of interpretations that arise are best treated within a Constructionist approach where interpretation is a direct consequence of the syntactic structure projected.

In some respects, adpositions have noun-like qualities. For instance, some adpositions are developed from a nominal source. Svenonius (2004a) mentions the example *instead of*, which stems from the noun *stead*, which means 'place'. This is also true for its Norwegian equivalent *i stedet for*, lit. 'in the place of', where the analogy is even clearer, since the noun *sted*, which means 'place' is still in use in the language. Another example comes from Northern Sámi, where *saji*, 'place', can either be used as a noun, in which case it has its literal meaning, as in (1a), or it can be used as a postposition with the meaning *instead*, as in (1b) (examples from Svenonius 2004a= his (26a-b), p. 12):

(1) a. Don čohkkát mu sajis.
you sit me place.LOC/at.place
'You're sitting in my place' or 'You're sitting instead of me.'
b. Don čohkkát mu dábálaš sajis.
you sit me usual place.LOC
'You're sitting in my usual place.'

P is also similar to nouns in not combining with tense/aspect morphology, a typical property of verbs. There is also a close relation between adpositional elements and case suffixes in languages such as Hungarian, where the dividing line between what counts as an adposition and what counts as a case suffix on a noun is very hard to draw (cf. Asbury 2005). On the other hand, it is also well known that adpositions have many things in common with verbs. Both verbs and adpositions can assign case to their arguments, and in chapter 3, I will argue that this is the

case with the $\emptyset_P$ preposition which is essential in the licensing of an added Beneficiary or Recipient participant in benefactive double object constructions.

It has been argued by e.g. Freeze (1992), Kayne (1993), or den Dikken (1995) that the auxiliary HAVE is decomposable into an abstract predicate (which den Dikken represents as BE) plus a prepositional component. In my analysis of double object constructions, I will adopt a decompositional analysis of the possession relation which is essentially similar to the one proposed by den Dikken (1995). Specifically, I propose that the Goal/Recipient argument is generated in the complement of a null preposition $\emptyset_P$, which also case-marks the Goal. I assume a split P model where the Theme is introduced by the p head, and case-marked by the verb in the usual fashion. The empty preposition must be licensed, which can be achieved in one out of two ways: (i) either via incorporation into a verb (here, the abstract verbal predicate Pred, which can be thought of as BE), or (ii) it can be licensed by dative case morphology. As we will see, lacking morphological dative, Norwegian obligatorily employs strategy (i), while German has a choice between the two strategies (contrary to den Dikken's original proposal). For more discussion, see the relevant sections in chapter 3.

The function of the incorporating preposition $\emptyset_P$ is close to that of the overt preposition *til*, 'to', in Norwegian, which can be incorporated into the verb with certain ditransitive verbs (cf. (2)), analogous to double object constructions with verbs of transfer of possession:

(2) a. Komiteen tildelte kandidaten prisen for beste
committee.the to.share candidate.the prize.the for best
hovedoppgave.
master's.thesis
'The committee awarded the candidate the prize for the best master's thesis.'

b. De tilbydde han jobben som trener for fotballaget.
they offered him job.the as coach for football.team.the
'They offered him the job as coach for the football team.'

Moreover, the fact that the entailments of possession cannot be cancelled in sentences like the ones in (3), supports the claim that the notion of possession is structurally present here:

(3) a. #Jens strikket Marit en genser, men ga den til Trine.
Jens knitted Marit a sweater, but gave it to Trine
'Jens knitted Marit a sweater, but gave it to Trine.'

b. #Marit bakte Jens en eplekake, men ga den til hunden.
Marit baked Jens an apple.cake, but gave it to dog.the
'Marit baked Jens an apple cake, but gave it to the dog.'

Furthermore, many languages have prefixes which are closely related to adpositions, and which affect change the aspectual properties of the verbs they combine with in various ways. Slavic has many examples of this type, the following Russian examples are from Svenonius (2004b) (=his (1), p. 1):

(4) a. Helder za-brosil mjač v vorota angličan.
Helder into-threw ball in goal English
'Helder kicked the ball into the English goal.'
b. David sovsem za-brosil futbol.
David completely into-threw soccer
'David completely gave up soccer.'
c. Ricardo nervsno za-brosal mjač.
Ricardo nervously INCP-threw ball
'Ricardo began to nervously throw the ball.'

In (4a), *za*, 'into', is used in its spatial sense, while in (4b) the combination of verb plus *za* has the idiomatic meaning 'to give up.' In (4c), *za* is used as an inceptive prefix which focusses on the initiation of the event.

Germanic particles and adpositions can have similar functions, as the sentences in (5) show. They can, for instance, mark that the action is completed, as in the English example in (5a), which contains the completive marker *up*. Adpositions can also signal ongoing action, which English marks by means of *on* ((5b)), while German employs a PP with *an*, 'on' plus dative case to mark that the action continues, as in (5c):

(5) a. They drank all the wine up in twenty minutes.
b. They drank on all night.
c. Sie haben an einem Haus gebaut.
they have on a.DAT house built
'They built on a house.'

In chapter 4, I will show instances from Norwegian where what looks like a particle *til*, 'to', (which sometimes also can appear without an overt ground argument) specifies a non-spatial endpoint to an event where the endpoint is otherwise underspecified, so that the interpretation of the event is vague between denoting a single change or a process. Thus, while a sentence like (6a) is vague between denoting a single jump or a

jumping process, (6b) can only have the first type of meaning.

(6) a. Jens hoppet.
Jens jumped
(i) 'Jens jumped (once).'
(ii)'Jens was jumping.'
b. Jens hoppet til.
Jens jumped to
'Jens jumped (once).'

That prepositional phrases can make the event telic by adding a spatial endpoint, is nothing new. It is also well-known that one and the same verb, which when it appears without a spatial PP is interpreted as unbounded, can combine with different types of spatial PPs, resulting in different types of interpretations. Consider the examples in (7), with the verb *sykle*, 'bike.' The example in (7a) shows that this verb can combine with a bounded PP with *til*, 'to', which makes the event telic by providing a spatial endpoint. In addition, the same verb can also combine with a PP with a locative preposition like *i*, 'in', as in (7b), where the interpretation of the event for some speakers is vague between a locative and a directional reading for the PP. The verb *sykle* can also combine with a route-denoting PP like *mot*, 'towards', as in (7c), where a bounded reading is never possible.

(7) a. Jens syklet til butikken.
Jens biked to store.the
'Jens biked to the store.'
b. Jens syklet i grøfta.
Jens biked in ditch.the
'Jens biked in the ditch' (ambiguous).
c. Jens syklet mot byen.
Jens biked towards town.the
'Jens biked towards the town.'

In chapter 2, I argue that properties of cases like the ones in (7) can be handled properly in a framework where the interpretation of the V-PP complex follows on the one hand from the position which the spatial PP is merged into in the verbal predicational structure, and on the other from the fine-grained decompositional structure of spatial prepositional phrases.

Thus, I hope to show that at least for the cases at hand, the flexible nature of adpositions can be properly handled within a Constructionist

framework where the interpretation of elements is a direct consequence of the fine-grained syntactic structures which they appear in.

1.3 The interface between argument structure and syntax

In traditional generative grammar, predicates are assumed to be listed in the lexicon together with argument structure information which specifies the number and what types of arguments (in terms of θ-roles) they combine with in the syntax. This argument structure information then forms the basis for the projection of the syntactic structure, as stated in the Projection Principle (cf. Chomsky 1981).

However, a longstanding problem within generative grammar concerns the division of labour between the lexicon and the syntactic component. In this connection, a number of important questions arise: How much information should be associated with the lexical entries themselves, and how much can be treated as the result of syntactic operations? What is the correct level of representation for stating argument structure generalizations? Why is it that specific semantic roles get linked to specific syntactic positions? And how can argument structure alternations such as e.g. the causative-inchoative alternation, but also the limitations on such operations best be treated without losing explanatory power?

This debate dates back as early as Chomsky (1970), who was the first to shed light on the topic of the division of labour between the lexical component and the transformational component. In a time when people lightheadedly proposed transformations 'all over the place', Chomsky argued that the properties of different types of nominalizations in English are best treated as stemming from different base-generated structures, and not from the application of various complicated transformations.

Roughly, the types of approaches to these questions fall into two main camps. On the one hand, we have researchers working within the Lexicalist tradition, who assume that the correct level for stating argument structure information is the lexicon (cf. Levin and Rappaport Hovav 1995, *inter alia*, Reinhart 1995, Reinhart 2002). On the other, we have authors who seek to derive the argument structure behaviour of lexical items from the syntactic structure in which they appear (cf. e.g. Hale and Keyser 1993, *inter alia*, van Hout 1998, van Hout 2000, Travis 1992, Ritter and Rosen 1998, Borer 2005, among others).

1.3.1 Lexicalism vs. Constructionism

According to Lexicalist approaches, the lexicon is an autonomous module with its own rules and combinatorial mechanics. The argument structure associated with particular lexical heads is treated as deriving from the lexical semantics of that head. In that way, the *lexical meaning* of a predicate is assumed to determine its syntactic properties. The information contained in the lexical entries is highly specific, and argument structure flexibilities are captured in terms of lexical operations directly on argument structure frames. The lexicon is then linked to the syntactic component via a system of internally ordered linking rules which are responsible for mapping event participants into specific structural positions.

One problem for a Lexicalist approach concerns the nature of argument structure alternations. Many verbs are notoriously flexible with respect to the syntactic structures they can appear in. For instance, verbs like *sink* or *break* can either appear in an intransitive version where they combine with a single internal argument, or they can appear in a transitive frame where they combine with an agent and a patient. This alternation is quite common, and has come to be known as the causative-inchoative alternation.

(8) a. The boat sank.
b. John sank the boat.
c. The window broke.
d. John broke the window.

Other instances where one verb may be associated with different types of syntactic frames, include, among other things, resultative constructions, as in (9), and double object constructions, as in (10):

(9) a. The dog barked the entire neighbourhood awake.
b. John danced Mary across the room.
c. I cooked the chicken black.
d. She painted the house red.

(10) a. John sent a letter to Mary.
b. John sent Mary a letter.
c. Mary knitted a sweater for John.
d. Mary knitted John a sweater.

In Lexicalist frameworks, argument structure alternations like these have either been captured in terms of both being derived from a common base,

or in terms of treating one alternant as underlying and the other as derived. Reinhart (2002) proposes different types of operations that operate directly on theta grids (lexical entries) to change their argument-taking properties. In her system, unaccusatives are derived from causatives via a reduction operation which takes away the agent. Thus, she assumes that all unaccusatives are uniformly derived from verbs which have the feature [+c] (cause), and whose second argument is a theme. The Lexicalist position is nicely summed up in the following quote from Reinhart (2002), p. 284 (repeated from Reinhart 1998):

> [L]inguistic practice is guided by the principle of Lexicon Uniformity, which states that each verb-concept corresponds to one lexical entry with one thematic structure, and entails that the various thematic forms of a given verb are derived by lexicon-operations from one thematic structure.

However, some verbs seem virtually unconstrained with respect to the different grammatical environments they can appear in. The examples in (11) are from Ramchand (2005), the ones in (12) are from Borer (2003):

(11)
a. John ate the apple.
b. John ate at the apple.
c. The sea ate into the coastline.
d. John ate me out of house and home.
e. John ate.
f. John ate his way into history.

(12)
a. The factory horns sirened throughout the raid.
b. The factory horns sirened midday and everyone broke for lunch.
c. The police car sirened the Porche to a stop.
d. The police car sirened up to the accident site.
e. The police car sirened the daylight out of me.

Still, verbal flexibilities are not entirely general, as the pairs of examples in (13) show:

(13)
a. Mary danced.
b. *John danced Mary.
c. Mary yawned.
d. *The lecture yawned Mary.
e. I painted John a picture.
f. *I painted John a wall.

In chapter 3, I argue that while there is much variation among speakers with respect to which predicates allow the addition of an extra Beneficiary participant, the predicates which permit this must all be compatible with a creation interpretation. In addition, pragmatic factors concerning use are seen to be at play in governing the distribution of this alternation. This conclusion supports a purely Constructionist treatment of benefactive double object constructions, where the impossible structures are not ruled out by grammar *per se*, but instead by pragmatic considerations.

Levin and Rappaport Hovav (1995) discuss pairs like (14) (from Levin and Rappaport Hovav (1995), (their (12-13) p. 85-86), where there seems to be a gap in the pattern which would be unexpected if the intransitive form is underlying and the transitive form derived via the addition of an external argument. On the basis of such gaps in the paradigm, they conclude that (14a) is derived from (14b) by decausativization, which removes the external argument.

(14) a. The wind cleared the sky.
b. The sky cleared.
c. The waiter cleared the table.
d. The table cleared.

Authors working within Constructionist-based approaches to argument structure go in the opposite direction. On the basis of the extreme freedom of some verbs to appear in different frames as demonstrated by such examples as (11) and (12), they reject the special status of the lexicon. Rather, the interpretation of lexical items is driven solely by the properties of syntactic structures.

The theory of Hale and Keyser (1993), *inter alia*, is similar to Constructionist approaches in may ways. In their theory, argument structure is nothing more than the syntactic configuration projected by lexical items. The following quote from Hale and Keyser (2002) (p. 1) sums up their syntax-based approach to argument structure nicely:

> Argument structure is determined by properties of lexical items, in particular, by the syntactic configurations in which they must appear. There are just two relations, complement and specifier, defined so as to preclude iteration and to permit only binary branching.

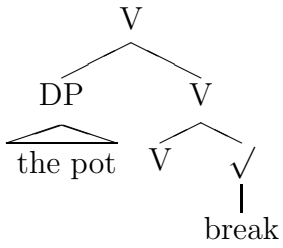
In this system, theta role assignment reduces to predication; there are no thematic roles apart from the relations between event participants and the lexical relational structure.

The fact that while an intransitive sentence like (15a) has a transitive counterpart ((15c)), while a sentence like (15b) does not ((15d)), can be derived directly from structural differences:

(15) a. The pot broke.
b. The engine coughed.
c. I broke the pot.
d. *I coughed the engine.

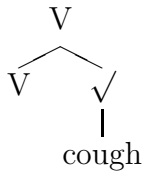
The lexical entry for the verb *break* consists of a root ($\sqrt{}$) and a verbal host (V), which may be empty. The root appears in the complement position of the verbal component, and has the property that it requires a specfier, which they assume is an important property of the root. The structure for (15a) is shown in (16):

(16)



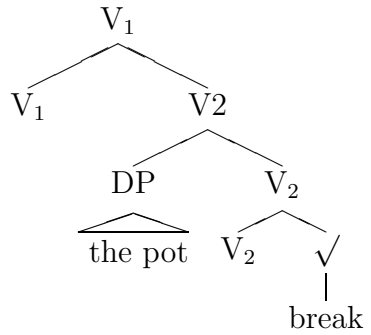
Likewise, the lexical entry for *cough* consists of a root plus a verbal element. However, unlike *break*, the root for *cough* does not require a specifier. The structure for (15b) is shown in (17):

(17)



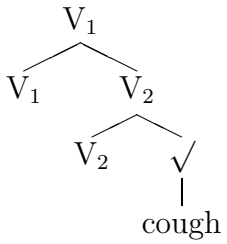
The causative variant in (15c) is derived when the structure in (16) is embedded under a verbal head, as in (18), where the argument introduced by the root is interpreted as a subject of change. The external argument is introduced outside of the verbal projection.

(18)



However, because the structure in (17) does not introduce a specifier (the subject of unergatives is introduced outside the verb phrase), there is no internal argument which can be licensed by V_1, and the derivation in (19) crashes:

(19)



Thus, the main differences between unaccusative and unergative predicates is assumed to follow from one essential property, which they have to stipulate: unaccusative roots introduce a specifier argument (which is interpreted as the subject of change), while unergatives never do this; the subject of unergative predicates is introduced higher up in the structure, as true external arguments. An unergative predicate cannot be embedded under a higher verbal head, because this would violate restrictions on predication. However, in this system, although the nature of argument structure is syntactic, it is still assumed that these processes take place in the lexicon (therefore the name L-syntax), although obeying the same principles as other syntactic derivations which are assumed to take place in syntax proper (which Hale and Keyser term *S-syntax*).

Borer (2005) argues that a modular theory of grammar where the lexicon forms a separate component which is linked to the syntactic component via specific 'interface' or 'linking' rules has the consequence that the same type of information is represented twice, once in the lexicon, and once in the syntax. From the point of view of economy, this is an

undesirable result. According to her system, the solution is to abandon the lexicon as an independent module. Instead she assumes that lexical items (in her terms 'listemes') are devoid of any syntactic properties which regulate their syntactic distribution. Interpretation is simply a matter of the functional event structure in which the arguments are merged as specifiers. Any structure can, in principle, be generated; impossible structures are ruled out by pragmatic considerations and world knowledge.

The existence of flexibilities such as the ones demonstrated in (11) and (12) above may tempt us into assuming a radical Constructionist approach like the one assumed by Borer (2005), where lexical items do not contain any information relevant to argument structure at all. Still regularities such as the ones in (13) are quite widespread, and it is hard to see how the non-existence of certain patterns can be made follow simply from pragmatic considerations.

In this dissertation, I will follow a moderate Constructionist approach to the nature of argument structure like the one assumed by Ramchand (2005). This approach is moderate in that it does not completely deny the presence in the lexicon of selectional information of some sort, which puts constraints on how lexical items are associated with structural positions. I will adopt the Ramchandian position according to which the flexibility of the generative system is restricted by syntactically relevant categorial features which are attached to listemes in the lexicon. In this way, the lexicon is not totally devoid of argument structure information of the type that radical Constructionists want to get rid of. Still, the approach is Constructionist at heart, because it rejects a view of the lexicon as an independent module with its own specific lexicon-internal processes which are opaque to the syntactic computational system. Instead, the only type of argument structure information present in the lexicon is categorial features which places restrictions on the computation.

1.3.2 Ramchand's *First phase syntax*

Ramchand (2005) presents a view of argument structure which is essentially Constructionist, in that it seeks to abandon the need for a separate lexical module where individual lexical items are listed together with their argument structure information, and where alternations are treated in terms of specific lexicon-internal operations. At first this might seem similar to the L-syntactic structures assumed in the work by Hale and Keyser (1993), *inter alia*, but there is one important difference between the two approaches. While Hale and Keyser assume that the nature

of argument structure is syntactic, and as such obeys the same restrictions as syntax proper, they still make a distinction between L-syntax, which takes place in the lexicon, and S-syntax, which takes place in the syntactic component.

However, Ramchand assumes an essentially Constructionist approach where there are no lexicon-specific derivations; everything happens in the derivational component. In the Ramchandian model, the information which is traditionally associated with lexical items can be decomposed into a combination of maximally three *subevents*, each represented by a separate functional projection. There is a *causing* or *initiation* subevent InitP (for initiation), a *process* subevent (ProcP) which denotes a transition or change, and a *result* subevent (ResP) which gives the endpoint and/or final state of the event. Each subevents introduces and licenses different types of event participants, which appear in the respective specifier positions. InitP introduces different types of causers or external arguments, ProcP licenses the participant which is interpreted as undergoing change or transition with respect to the process, and ResP introduces the Resultee, which is the participant that is interpreted as the 'holder' of the result state. This splitting up of the verb phrase into separate layers is similar to other types of decompositional structures for the verb phrase, where the VP is split up into two separate layers, v and V (e.g. Chomsky 1995), but differ from these in assuming a specific projection Result which introduces an endpoint which is part of the verbal predication.

In Ramchand's model, there is no one-to-one correspondence between telicity and the presence of ResP in the decompositional structure of the predicate, and I share this view. Thus, I adopt the assumption that ResP is only present in case the predicate explicitly expresses a result state. However, there are also various other ways in which entailments of telicity can arise, for instance with verbs of creation/consumption, where the telicity of the event is directly correlated with the boundedness of the direct object (cf. e.g. Verkuyl 1972, *inter alia*, Krifka 1998). With these verbs, the internal argument gives rise to a Path or scale which is homomorphic with respect to the process denoted by the event, and a bounded Path gives rise to a bounded event. The term Path originally stems from work on the semantics of spatial prepositions, but it has been generalized to cover a broad range of cases (cf. e.g. Hay et al. 1999, Beavers 2005, etc.).

Consequently, direct objects whose inherent properties give rise to a scale which is homomorphic with respect to the process, are not Undergoers, but Paths or Rhemes, which are really only different names for

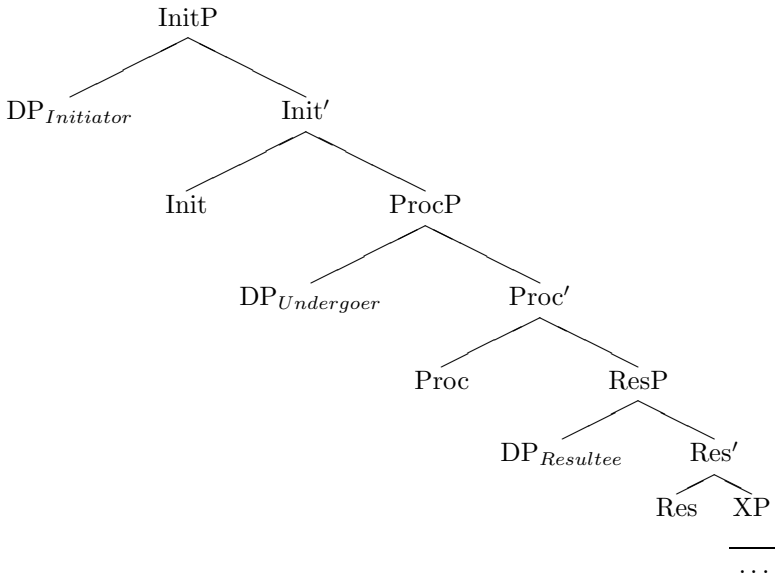
the material occupying the complement to ProcP and ResP, respectively. Paths are homomorphic with respect to the process defined by the predicate, and appear as complement to ProcP, while Rhemes serve to further define a final point/result state entailed by the lexical predicate, and appear in the complement to ResP. This is, as we will see, exactly parallel to the Paths in the denotation of directional prepositional phrases, where Path-denoting directional PPs appear as complements to ProcP, while location-denoting PPs which are interpreted as goals of motion can only get this type of interpretation in the complement to ResP.

Zwarts (2005) argues the Paths denoted by spatial prepositional phrases can be bounded or unbounded, and when a bounded PP combines with a verb which does not provide an endpoint, the PP is responsible for the boundedness of the event as a whole, as I will argue in the second chapter. When no endpoint is entailed by the lexical predicate (hence, ResP is absent from the structure), as with verbs of manner of motion, a directional prepositional phrase combines directly with the process head, and entailments of telicity arise if the PP-denotation is bounded. Zwarts argues that while unbounded spatial Paths can be concatenated to form a new Path (a Path which is *towards the house* can be concatenated with another Path which is also *towards the house*, and the result is a new Path, which is also *towards the house*), this is not so for bounded Paths, which cannot be summed to create a new Path of the same type. As we will see in chapter 4, this notion of concatenation can also be transferred to the eventual domain, where I will argue that the extended activity readings for semelfactive and degree achievement predicates are derived via a summing operation which is essentially similar to Path concatenation.

The view of participant roles as relating to specific structural positions is similar to proposals by e.g. Hale and Keyser (1993), Travis (1992), Ritter and Rosen (1998), or Borer (2005), who all assume that event participants are interpreted in relation to functional heads in the event structure that is built up. In this way, theta role 'assignment' reduces to relations between specifiers and heads in the decompositional structure of the verb phrase. Participant roles can be simple or complex; complex roles arise when one and the same participant is linked to different specifier positions simultaneously. In chapter 3, I will argue that when an additional 'Beneficiary' participant appears with verbs of creation, as in a sentence like *John baked Mary a cake*, the extra participant gets a composite role; it is simultaneously a Holder of Result state, but also a Recipient, where the Recipient interpretation is the result of the

structural position the participant is merged into. Specifically, I adopt a decompositional approach to the possession relation in which the Recipient participant is introduced as the internal argument of an abstract preposition $\emptyset_P$, which in turn appears in the complement to an abstract verbal predicate Pred.
Hence, traditional theta role labels like Agent, Theme, or Experiencer have no autonomous status in this system; they are simply entailments arising from different structural relations between a participant in a specifier position of a functional head. This is a desired effect, given the notorious difficulties on getting a coherent classification of the properties of different thematic roles, how many there should be, what their appropriate labels are, etc (cf. e.g. the discussion in Dowty 1989 or Baker 1996, Baker 1997, who try to reduce the number of thematic roles to just a few, related to either verbal entailments (Dowty) or to specific structural positions (Baker)). However, while I will occasionally employ labels such as Beneficiary, Recipient, or Goal, I will simply use them as handy descriptive labels, since such labels have no independent status in the model that I am working in. In effect, a Constructionist approach also effectively eliminates the need for specific linking rules which posit rules for how the participants in a verb's argument structure are mapped into syntactic positions. Linking has, for instance, been assumed to take place according to a Thematic Hierarchy (cf. e.g. Larson 1988, Grimshaw 1990), which stipulates the internal order of participants. The maximal decompositional structure that a verb can have is shown in (20):

(20)



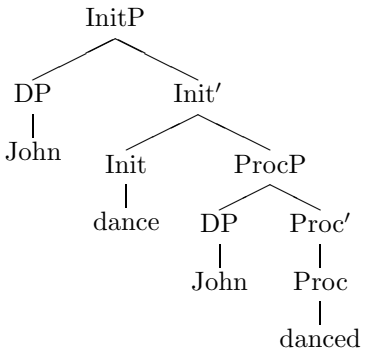
In this system, ProcP forms the core of the verbal predication, and Ramchand assumes that it is obligatorily present for all dynamic verbs, even with punctual verbs. This might sound counterintuitive at first, because of the label Proc(ess)P and the way in which we conceive of processes as durational. However, ProcP simply represents a transition, and nothing is said with respect to the duration of the transition. In chapter 4 I discuss the properties of semelfactive predicates in Norwegian, and there, I simply adopt the assumption that ProcP is obligatorily present. However, nothing in my proposal really hinges on that assumption, and ProcP could probably also be absent without affecting the argument. All possible verb meanings can be built out of this minimal inventory of subevents. In the following, I will employ examples from Norwegian to show how this works for different types of verbs.

As already mentioned, I share the view that in order to account for both argument structure flexibilities and their restrictions, insertion must somehow be constrained so as to avoid the generation of ungrammatical structures. The way in which Ramchand represents this, is by tagging a lexical item with categorial features (in terms of Init, Proc, Res) which regulate what heads the lexical head are associated with. One argument can be linked to more than one subevent, which is represented by coindexation. Thus, the lexical entry for a basic unergative verb like *dance* can be represented like this:

(21) *dance*: [Init$_i$, Proc$_i$]

On this basis, a structure like (22), for a sentence like *John danced* is generated:

(22)

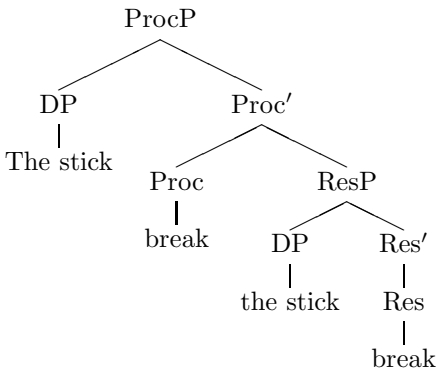


Here, the lexical encyclopaedic content of the verb is linked to two heads, and the participant *John* is simultaneously the Initiator and the Undergoer. The verb *dance* does not entail any endpoint or result state, so ResP is not present. The entry for a basic unaccusative verb like *break* is represented in the following way:

(23) *break*: [Proc$_i$, Res$_i$]

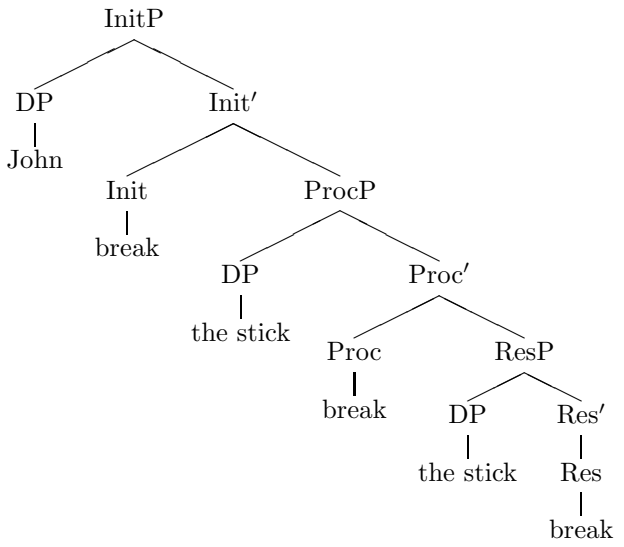
Break obligatorily entails a Result state, where something gets broken. The same participant is simultaneously Undergoer and Resultee. The structure for *the stick broke* is shown in (24):

(24)



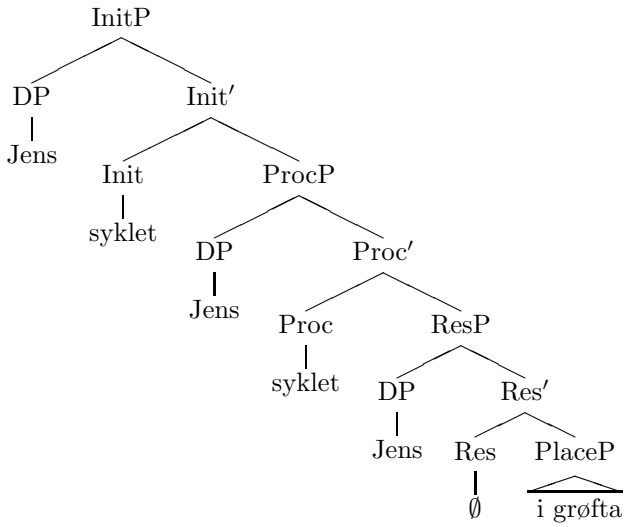
Break can be causativized, which is done by addition of InitP, which licenses an extra participant. The resulting structure is shown in (25), which is the type of structure that is assumed for all telic transitive verbs:

(25)



Some verbs which do not entail themselves entail the presence of an endpoint or result state can nevertheless give rise to telic readings when they combine with different types of material which identifies a final result state. In chapter 2, I discuss a class of examples where some verbs of manner of motion which themselves refer to atelic activities, can combine with a locative PP which defines the endpoint. An example of the right kind is a sentence like *Jens syklet i grøfta*, 'Jens biked in the ditch', which is ambiguous between a locative and a directional reading for the PP. The relevant structure for the directional reading is shown in (26):

(26)



I assume that on the directional reading, the endpoint is given by a null Res head whose content is not identified by the lexical verb, which itself does not imply an endpoint. The locative PP, which I assume is an instance of the category Place, then appears in the complement to the null Res head. Different languages differ with respect to the availability of a null ResP in their inventory, but Norwegian seems to be quite free in this respect, as a null ResP can be employed both with verb-particle constructions, locative PPs which are interpreted as directional, and e.g. with resultative constructions.

1.3.3 The argument structure of adpositional phrases

Although the main topic of this dissertation is various ways in which adpositional phrases (specifically: prepositional phrases) combine with different types of verbs, and what interpretations that arise, I have not in any great detail considered the internal functional structure projected by different types of adpositional phrases.

Spatial adpositions can often be characterized as denoting asymmetric relations between a Figure and a Ground, where the Figure is the entity which is located or in motion, and the Ground is the reference object which it is being located in relation to. These terms originally stem from work within gestalt psychology, but have been employed in work by Talmy (Talmy 1978, Talmy 2000) to describe the basic relations denoted by spatial adpositional phrases. The following sentences from Svenonius (2004a) show that the Figure-Ground relation is asymmetrical and cannot be reversed:

(27) a. Max stuck his finger in his nose.
b. #Max stuck his nose around his finger.
c. The sheep chased the cat up a tree.
d. #The sheep chased a tree under the cat.

Although I will not actively employ this distinction in this dissertation, I still assume that patterns like the ones observed by e.g. Talmy and Svenonius are robust facts about how language expresses spatial relations. Probably, the distinction can also be transferred to some of the more abstract other uses which adpositions have been put to, but exploring this issue in more detail lies outside of the scope of the present work.

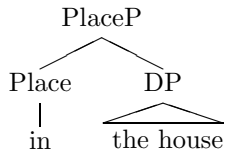
Because of the indirect relationship between the external argument

and the verb as opposed to that of the verb and its complement, Kratzer (1996) and others have argued that the external argument is introduced by a functional head v which dominates the verb phrase. Analogous to this, and because of the asymmetrical relation between Figure and Ground in adpositional phrases, people have proposed that the Figure is introduced by a functional head p dominating the lexical projection of the preposition (cf. e.g. van Riemsdijk 1990, Rooryck 1996, or Svenonius 2003).

In chapter 4, I assume that the preposition *til*, 'to', which combines with semelfactives and degree achievements is different from the homophonous spatial preposition *til* in having the property that it does not introduce an external argument. In a split P model of the prepositional phrase, I could then have assumed that these Ps are bare Ps which lack the p layer which is necessary for introducing the external argument. However, nothing in my proposal hinges on that particular assumption, so I have chosen to simply use the label PP for the external-argument-lacking version of *til*.

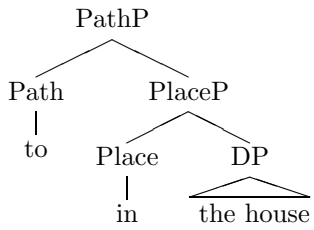
For spatial adpositional phrases, I will adopt the insight of much recent work on the syntax of spatial PPs according to which the main distinction between location and direction/goal is represented in terms of differences in the internal functional structures projected by the respective PPs (cf. e.g. van Riemsdijk and Huybregts 2002, Koopman 2000, den Dikken 2003, Svenonius 2004c). For locative PPs, I will assume that they are PlacePs, even on their directional reading. Unambiguously directional PPs, on the other hand, are always PathPs. Accordingly, a locative PP like *in the house* will be assigned a (schematic) structure like the one in (28), while a directional PP like *into the house* will be assigned a structure like the one in (29), where a Path head *to* takes a PlaceP complement.[1]

(28)



[1]Svenonius (2004c) argues that the complement of Place is a KP (for case), but I abstract away from that in the following representations.

(29)

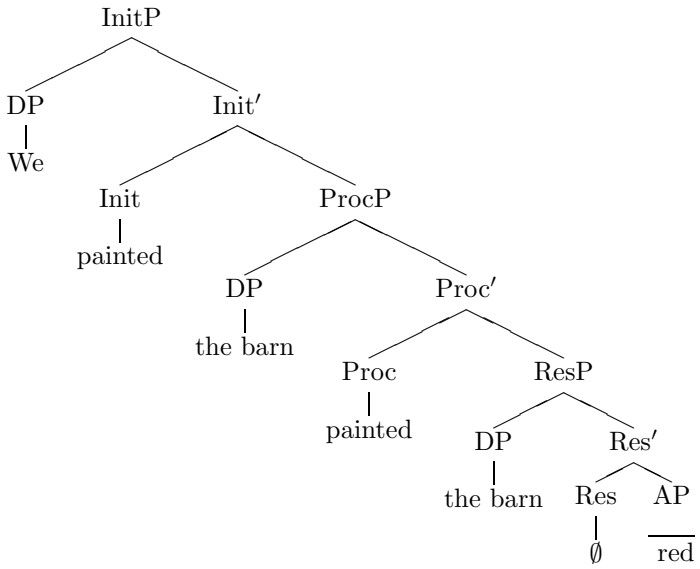


While I do not deny the fact that the extended projections of adpositions may contain more functional structure than what I will be assuming in this work, and which contribute in specific ways to interpretation, I have chosen to remain largely agnostic with respect to these issues, because my main concern is with the external distribution of adpositional phrases, and how they interact with the verbal predicational structure in specific ways. In addition to the ordinary inventory of prepositions, I assume that the inventory of adpositional phrases also contains null elements. As I argue in chapter 3, the possession relation decomposes syntactically into an abstract verbal predicate Pred plus a null prepositional component $\emptyset_P$, where the prepositional component incorporates into the abstract verbal predicate.

The distinction between Place and Path also has its parallel in the event domain; in exactly the same way as Path embeds PlaceP in directional adpositional phrases like *into*, ProcP embeds ResP in the verbal domain, e.g. in an example like *we painted the barn red*, where the resultative AP *red* defines a final state, parallel to the role of PlaceP has in PathP.

A simplified structure is given in (30):

(30)



In that way, PathP can be thought of as the parallel in the adpositional domain to the verbal ProcP, and PlaceP as the parallel to ResP. This is also reflected in the way in which these projections combine with each other, and the interpretations that arise. PathP only combines with ProcP, where it gives rise to a Path which is homomorphic with respect to the process denoted by the verb. In the same way, PlaceP only combines with ResP, and it is interpreted as a location (or state).

1.4 Main findings of the dissertation

This dissertation is about prepositional phrases, argument structure, and how the argument structure of prepositional phrases is integrated with the argument structure of the verb to give rise to different types of interpretations.

I develop a model of the relation between argument structure and syntactic structure where the interpretation of event participants is a consequence of the structural positions they appear in in a fine-grained decompositional model of the verb phrase. The analysis is then applied to three different types of verb-PP relations. I hope to show that there are good reasons to assume that the nature of argument structure is essentially syntactic, and that there is no need for specific argument

structure-changing operations taking place in the lexicon.

In the second chapter, I examine instances where a verb of motion combines with different types of spatial prepositional phrases, and I show that the verb and the PP contributes to the interpretation in various ways. The main purpose of the chapter is to get a clearer picture of how directional/goal of motion readings for the PP arise. As we will see, in some cases, the notion of an endpoint is contributed by the verb, and the PP simply serves to further specify this endpoint. In others, the verb doesn't provide an endpoint at all, and here, the semantics of the prepositional phrase determines whether the combination is telic or not.

Following e.g. Koopman (2000), den Dikken (2003), or Svenonius (2004c), I assume that spatial prepositional phrases contain a rich functional structure, where the distinction between Path and Place will be the most important for the analysis. Specifically, I argue that directional PPs are PathPs, while locative PPs are PlacePs. In combination with a limited set of verbs of motion a locative PP can get a directional reading, in which case I assume that they are not PathPs, but PlacePs which can only get a directional reading in a specific structural configuration. The distinction between Path and Place is also reflected in their different syntactic behaviour, which follows both from differences in the syntactic structures which the PPs appear in, but also from the distinction between Path and Place.

Truly directional PPs are relatively free with respect to the positions they appear in, which I assume follows if they are PathPs, which have the property of being referentially "complete". However, locative PPs which only get a directional reading in combination with a limited set of verbs, are not PathPs, but PlacePs, where a directional reading is only available when they appear as the sister to a projection of a verb which itself licenses an endpoint. Consequently, if this relation is disrupted, only a locative reading emerges. Thus, I assume that PlaceP is referentially "incomplete" in that PlaceP itself never is able to give rise to a goal of motion interpretation. However, when they refer to locations, PlacePs are even freer in their distribution than PathPs. In that case, I assume that PlacePs are simply adjoined to a projection of the verb, although nothing in principle rules out alternative analyses.

The topic of the third chapter is benefactive and malefactive double object constructions in Norwegian and German, where I argue that there is a possession relation between the Recipient and the Theme, and where the possession relation decomposes in the syntax into a null preposition plus an abstract verbal predicate Pred. Hence, in a sentence like *John*

baked Mary a cake the Recipient *Mary* is introduced as the internal argument of the null preposition, while the Theme is introduced by the p head in a split P model. The empty preposition must be licensed, which is achieved when it moves into a position from which it can be incorporated into the abstract verbal predicate. Alternatively, the empty preposition can be licensed by dative case morphology, in which case it does not have to move, which is an option available in German.

The fourth chapter looks at (transitive and intransitive) semelfactives and degree achievements, which on their base readings are vague between denoting single changes or extended events. However, in Norwegian (and Swedish), a PP with *til*, 'to', can combine with semelfactives and degree achievements, in which case only the single change interpretation is available. Contra what has previously been assumed (e.g. by Smith 1997 and Toivonen 2003), I argue that on their base readings, semelfactive predicates are telic, and similarly also for degree achievements. However, the endpoint denoted by the predicate is crucially underspecified or incomplete, and as such, it can be conceived of as non-distinct from the starting point of the event. Thus, the singular events can be concatenated under an operation known as *S-summing* (cf. Kamp 1979, Rothstein 2004) which derives extended events from minimal events in case certain restrictions are met. With semelfactives and degree achievements, S-summing can apply because of the underspecification of the endpoints. When *til* is present, S-summing cannot apply, and only the singular reading is available. This follows, I argue, if the function of *til* is to add content to the underspecified endpoint entailed by the predicate, which blocks S-summing from applying. The preposition *til* as it is employed here is distinct from the Path-denoting preposition *til*, in that it does not introduce an external argument. This might seem surprising at first glance, but as we see, there are also other cases in which this 'unaccusative' version of *til* is employed, e.g. to mark possession and Experiencers.

Chapter 2

Prepositions: Paths and Places

2.1 Introduction

In this chapter, I examine the syntactic and semantic properties of different types of spatial prepositional phrases in Norwegian. The purpose is to investigate the different ways in which spatial PPs combine with verbs of motion to give rise to locative and directional readings.[1] I will use the terms 'locative' and 'directional' as descriptive labels; locative PPs serve to locate entities or events in space, directional PPs specify a direction and an endpoint for the motion.[2]

The term 'motion verb' will be used as a descriptive label for a class of verbs which refer to motion or displacement. The properties of this class of verbs have been described by Levin (1993), who makes further distinctions within the class of verbs of motion. For the present purposes, the most important distinction will be the one between *verbs of manner of motion* and *verbs of inherently directed motion*. According to Levin's description verbs of manner of motion "describe motion that typically, though not necessarily, involves displacement, but none of them specifies an inherent direction as part of its meaning. All of these verbs have meanings that include a notion of manner or means of motion. They

[1] Some of the material included in this chapter has been published as Tungseth 2003 and Tungseth 2005. However, the analysis developed here will deviate in certain respects from the proposals put forth there.

[2] In addition to these two categories of spatial PPs, we have instances of so-called route prepositions, which specify a path or route, but which in themselves never specify an endpoint. Examples include prepositions such as *towards* or *along*. I will not consider prepositional phrases with route prepositions, for lack of space.

differ from each other in terms of the specific manner or means" (p.264). Verbs of inherently directed motion specify the direction of motion, even if an overt directional complement is not present.

How to properly characterize motion relations has been discussed extensively in the literature. Some authors treat motion events as referring to a series of snapshots, where each snapshot depicts the moving object at a different location. This line of thinking has been suggested e.g. by Tenny (1992) or Verkuyl (1993). Jackendoff (1996) rejects the 'snapshot approach' as imprecise; since it only specifies a sequence of momentary states, and not as a sequence of motion, it loses the fact that the object is moving. Instead, he proposes that motion should be encoded as continuous change over time, where the position of the theme is mapped onto a path in time. This is similar to the view held by e.g. Krifka (1998), who assumes that motion verbs describe motion relations (MRs) between an event e, a path p and a figure x, where x is mapped onto p in e.

An important aim of this chapter is to arrive at a deeper understanding of the different ways in which directional readings can arise. The meaning of the verbal predicate and different types of spatial prepositional phrases contribute to interpretation in different ways; sometimes, the directional interpretation comes from the verb, in other cases, the directional meaning derives from the semantic properties of unambiguously directional prepositional phrases.

Some verbal predicates like e.g. *fall* imply an endpoint, and can give rise to telic readings also when no goal PP is present.[3] These predicates can combine with a locative prepositional phrase which further specifies that endpoint, as in (1a), where the interpretation of the PP is directional. Other verbs, like e.g. *run*, can optionally give rise to directional interpretations when they combine with a locative PP; e.g. (1b) is for some speakers potentially ambiguous between a locative and a directional reading of the PP, but when an unambiguously directional PP is present, only a directional reading arises, as in (1c). In yet other cases, the verbal predicate does not specify a final point. In (1d), the locative PP can only be interpreted as locating the event; a directional reading can only arise if the prepositional phrase itself is directional, as in (1e).

[3]Whether this property is part of the lexicalized meaning of the predicate or derives from our knowledge about the world is not so important here. For instance, while the verb *fall* is normally thought of as denoting an inherently telic event, a sentence like *The moon has been falling for millennia* is still fine. Thus, contextual/pragmatic factors also contribute to the interpretation.

(1) a. John fell in the water. (directional)
b. John ran in the room. (ambiguous)
c. John ran into the room. (directional)
d. John danced in the room. (locative)
e. John danced into the room. (directional)

The difference between direction and location is reflected in the basic distinction between Place and Path, where Place is associated with stative location and Path is associated with motion and direction. I will follow recent proposals in the literature by assuming that Place and Path are functional heads in the extended projection of the preposition (cf. e.g. Koopman 2000, van Riemsdijk and Huybregts 2002, or den Dikken 2003).[4]

I start out by examining sentences like the ones in (1a) and (1b) where a locative prepositional phrase in combination with a limited subclass of verbs is ambiguous between a directional and a locative interpretation. I argue that the directional and locative interpretations arise from differences in the syntactic positions for the prepositional phrase in each case, which is consistent with their different behaviour with respect to a number of tests which are sensitive both to syntactic, semantic and phonological distinctions.

Having done that, I move on to looking at the behaviour of unambiguously directional (goal) prepositions like *til*, 'to', which will be treated as instances of the category Path. Although we should expect unambiguously directional PPs to pattern essentially in the same way as locative PPs on their directional meanings, we will see that the patterns are not entirely as expected. This fact which will have to receive a principled explanation.

Spatial PPs vary with respect to their internal complexity. Both locative and directional PPs can either be simple (in a non-technical sense), by which I mean that they consist of a single preposition, like e.g. *at* (locative) or *to* (directional). They can also be complex, like e.g. *onto* (directional) or *in front of* (ambiguous), in which case they consist of a locative or directional particle plus a simple locative preposition. In the following, I will occasionally use the terms 'simple' and 'complex' to describe PPs which contain a single preposition like *i*, 'in', or *til*, 'to'.

In this chapter, I have chosen to first lay out the data and diagnostics, in order to get a clearer picture of the patterns which emerge, before moving on to the actual analysis where each type of preposition-verb-

[4]The term 'path' was introduced by Jackendoff 1983 in order to describe PPs with motion verbs.

combination will be treated separately.

In combination with a subset of verbs of manner of motion, PPs with locative prepositions are ambiguous between referring to the endpoint of the event, or specifying the location for the motion event. Such prepositional phrases are invariably instances of the category PlaceP; the differences in interpretation are the consequence of the different structural positions they are merged into in the decompositional structure of the verb phrase. On their directional readings, these PPs appear low down in the verb phrase as complements to the Res head in a Ramchandian decompositional structure like the one outlined in the previous chapter. Here, they are interpreted as goals of motion. On their locative reading, they appear higher up in the structure as adjuncts to the verb phrase, where they specify the location for the event.

Unambiguously directional PPs (i.e. PPs which can never get locative readings) are argued to contain an extra functional layer Path, which gives rise to a directional interpretation for the PP. These PPs do not depend on an endpoint implied by the verb to be interpreted as goals of motion, they can also do so with a wide range of atelic manner-of-motion verbs. With atelic motion verbs, I assume that PathPs appear in the complement position to the Proc head where they give rise to a path or scale which is homomorphic with respect to the verbal process. Thus, it is the properties of the prepositional phrase which determine whether the event is telic or not, in the fashion of Zwarts (2005). If PathP contains a PP like *til*, 'to', which denotes a bounded path, the interpretation of the event as a whole is bounded. If the PP contains a preposition like *mot*, 'towards', which can never denote a bounded path, the interpretation of the event is atelic.

2.2 Locative prepositional phrases and verbs of motion

In Norwegian, and to a certain extent also in English, a sentence containing a verb of motion and a prepositional phrase which consists of a locative preposition like *i*, 'in', *på*, 'on', or *under*, 'under', can be seen to be ambiguous between a telic reading of directed motion and an atelic reading of located motion. A few examples with different prepositions are given in (2) (intransitive verbs) and (3) (transitive verbs):[5]

[5]In the following, I will use complex verb forms to avoid issues regarding the position of the direct object.

(2) a. Jens har syklet i grøfta.
Jens has biked in ditch.the
'Jens has biked in the ditch.' (ambiguous)
b. Per har hoppet i elva
Per has jumped in river.the
'Per has jumped in the river.' (ambiguous)
c. Flasken har rullet i åkeren.
bottle.the has rolled in field.the
'The bottle has rolled in the field.' (ambiguous)

(3) a. Hårek måtte trille vogna i garasjen.
Hårek must roll cart.the in garage.the
'Hårek had to roll the cart in the garage.'
b. Per burde bære skiene på loftet.
Per should carry skies.the on attic.the
'Per should carry the skies in the attic.'
c. Hans har skjøvet pappeskene under senga.
Hans has pushed cardboard.boxes.the under bed.the
'Hans has pushed the cardboard boxes under the bed.' (ambiguous)

A PP like *i grøfta*, 'in the ditch', in (2a) can either be interpreted as the endpoint/goal of the biking event, or it can simply specify its location.

2.2.1 Types of verbs and interpretations of the PP

While the sentences in (2) and (3) above are ambiguous between locative and directional readings for the PP, it can only be interpreted as directional in the sentences in (4). The verbs used in (4) belong to Levin's class of *put*-verbs, which are inherently directional, and here, a locative PP only serves to further specify the endpoint defined by the predicate.

(4) a. Marit har satt brødet i ovnen.
Marit has put bread.the in oven.the
'Marit has put the bread into the oven.'
b. Hun har satt seg på auditoriet.
she has sat herself on auditorium.the
'She got seated in the auditorium.'
c. Dere burde putte bøkene i esker.
you should put books.the in boxes.the
'You should put the books in boxes.'

d. Hun har lagt boka under senga.
she has put book.the under bed.the
'She has put the book under the bed.'

However, not all verbs which refer motion or displacement can combine with locative prepositions to give rise to directional interpretations. For instance, the only available interpretation for the PPs in the sentences in (5) is locative. According to Levin's classification, these verbs all belong to the class of verbs of manner of motion. Although some manner of motion verbs *do* license directional interpretations for locative PPs, this is never possible with the verbs used in (5).

(5) a. Petter måtte svømme i innsjøen.
Petter had.to swim in lake.the
'Petter had to swim in the lake.'
b. Marit har jogget i skogen.
Marit has jogged in forest.the
'Marit has jogged in the forest.'
c. Vi har spasert i parken.
we have strolled in park.the
'We have strolled in the park.'
d. Barna har danset i stua.
children.the have danced in living.room.the
'The children have danced in the living room.'

Yet other verbs again do not refer to displacement, and can never combine with directional PPs. However, some of these verbs can appear in resultative constructions with a fake reflexive as shown by (6c), where the PP specifies the endpoint of the event, but where the singing event is not really conceived of as a motion event. Rather, the event is conceived of as a causative event where Jens's singing caused him to end up in the opera (as a singer).

(6) a. Jens har sunget til stua.
Jens has sung to living.room.the
'Jens has sung to the living room.'
b. Jens har sovet til skolen.
Jens has slept to school.the
'Jens has slept to school.'
c. Jens har sunget seg til operaen.
Jens has sung himself to opera.the
'Jens has sung himself to the opera.'

The sentence in (6a) *can* get a reading where the *til*-PP gets a modifying function in which it is interpreted as a property of the subject. However, this sentence crucially *cannot* get a reading which can be paraphrased as *Jens sang, and as a result, he ended up in the living room*, where the PP specifies the final point of a path of motion.

Thus, since a directional interpretation is available for the locative PPs in (2) –(4), but not in (5) or (6a)-(6b), there must be something which the verbs in (2) - (4) have in common, but which the verbs in (5) lack, which is necessary in order to license a directional interpretation.The table in (7) sums up the findings so far, where √ means that a combination is OK, * marks that it is impossible, and % signals that only a subset of speakers allow that combination. A location-denoting PP can of course appear with all these verbs, but that's always possible. What I am interested in here, is the extent to which a locative PP can get a directional interpretation.

(7)

	dir. reading of loc. PP	**dir. PP**
falle, 'fall'	√	√
løpe, 'run',	%	√
svømme, 'swim'	*	√
synge, 'sing'	*	*

2.2.2 Goal of motion interpretations: Thomas (2001) and Folli and Ramchand (2002)

Thomas (2001) discusses cases from English where a locative PP gets a directional interpretation. She argues that the locative prepositions *in* and *on* can only combine with verbs which contain an element of direction as part of their inherent meaning. Following proposals by Rooryck (1996), she argues that directional prepositional phrases consists of a lexical projection PP which is embedded inside of a functional projection *p*. The head of *pP* contains a feature [direction] which forces an unambiguously directional preposition to move from the lexical and into the functional head. However, with (ambiguous) *in* and *on*, the preposition does not raise to *p*. Only verbs which themselves contain an element of direction permit the preposition to stay in P, where a directional interpretation arises via a matching relation between the features of the verb and the features on *p*.

Folli and Ramchand (2002) also discuss different strategies in which goal of motion interpretations can be formed in English and Italian. Ac-

cording to their analysis, goal interpretations have two sources. Telicity is either related to a functional projection RP (i.e. ResP) in the decompositional structure of the verb phrase, which can embed a locative PP specifying the endpoint of motion, or a goal interpretation can arise through adjunction of a PP whose inherent properties gives rise to a telic interpretation. In Italian all simple prepositions are purely locative, and hence, a Res head is necessary to give rise to directional readings. English, on the other hand, has a class of prepositions which are unambiguously directional (e.g. *to*), which are able to create goal interpretations even in cases where a ResP is not licensed by the verbal predicate.

I adopt Thomas's basic insights that the verbs which permit directional readings of locative PPs must be verbs of manner of motion which incorporate an element of direction as part of their meaning. In addition to this, I assume with Folli and Ramchand (2002) that in order to give rise to a goal reading for locative PPs, a Res head must be present in the lexical decompositional structure for the verb phrase.

Specifically, I assume that there is a class of manner of motion verbs where the verb root $\sqrt{}$ is optionally specified for a feature [direction], which can license a null ResP. However, since the feature is optional, ResP is also only optionally present, allowing for activity/process readings of the verb.[6] ResP in turn takes the PlaceP in its complement, which is interpreted as the final point, which follows from the semantics of ResP. ResP defines a final state, and a PP in its complement position can only be interpreted as a location. With verbs where a locative PP can be interpreted as a goal of motion, the notion of a path really is provided by the verb, where ProcP defines the nature of change over time. A PP in the complement to ResP serves to further specify the result state provided by ResP, by defining a final location. This is actually consistent with the interpretation of completive temporal adverbials with *i* α_{time}

[6]In Tungseth (2005), I phrased this in terms of interpretable and uninterpretable features and checking via Agree, as in work by Chomsky (1999), subsequent work, or Pesetsky and Torrego (2001), or Pesetsky and Torrego (2004). There I assumed that all spatial prepositions project a layer of functional structure which I termed FP. In case of a directional interpretation of the PP, the head of FP must be licensed, which can happen in one of either two ways. If the PP consists of a single preposition like *i*, 'in', or *på*, 'on', the F head is empty, and must be licensed by an interpretable feature on the verb of motion, where the F head carries the uninterpretable variant of the feature. The other way in which F could be licensed, was by containing overt lexical material. However, I don't want to adopt that analysis here. The reasons are connected to the location of the features, and ultimately also to the distinction between lexical and functional categories, which more or less breaks down in the constructionist model assumed here.

when they are added to events where a locative PP is interpreted as a goal. Here, the adverbial gets an inceptive interpretation instead of one where it measures the time up to the completion of the event (cf. (11) below), which is consistent with the PP never actually denoting a goal, but rather a final point.

Hence, ambiguous PPs are invariably PlacePs, and their differences in interpretation is related to differences in the syntactic positions these PlacePs are merged into. However, as we will see later on, this is only one way in which spatial PPs can combine with verbs of motion in order to give rise to directional readings. The other option concerns PPs which are unambiguously directional, which I will assume are instances of the category PathP. PathP is independent of the verb for a directional interpretation, and can appear in a much wider range of contexts, as shown by the sentences in (39) above. Hence, I assume that when a PathP combines with a verb of manner of motion, no ResP is present in the structure; the notion of an endpoint simply stems from the semantics of the preposition (cf. e.g. Zwarts 2005).

Ramchand (2005) argues that only verbs which themselves license a Result subevent can give rise to telic interpretations in combination with locative PPs which contain of a single locative preposition. For instance, a verb like *break*, which always entails a result state, can appear with a resultative PP with unambiguously locative preposition *in*, as in (8). Ramchand employs this property as a diagnostic for the presence of a result subevent in the fine-grained decompositional structure of the verb phrase.

(8) a. John broke the stick.
b. John broke the stick in pieces.

Accordingly, all verbs which refer to motion can combine with directional PPs to give rise to telic interpretations, but only verbs which themselves lexicalize an endpoint can combine felicitously with simple locative prepositions to do so. A verb like *fall* is conceived of as specifiying an endpoint (whether it derives from world knowledge or not), so it should be able to combine with a locative PP to give a directional reading. A verb like *dance*, on the other hand, simply refers to an activity, and can only combine with unambiguously directional PPs. Here, a locative PP only specifies the location of the event, and can never get a directional reading (hence the star in (9b)).

(9) a. John fell in(to) the water.
b. *John danced in the room.

But in addition to verbs like *fall*, which themselves entail the presence of a result state, we have verbs like *run* and *roll*, which do not in themselves license an endpoint. Still, such verbs can for some speakers combine with locative prepositional phrases to give rise to goal interpretations.[7]

2.3 Diagnostics

Locative PPs which are ambiguous between locative and directional interpretations, behave differently with respect to a number of diagnostics, dependent on the interpretation. Later on, I will argue that this is related to differences in the respective structural positions which these PPs are merged into.

2.3.1 Temporal adverbials

Consider first the acceptability of temporal adverbials with *i* α_{tid}/*på* α_{tid}, 'for α_{time}/in α_{time}', which go with atelic and telic events, respectively.[8] Both adverbials are accepted with these verbs, but on different interpretations. When they occur with *i* α_{tid}, 'for α_{time}', the reading is locative (cf. (10)), with *på* α_{tid}, 'in α_{time}', the reading is directional (cf. (11)):[9]

(10) a. Jens har syklet i grøfta i en time.
Jens has biked in ditch.the in an hour
'Jens has been biking (around) in the ditch for an hour.'
b. Per har hoppet i vannet i ti minutter.
Per has jumped in water.the in ten minutes

[7]This is an area where thera appears to be some inter-speaker variation, and the speakers who allow this, must be able to license a null ResP also with a class of verbs which do not themselves specify an endpoint. In my analysis, this is only possible in case the verb possesses a [direction] feature.

[8]With these adverbials we have a discrepancy between the glosses and translations; Norwegian employs adverbials with the preposition *i*, 'in', to signal durativity/atelicity, while English uses *in* for the exact opposite purpose, namely to measure the time interval up to the completion of the event. Thus, it is important to carefully distinguish the glosses and translations of the Norwegian examples.

[9]While the English equivalents of the sentences in (10) and (11) may vary in verb form between progressive (locative) and simple past/present (directional), the Norwegian examples are all simple present/past; the different interpretations are only overtly signalled by differences in the temporal PPs which they occur with.

'Per has been jumping (up and down) in the water for ten minutes.'

c. Båten har drevet under brua i en time.
boat.the has drifted under bridge.the in an hour
'The boat has been drifting under the bridge for an hour.'

(11) a. Jens har syklet i grøfta på et øyeblikk.
Jens has biked in ditch.the on a moment
'Jens has biked into the ditch in a moment.'

b. Per har hoppet i vannet på brøkdelen av et sekund.
Per has jumped in water.the on fraction.the of a second
'Per has jumped into the water in a fraction of a second.'

c. Båten har drevet under brua på et øyeblikk.
boat.the has drifted under bridge.the on a moment
'The boat has drifted under the bridge in a moment.'

But when these verbs appear with no PP, only *i* α_{tid} is accepted, which indicates that the event is atelic. The verb *hoppe* (cf. (11b)) is an instance of a semelfactive verb, where the predicate in isolation is ambiguous between referring to a single occurrence (one jump) or to an activity (a series of jumps). *I* α_{tid} only appears on the latter reading. The specific properties of semelfactives are discussed in more detail in chapter 4.

Another thing which is interesting to notice, is the choice of temporal adverbials in the sentences in (11). These adverbials all specify very short intervals, and the adverbial gets an inceptive reading where it measures the time up to the initiation point of the event. In this respect, these sentences are close in meaning to achievements like *John won the competition*, where temporal adverbials with *in* also are interpreted as inceptive. Actually, the interpretation of the time adverbial varies with the choice of preposition for the directional PP. With PPs containing single point-denoting prepositions like *i*, 'in', an inceptive reading arises (cf. (12a)). However, if the preposition is complex (i.e. the PP contains more than one single preposition), the reading of the adverbial is changed into one in which the adverbial gets its usual reading where it measures the interval up to the completion of the event (cf. (12b)). While it is interesting to see the effects that the semantics of the preposition has on the interpretation of the event, it is beyond the scope of this chapter to give such examples a more thorough discussion.

(12) a. Jens har kjørt i elva på et øyeblikk.
Jens has driven in river.the on a moment
'Jens has driven into the river in a moment.'

b. Jens har kjørt ut i elva på tretti minutter.
Jens has driven out in river.the on thirty minutes
'Jens has driven into the river in thirty minutes.'

It is well known (dating back to Verkuyl 1972) that telicity is a property of predicates, not a property of verbs in isolation, and that material in the verb phrase other than the verb may induce telicity, e.g. certain types of direct objects, particles, resultative predicates, or bounded directional PPs. Verb-plus-PP-combinations which are ambiguous with respect to whether the PP defines a goal or a location, are consistent with temporal adverbials with *på*, which measure the time up to the completion of the event, but only on the directional interpretation of the ambiguous PPs. I take this to indicate that these spatial PPs can get a directional reading where they function to specify the endpoint of the event.

2.3.2 VP constituency tests

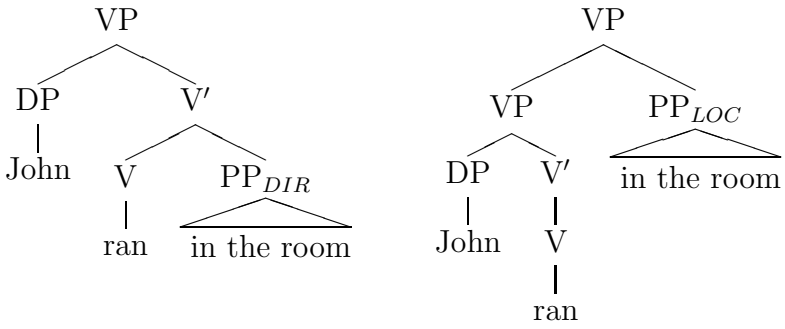
Consider the behaviour of the ambiguous PPs with respect to VP-topicalization ((13)) and *do so*-substitution ((15)), which are sensitive to differences in syntactic structure. Topicalization can only front whole constituents, and thus, the only elements which can be stranded under topicalization are the ones which do not appear in a position internal to the fronted constituent. Consider the sentences in (13), where the VP has been fronted, stranding the *i/på*-PP.

(13) a. Trille vogna burde Hårek gjøre i garasjen.
roll cart.the should Hårek do in garage.the
'What Hårek should do in the garage, was roll the cart.'
b. Bære skiene måtte Per gjøre på loftet.
carry skis.the had.to Per do on attic.the
'What Per had to do in the attic, was carry the skis.'
c. Dytte kjelken har barna gjort i sølepytten.
push toboggan.the have children.the done in puddle.the
'What the children have done in the puddle, was push the toboggan.'

Here, only a locative interpretation of the PP is available, and coupled with the observation that the directional reading is available also if the PP is moved along with the VP, this suggests that locative and directional PPs appear in different structural positions. Later on, I will propose an analysis of such cases according to which the locative-directional ambiguity of locative PPs follows from differences in the syntactic structures

projected, as indicated by the schematic structures in (14), for directional and locative interpretations, respectively:

(14)



The data from *do so*-substitution in (15) (Nor. *gjøre det samme*, lit. 'do the same thing') also support the hypothesis that locative PPs which are interpreted as directional appear VP-internally, while PPs which are interpreted as locative appear higher up in the structure. Again, only a located motion interpretation of the PP is available:

(15) a. Jens har syklet i grøfta og Per har gjort det samme
Jens has biked in ditch.the and Per has done the same
i garasjen.
in garage.the
'Jens rode his bike in the ditch and Per did so in the garage.'

b. Per har hoppet i vannet og Jens har gjort det
Per has jumped in water.the and Jens has done the
samme i grøfta.
same in ditch.the
'Per jumped (up and down) in the water and Jens did so in the ditch.'

c. Hårek har trillet vogna i garasjen og Hans har gjort
Hårek has rolled cart.the in garage.the and Hans has done
det samme i hagen.
the same in garden.the
'Hårek rolled the cart in the garage and Hans did so in the garden.'

2.3.3 Ordering of adverbials

Adverbial placement can also help in teasing out the two different meanings of these sentences. According to Nilsen (1998), adverbial PPs in Norwegian are hierarchically ordered. When more than one adverbial PP are present simultaneously, the unmarked order between them is the one in (16) (from Nilsen 1998:109):

(16) [V, PP_{DIR}, PP_{INST}, PP_{DIR}, PP_{TEL}, PP_{ATEL}, PP_{LOC}, PP_{TEMP}]

According to Nilsen's hierarchy in (16), directional PPs can appear in two positions in the clause.[10] Either they can appear in the position immediately following the verb, or in the position following instrumentals, but preceding temporal PPs.[11] Locative PPs, on the other hand, follow instrumental and temporal *i*- or *på*-PPs (Nilsen's *telic* and *atelic* PPs, respectively).

Nilsen argues that adverbial PPs are best treated as reduced relative clauses on the event, taking the event (AspP) in their specifier (cf. Barbiers 1995). Thus, in a sentence containing a locative PP, for instance, the event argument appears in the specifier of the locative PP. This line of argumentation is compatible with Kayne's Linear Correspondence Axion (Kayne 1994). For convenience, I will assume right-adjunction of locative PPs, and I assume that the results are also compatible with a Kaynean solution.

Disregarding for the moment issues of adjunction and the exact structural position of adverbial PPs, the adverbial hierarchy in (16) can be employed as a diagnostic. Since instrumental PPs can either precede or follow directional PPs, but must precede locative PPs, we expect the order where the instrumental PP precedes the ambiguous spatial PP to allow both readings, while if the the ambiguous spatial PP precedes the instrumental PP, only the directional reading should be available. The available readings are indicated in parenthesis:

(17) a. Jens har syklet [på trehjulssykkel] [i grøfta].
Jens has biked on tricycle in ditch.the
'Jens biked on his tricycle in the ditch.' (amb.)

[10] Whether both of these positions represent base positions for directional PPs, or whether one order is basic and the other derived via movement, is not really important here. I simply employ Nilsen's hierarchy as a surface diagnostic.

[11] As we will see later in this chapter, this is an oversimplification, since unambiguously directional PPs show a greater freedom with respect to their positioning, but it will suffice for the discussion of the behaviour of the locative/directional ambiguity with locative prepositional phrases.

b. Jens har syklet [i grøfta] [på trehjulssykkel].
Jens has biked in ditch.the on tricycle
'Jens biked in the ditch on his tricycle.' (dir.)
c. Båten har drevet [uten årer] [under brua]
boat.the has drifted without oars under bridge.the
'The boat has drifted without oars under the bridge.' (amb.)
d. Båten has drevet [under brua] [uten årer].
boat.the has drifted under bridge.the without oars.
'The boat has drifted under the bridge without oars.' (dir.)

In (17a), the instrumental PP *på trehjulssykkel*, 'on a tricycle', precedes the spatial PP. Hence, according to the prediction, the only possible interpretation of the PP should be locative, and this is exactly what we get. In (17b), on the other hand, the PPs appear in the opposite order, and the interpretation is unambiguously directional.

Further indications for the position of locative and directional PPs come from the relative ordering of temporal *i*- and *på*-PPs, which follow directional, but precede locative PPs. Hence, if a temporal *i*- or *på*-PP precedes the spatial PP, only a directional reading of the PP should be available.

(18) a. Hårek har trillet vogna [i en time] [i garasjen].
Hårek has rolled cart.the in an hour in garage.the
'Hårek has been rolling the cart for an hour in the garage.'
b. Hårek har trillet vogna [i garasjen] [på to minutter].
Hårek has rolled cart.the in garage.the on two minutes
'Hårek has rolled the cart in the garage in two minutes.'
c. Vi har trillet vogna [i en time] [under brua].
we have rolled cart.the in an hour under bridge.the
'We have been rolling the cart (around) for an hour under the bridge.'
d. Vi har trillet vogna [under brua] [på et sekund].
we have rolled cart.the under bridge.the on a second
'We have rolled the cart under the bridge in a second.'

The sentences in (18) show that the prediction is borne out. In (18a) , the temporal PP precedes the spatial PP, and the only interpretation available for the PP is locative. In (18b), the spatial PP precedes the temporal PP, and here, the spatial PP can only get a directional reading. This is also confirmed by the acceptance of *på to minutter*, 'in two minutes', which is only possible with telic events. Note that (18b) and (18d) are compatible also with temporal adverbials with *i*, which occur

with atelic events. However, when the *på*-adverbial is exchanged for an *i*-adverbial the only available interpretation for the spatial PP is locative.

Generally, it seems to be the case that while adverbial material can intervene between the verb and a spatial PP which is interpreted as locative, this is not so for the directional readings of these PPs. Here, if the verb-PP sequence is separated by an adverbial, the only available reading for the spatial PP is locative. The sentences in (19) confirm this.

(19) a. Jens kjørte sakte i grøfta.
Jens drove slowly in ditch.the
'Jens was driving slowly in the ditch.'
b. Ballen trillet sakte i åkeren.
ball.the rolled slowly in field.the
'The ball was rolling slowly in the field.'
c. Båten drev sakte under brua.
boat.the drifted slowly under bridge.the
'The boat was drifting slowly (around) under the bridge.'

In the next section, we will see that ambiguous spatial PPs (i.e. ambiguous with respect to the locative-directional distinction) also pattern differently with respect to PP-topicalization and clefting, which separate the spatial PP from the verb in exactly the same way as intervening adverbial material.

2.3.4 PP-topicalization and clefting

Another distinction between the locative and directional readings of prepositional phrases with locative prepositions, concerns differences with respect to their displacement properties. When the PP is separated from the verb under topicalization, as in (20) or under clefting, as in (21), the only available reading for the PP is locative.

(20) a. I grøfta har Jens kjørt bilen.
in ditch.the has Jens driven car.the
'In the ditch Jens drove the car.'
b. I vannet har Per hoppet.
in water.the has Per jumped.
'In the water, Per has jumped.'
c. Under brua har båten drevet.
under bridge.the drifted boat.the
'Under the bridge, the boat was drifting.'

(21) a. Det er i grøfta (at) Jens har kjørt bilen.
it is in ditch.the (that) Jens has driven car.the
'It is in the ditch (that) Jens has been driving the car.'
b. Det er i vannet (at) Per har hoppet.
it is in water.the (that) Per has jumped
'It is in the water (that) Per has been jumping.'
c. Det er under brua (at) båten har drevet.
it is under bridge.the (that) boat.the has drifted
'It is under the bridge (that) the boat has been drifting.'

These observations fit into the picture if we assume that locative and directional prepositional phrases differ in their respective internal structures. Specifically, I will argue that even when they get a directional interpretation, locative PPs are PlacePs, and as such they are totally dependent on the verb for a directional reading. If the PlaceP is separated from the verb (by means of intervening adverbial or as a result of movement), only a locative interpretation survives. PPs with directional prepositions (like e.g. *til*, 'to', or *ut*), 'out', are always PathPs, and get directional readings also when they are separated from the verb. As we will see later, this intuition is on the right track.

2.3.5 Distribution of anaphora

Differences in the distribution of anaphora on the locative and directional readings of locative PPs add further support to this hypothesis. On the assumption that directional PPs are merged lower down in the structure than locative PPs, and also lower than the direct object, we get the following prediction: only directional PPs should permit reflexives coreferent with the direct object, which is confirmed by the sentences in (22). When a reflexive is present, as in (22a), only a directional interpretation of the spatial PP is possible, and if the sentence contains a pronoun referring to the direct object, the sentence is ambiguous between a locative and directional interpretation of the spatial PP (cf. (22b)).

(22) a. Jeg har kastet Per$_i$ i svømmebassenget sitt$_i$.
I have thrown Per in swimming.pool.the 3.p.refl
'I have thrown Per in(to) his swimming pool.'
b. Jeg har kastet Per$_i$ i svømmebassenget hans$_i$.
I have thrown Per in swimming.pool.the his
'I have been throwing Per (around) in his swimming pool.'

c. Vi måtte bære kaninene$_i$ i burene sine$_i$.
we had.to carry rabbits.the in cages.the 3.p.refl
'We had to carry the rabbits in(to) their cages.'

d. Vi måtte bære kaninene$_i$ i burene deres$_i$.
we had.to carry rabbits.the in cages.the theirs
'We had to carry the rabbits (around) in their cages.'

Again, the structures which I proposed in (14) make the right predictions; if the PP contains a reflexive bound by the direct object, the only possible reading is directional, since reflexives must be bound by a coindexed c-commanding antecedent. However, if the PP contains a pronoun, the PP can either be interpreted as locative or as directional. I don't have a good explanation for why this is so, but it has been noted in the literature on Norwegian (cf. e.g. Hestvik 1992) that pronouns seem to obey an *antisubject* condition, which might also be the factor at play here. However, what is more important, is that a if the locative prepositional phrase contains a reflexive, only a directional interpretation is available for the PP.

2.3.6 Accent placement/prosody

Hoekstra (1999) argues that accent placement can help in disambiguating the locative and directional readings of a sentence like *dat Jan in de sloot valt*, 'that Jan falls in the ditch'. Adjunct PPs are individually accented, while complements of a verb receive stress on the (lexical) head of the complement. According to Hoekstra (1984), directional PPs form small clause complements to the verb, while locative PPs are adjoined to the V'-level.

These assumptions about accent placement also hold for Norwegian; which the sentences in (23) show (accent placement is indicated by capital letters on the accented elements). In (23a), the verb and the spatial PP each receive individual accent, and the PP is interpreted as locative. In (23b), on the other hand, the accent falls on the DP complement to the verb, and the spatial PP is interpreted as locative.[12]

(23) a. Jens SYKlet i GRØfta.
Jens biked in ditch.the
'Jens was biking around in the ditch.'

[12]This contrast can also be represented in terms of differences in prosodic phrasing; on the directional reading, the verb and the PP forms a prosodic unit, while on the locative reading, this is not the case.

b. Jens syklet i GRØfta.
Jens biked in ditch.the
'Jens biked in(to) the ditch.'
c. Båten DREV under BRUa.
boat.the drifted under bridge.the
'The boat was drifting (around) under the bridge.'
d. Båten drev under BRUa.
boat.the drifted under bridge.the
'The boat drifted (to) under the bridge.'

The link between syntactic structure and accent placement has been investigated e.g. Cinque (1993) and has been further developed by Truckenbrodt (1995). Truckenbrodt proposes two different principles for accent placement; one for verb-complement constructions, the other for cases in which one XP is outside of another XP, which is the case in adjunction structures. The principles are repeated in (24) and (25) below (=Truckenbrodt's (25), p. 175 and (28) p. 177):

(24) In a complement-head configuration, head and complement enter into a single [phonological phrase] headed by phrasal stress on the complement.

(25) If XP is outside of YP and neither XP nor YP is contained within a higher lexically headed ZP, XP and YP are phrased separately.

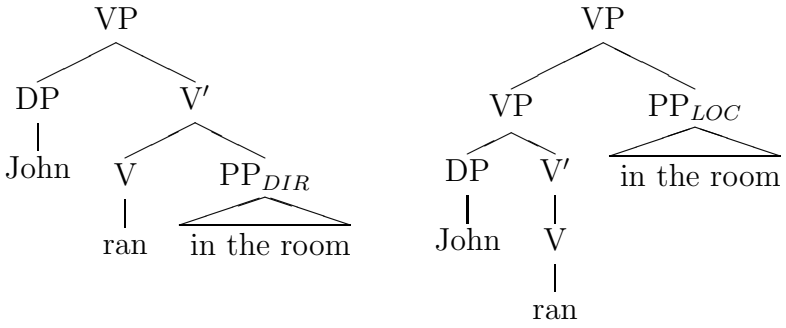
According to (24), the accent in complement-head constructions should fall on the most deeply embedded constituent. Given the assumption when they get a directional interpretation, locative PPs appear in the complement to a projection of the verb, we expect the accent to fall on the DP complement to the verb, and this is confirmed by (23a). On the other hand, if the spatial PP is not contained within a projection of the verb, we predict, by principle (25), that the verb and the DP complement of the preposition should be accented separately, and this is also confirmed, as (23b) shows.

2.3.7 Summary of the findings

We have seen that data from VP constituency tests, facts about adverbial placement, binding of anaphora, and accent placement all point toward a structural difference between the locative and directional readings of locative PPs when they combine with a subset of the verbs of (manner of) motion.

The findings suggest that directional PPs are merged low down in the structure, as complements to a projection of the verb, while locative PPs appear higher up in the structure, possibly in adjoined positions, as in (26) (repeated from (14) above).

(26)



2.4 Expressions of location

Although this chapter mainly centres on expressions of direction, it is useful to consider the properties of prepositional phrases that are clearly locative, especially in the light of the findings of the previous section, where we saw that certain locative PPs can give rise to locative as well as directional interpretations in combinations with a restricted set of verbs.

Svenonius (2004c) discusses the properties of spatial prepositional phrases in English. He argues that spatial PPs project a rich structure of functional projections, where PlaceP expresses location and PathP expresses direction. According to Svenonius, all location-denoting PPs, which he assumes to be syntactic entities of the class PlaceP, have certain properties in common. For instance, they have the ability to occur as complement of stative locational verbs like *remain* or *be* (Norwegian equivalents *bli (værende)* and *være*), they can occur as locative adjuncts in contexts where no motion is implied, they can serve as the complement of *from* (Norwegian *fra*), or they can function as restrictive modifiers to ordinary common nouns. Thus, a Norwegian PP like *bak huset*, 'behind the house', patterns as locative with respect to these diagnostics.[13]

[13]In the case of *bak*, 'behind', a directional meaning can arise when the PP is embedded under a verb which can license a directional meaning, as with other locative PPs. Hence, a sentence like *Hunden løp bak huset*, 'The dog ran behind the house', is ambiguous between a directional and a locative reading of the PP.

(27) a. Hunden ble værende bak huset.
dog.the was being behind house.the
'The dog remained behind the house.'
b. Hunden bjeffet bak huset.
dog.the barked behind house.the
'The dog was barking behind the house.'
c. Hunden løp fra bak(om) huset.
dog.the ran from behind house.the
'The dog ran from behind the house.'
d. Hunden bak huset.
dog.the behind house.the
'The dog behind the house.'

Locative PPs can also be complex, in which case they consist of a locative particle like *inne, ute, oppe, nede*, 'in, out, up, down', taking a simple locative PP complement, as in (28). Locative particles in Norwegian contain the suffix *-e*, so they are identified as unambiguously locative. Directional particles never contain this suffix.

(28) a. Hunden løp inne i huset.
dog.the ran in in house.the
'The dog was running inside the house.'
b. Eskene stod oppe på loftet.
boxes.the stood up on attic.the
'The boxes were standing in the attic.'
c. Det bor et lite spøkelse nede i kjelleren.
It lives a small ghost down in basement.the
'A small ghost lives in the basement.'

Locative particles can appear on their own, (i.e. with implicit Ground argument of P), in which case they specify a location (cf. (29a)), they cannot on their own take a complement DP (cf. (29b)); this is only possible if they combine with a morphologically simple preposition like *i*, 'in', as in (29b):

(29) a. Katten er inne.
cat.the is in
'The cat is inside.'
b. *Katten er inne huset.
cat.the is in house.the
'The cat is in the house.'

c. Katten er inne i huset.
cat.the is in in house.the
'The cat is inside the house.'

In the previous section, I argued that the directional and locative readings of locative prepositional phrases could be distinguished on the basis of a number of different criteria. Let us now see how a sentences where the verb used does not refer to motion patterns with respect to these tests. The results are given in (30) below:

(30) a. Hunden lå bak huset i en time/*på en time.
*dog.the lay behind house.the in an hour/*on an hour.*
'The dog was lying behind the house in an hour/for an hour.'

b. Lå gjorde hunden bak huset.
lay did dog.the behind house.the
'What the dog did behind the house, was to lie.'

c. ?Hunden lå bak huset og katten gjorde det
dog.the lay behind house.the and cat.the did the
samme bak garasjen.
same behind garage.the
'The dog was lying behind the house and the cat behind the garage.'

d. Du må bade hunden bak huset *sitt$_i$/hans$_i$.
you must bathe dog.the behind house.the 3.p.refl/his.
'You must bathe the dog behind its house.'

e. Hunden LÅ bak HUSet.
'dog.the lay behind house.the
'The dog was lying behind the house.'

The sentences in (30) show that locative PPs which combine with verbs which don't refer to motion/displacement behave identically to the locative reading of the ambiguous locative PPs above.

In §2.3.4 above, we saw that when locative prepositional phrases (i.e. PlacePs) are separated from the verb by intervening material or under movement, only the locative interpretation is preserved. I tentatively related this to a difference between Path and Place, where Place elements had to be in a close relation to a projection of the verb (as I will claim here, they have to be complements to the Res head) to be interpreted as directional. The sentences in (31) show that a prepositional phrase which is interpreted as locative can be separated from the verb without affecting the interpretation (and without resulting in ungrammaticality):

(31) a. Hunden lå ofte bak huset.
dog.the lay often behind house.the
'Behind the house, the dog often was lying.'
b. Bak huset lå hunden.
Behind house.the lay dog.the
'Behind the house, the dog was lying.'
c. Det var bak huset hunden lå.
It was behind house.the dog.the lay
'It was behind the house, the dog was lying.'

2.4.1 A note on external vs. internal location

So far, I have only considered instances where the PP serves to specify the location for the full event. However, as argued by Maienborn (2003), locative PPs can be divided into *event-external* and *event-internal* modifiers. While the former relate to the full event, the latter relate to a subpart of the event. An English sentence such as (32) is ambiguous between an external reading where the appointment is made in the museum, and an internal reading, where the PP specifies the location where the appointment was made. In (32) I represent the two readings by bracketing:

(32) Mary agreed to meet Jack in the library.
(i) Mary agreed to [meet Jack in the library] (internal).
(ii) Mary [agreed to meet Jack] in the library (external).

The Norwegian parallel to (32) shows the same kind of ambiguity ((33)):

(33) Jeg avtalte å møte Jens på biblioteket.
I arranged to meet Jens on library.the
(i)'In the library, I arranged to meet Jens.'
(ii)'I arranged to meet Jens in the library.'

In (33), the event is complex, and the PP *på biblioteket*, 'at the library', can either be associated with the matrix event of arranging, or with the embedded event of meeting, so I assume that the PP can be adjoined to two different syntactic projections. However, since the topic of locative PPs is not really the one under inspection here, I will not discuss the issue of external vs. internal modifiers in more detail, and instead, I will move on to the directional expressions, specifically, to PPs which express goal.

2.5 Directional expressions

In this section, I will discuss the properties of PPs which unambiguously refer to a goal, which Svenonius (2004c) assumes to be instances of the functional category Path in a fine-grained decompositional structure of spatial prepositional phrases. In order to distinguish among directional PPs with different semantic properties, he makes further distinctions between *GoalPaths*, *SourcePaths* and *PlacePaths*.

GoalPaths are headed by the preposition *to*, and refer to paths of motion when they appear with verbs denoting motion (the notion of 'Path' will be the topic of closer inspection in a later section). Roughly, these PPs refer to a path plus a final point, which is represented by the DP complement of the preposition. GoalPaths induce telicity because of their inherent properties. *SourcePaths* are headed by *from*, and can be seen as related to GoalPaths, but with the opposite directionality.[14] The last type of Path, PlacePaths, are instantiated by PPs headed by prepositions such as *over, across*or *under*. On Svenonius's analysis, a PlacePath expression like *over the dam* in a sentence like (34)(=Svenonius's (38f), p. 14) instantiates a structure in which a non-overt Path head VIA (which encodes direction) embeds a PlaceP.

(34) The mountaineers climbed over the dam.

2.5.1 Simplex and complex directional PPs

Parallel to the locative particles which I briefly mentioned in §2.4 above, we have particles which are unambiguously directional, like *ut, inn, opp, ned*, 'out, in, up, down'. A bare directional particle can combine with verbs of motion to give a directional reading (where the Ground argument of the preposition is implicit) (cf (35a)), they normally don't combine directly with a DP complement, ((35b)), although the sentences in (36) show that this is possible in a limited number of cases; the complement of the preposition must refer to an entrance or porthole, as in((36a)), and it cannot refer to a container ((36b)). In order to take a complement, directional particles must combine with a simple locative PP as in (35c):

[14]Nam (2004) argues that there are asymmetries between the behaviour of goal PPs and source PPs with respect to their syntactic behaviour, but according to Gehrke (2005a), these asymmetries do not follow from differences in their external distribution, but rather from differences in their PP-internal syntax. This latter claim seems to fit nicely into the analysis argued for by Svenonius (2004c), who makes a distinction between GoalPath, SourcePath and PathPlace, which is reflected in their internal syntactic structures.

(35) a. Katten løp inn.
cat.the ran in
'The cat ran in.'
b. *Katten løp inn huset.
cat.the ran in house.the
'The cat ran in the house.'
c. Katten løp inn i huset.
cat.the ran in in house.the
'The cat ran into the house.'

(36) a. Katten hoppet ut vinduet.
cat.the jumped out window.the
'The cat jumped out the window.'
b. *Katten hoppet ut huset.
cat.the jumped out house.the
'The cat jumped out the house.'

The directional particles combine with locative prepositions like *i, på, under, bak, foran*, 'in, on, under, behind, in front of' to give rise to complex directional PPs. A few examples are given in (37).

(37) a. Hunden løp inn i huset.
dog.the ran in in house.the
'The dog ran into the house.'
b. Ballen spratt opp på taket.
ball.the bounced up on roof.the
'The ball bounced onto the roof.'
c. Hun kjørte opp foran slottet.
she drove up in.front.of castle.the
'She drove up in front of the castle.'

2.5.2 *Til*

Til, the Norwegian equivalent of English *to*, also unambiguously specifies a goal. Like the directional particles, *til* can in highly restrictive circumstances be used as a particle, in which case its Ground argument must be inferred from the context (cf. (38a)). However, unlike the directional particles, *til* takes a complement ((38b)). A PP with *til* can also combine with directional particles, in which case the particle provides directionality and *til* provides a sense of an endpoint to the construction

(cf. (38c)).[15]

(38) a. Tilskuerne strømmet til.
spectators.the rushed to.
'The spectators came rushing to (the place).'
b. Barna sprang til godtebutikken.
children.the ran to sweets.shop.the
'The children ran to the sweet shop.'
c. Jens løp ut til flyplassen.
Jens ran out to airport.the
'Jens ran out to the airport.'

While locative PPs could only get a directional reading in combination with a restricted set of verbs, PPs with *til* can also give rise to a directional readings with verbs which disallow directional readings for locative PPs. A few examples are given in (39), where the stars in front of (39b) and (39d) mean that these examples are ungrammatical on the intended reading (but OK if the PP is interpreted as locating the motion):

(39) a. Turistene spaserte til den gamle bymuren.
tourists.the strolled to the old city.wall
'The tourists strolled to the old city wall.'
b. *Turistene spaserte i den store byparken.
tourists.the strolled in the big city.park
'The tourists strolled in the old city park.'
c. Jens danset til stua.
Jens danced to living.room.the
'Jens danced to the living room.'
d. *Jens danset i stua.
Jens danced in living.room.the
'Jens danced in the living room.'

In §2.3 above, I presented a number of diagnostics which can be used to distinguish between the locative and directional readings of locative PPs in combination with verbs of motion. On the basis of the findings in that section, I concluded that on their locative and directional readings, these PPs are merged and interpreted in different structural positions.

[15]The claim that PPs with *til* provide an endpoint to the event is a bit imprecise. The endpoint is not defined by the PP as a whole, but rather by the Ground argument of the preposition. Specifically, *Til* gives rise to a path, and its DP complement supplies the endpoint of the path.

Here, I apply these same diagnostics to a number of unambiguously directional PPs, to show how they pattern with respect to these tests.[16] I first apply the tests to simple PPs with *til*, before moving on to instances of complex prepositions. Before presenting the analysis, I then summarize the findings of the first part of this chapter.

Consider first the behaviour of these PPs with respect to the VP constituency tests VP-topicalization ((40)) and *do so*-substitution ((41)):

(40) a. ??Sprunget har Jens aldri gjort til supermarkedet.
run has Jens never done to supermarket.the
'What Jens has never done, is to run to the supermarket.'
b. ??Kjørt Cadillac har Marit ofte gjort til flyplassen.
driven Cadillac has Marit often done to airport.the
'What Marit has often done, is to drive a Cadillac to the airport.'

(41) a. *Jens sprang til supermarkedet og Per gjorde det
Jens ran to super.market.the and Per did the
samme til bensinstasjonen.
same to gas.station.the
'Jens ran to the supermarket and Per did so to the gas station.'
b. *Marit kjørte Cadillacen til flyplassen og Per gjorde
'Marit drove Cadillac.the to airport.the and Per did
det samme til byen.
the same to town.the
'Marit drove the Cadillac to the airport, and Per did so to town.'

The sentences in (40) and (41) show that like the directional readings of locative PPs, directional PPs with *til* cannot be stranded under VP-topicalization and *do so*-substitution.

The sentences in (42) and (43) show the behaviour of these PPs when they are separated from the verb under topicalization and clefting. These sentences are all grammatical, and this shows that prepositional phrases with directional prepositions (i.e. PathPs) can be separated from the

[16] In §2.3.1, we saw that when a PP with *til* combines with a verb of motion, only temporal PPs with *på* α_{tid}, 'In α_{time}' are possible, although the verb in isolation is atelic. However, while this diagnostic was important in order to tease the locative and directional meanings of locative PPs apart, the directional PPs which I examine in this section all refer to goals, and as such give rise to telic interpretations. Hence, I will disregard this test in the discussion of the directional PPs.

verb, which contrasts with the observations made for the directional readings of locative prepositional phrases. As we saw in §2.3.2 above,when a potentially ambiguous locative PP was separated from the verb, only the locative meaning survived.

(42) a. Til supermarkedet har Jens aldri sprunget.
to supermarket.the has Jens never run
'To the supermarket Jens has never run.'
b. Til flyplassen har Marit ofte kjørt Cadillacen.
to airport.the has Marit often driven Cadillac.the
'To the airport, Marit drove the Cadillac.'

(43) a. Det var til supermarkedet Jens sprang.
it was to supermarket.the Jens ran
'It was to the supermarket Jens ran.'
b. Det var til flyplassen Marit kjørte Cadillacen.
it was to airport.the Marit drove Cadillac.the.
'It was to the airport Marit drove the Cadillac.'

§2.3.3 above showed that the ordering of certain adverbials could influence the readings for spatial PPs which are potentially ambiguous between location and goal. But in this section, I am only considering PPs with *til*, which are unambiguously directional in combination with verbs of motion. According to Nilsen's hierarchy of adverbials in (16) above, directional PPs can appear in two positions in the clause, so we expect more than one order of the relevant PPs to be possible.

Thus, sentences like (44a), where the instrument PP precedes the *til*-PP and (44b), with the adverbials in the opposite order, should be equally fine, which is indeed the case. Some of these orders are a bit marked (e.g. the order where the temporal PP precedes the directional PP), but they are nevertheless grammatical.

(44) a. Per har syklet til flyplassen på trehjulssykkel.
Per has biked to airport.the on tricycle.
'Per has biked to the airport on his tricycle.'
b. Per har syklet på trehjulssykkel til flyplassen.
Per has biked on tricycle to airport.the.
'Per has biked on his tricycle to the airport.'
c. Per har syklet til flyplassen på mandag.
Per has biked to airport.the on Monday.
'Per has biked to the airport on Monday.'
d. Per har syklet på mandag til flyplassen.
Per has biked on Monday to airport.the

'Per has biked on Monday to the airport.'

Next, consider the distribution of anaphora. In §2.3.5 above, the locative and directional readings of simple spatial PPs were seen to pattern differently with respect to the distribution of reflexives and pronouns. On their directional readings, only reflexives were possible, while on their locative reading, both pronouns and reflexives could appear. (45) show what happens when the ambiguous PP is exchanged for a directional PP with *til*:

(45) a. Marit måtte kjøre barna$_i$ til foreldrene sine$_i$.
Marit had.to drive children.the to parents.the refl.3.p.pl
'Marit had to drive the children to their parents.'

b. Marit måtte kjøre barna$_i$ til foreldrene deres$_i$.
Marit had.to drive children.the to parents.the theirs
'Marit had to drive the children to their parents.'

c. Vi har trukket krokodillen$_i$ til dammen sin$_i$.
we have dragged crocodile.the to pool.the refl.3.p.sg
'We have dragged the crocodile to its pool.'

d. Vi har trukket krokodillen$_i$ til dammen dens$_i$.
we have dragged crocodile.the to pool.the its
'We have dragged the crocodile to its pool.'

(45) shows that when *til* is present, both reflexives and pronouns are permitted. This is exactly the same pattern that we got with the directional readings of locative prepositional phrases in 2.3.5 above, where I suggested that the availability of a pronoun on the directional reading was due to a antisubject condition on possessive pronouns in Norwegian (cf. Hestvik 1992). Thus, the mixed behaviour of unambiguously directional PPs with *til* suggests that these prepositional phrases may be flexible with respect to the syntactic positions they can appear in, in contrast to locative prepositional phrases, which can only get a directional reading when embedded under a projection of the verb.

I propose that the properties of these PPs follow if we assume that they, like locative PPs on their directional readings, are merged as complements to a projection of the verb, but that unlike those PPs, unambiguously directional PPs can be displaced by clefting and PP-topicalization, and they may also be separated from the verb by intervening adverbials.[17] Before concluding this section, let us look at the

[17]However, as we will see, there are actually also cases in which directional PPs are probably best treated as adjoined in the same way as locative PPs. A possible candidate for an adjunction analysis is the PP *out of Bethlehem* in a sentence like

data from accent placement. The sentences in (46) show that with respect to accent placement, directional PPs with *til* pattern in the same way as the directional readings of locative PPs in §2.3 above.

(46) a. Marit har kjørt bilen til FLYplassen.
Marit has driven car.the to airport.the
'Marit has driven the car to the airport.'
b. Hans har sprunget til BUtikken.
Hans has run to shop.the
'Hans has run to the shop.'

2.5.3 Internally complex directional PPs

We have seen that directional PPs with *til* are freer in their distribution than spatial PPs of the type discussed in §2.2, which could only be interpreted as directional when they appear in a direct relationship with a subclass of verbs of manner of motion. However, as we saw in (39), PPs with *til* could combine also with verbs that disallow directional radings for locative PPs. In addition, directional PPs with *til* could more easily be displaced under topicalization and clefting.

This section shows that the behaviour of complex directional PPs is essentially the same as with the simple PPs with *til* with respect to the tests. Neither VP-topicalization and *do so*-substitution are possible, as (47) and (48) show:

(47) a. *Trille vogna har Per aldri gjort inn i garasjen.
roll cart.the has Per never done in in garage.the
'What Per never has done, is to roll the cart into the garage.'
b. *Kaste ballen har Hans aldri gjort ned i kjelleren.
throw ball.the has Hans never done down in basement.the
'What Hans never has done, is to throw the ball down into the basement.'

(48) a. *Per har trillet vogna inn i garasjen og Hans har
Per has rolled cart.the in in garage.the and Hans has
gjort det samme inn i huset.
done the same in in house.the
'Per has rolled the cart into the garage and Hans has done so into the house.'
b. *Hans har kastet ballen ned i kjelleren og Per
Hans has thrown ball.the down in basement.the and Per

The wise men followed the star out of Bethlehem (from Wechsler 1997).

har gjort det samme ned i brønnen.
has done the same down in well.the
'Hans has thrown the ball down into the basement and Per has done so down into the well.'

With these PPs, both topicalization and clefting are OK, as (49) and (50) show:

(49) a. Inn i garasjen måtte Per trille vogna (hver kveld).
in in garage.the had.to Per roll cart.the (every night)
'Into the garage Per had to roll the cart (every night).'
b. Ned i kjelleren har Hans aldri kastet ballen.
down in basement.the has Hans never thrown ball.the
'Down into the basement Hans has never thrown the ball.'

(50) a. Det var inn i garasjen Per trillet vogna.
it was in in garage.the Per rolled cart.the
'It was into the garage Per rolled the cart.'
b. Det var ned i kjelleren Hans kastet ballen.
it was down in basement.the Hans threw ball.the
'It was down in the basement Hans threw the ball.'

The adverbial placement facts are also identical to the ones with the directional PPs with a single directional preposition. The directional PP can precede or follow an instrumental PP, it must precede a temporal PP, and the order of a manner PP like *sakte* and the directional PP is free.

(51) a. Jens har syklet på trehjulssykkel inn i garasjen.
Jens has biked on tricycle in in garage.the
'Jens has biked on his tricycle into the garage.'
b. Jens har syklet inn i garasjen på trehjulssykkel
Jens has biked in in garage.the on tricycle
'Jens has biked into the garage on his tricycle.'
c. Jens har syklet inn i garasjen i morges.
Jens has biked in in garage.the in morning
'Jens has biked into the garage this morning.'
d. Jens har syklet i morges inn i garasjen.
Jens has biked in morning in in garage.the
'Jens has biked this morning into the garage.'
e. Jens har syklet sakte inn i garasjen.
Jens has biked slowly in in garage.the
'Jens has biked slowly into the garage.'

f. Jens har syklet inn i garasjen sakte.
Jens has biked in in garage.the slowly
'Jens has biked into the garage slowly.'

With respect to anaphora, both reflexives and pronouns can appear, exactly as with *til*:

(52) a. Barna har dyttet heksa$_i$ inn i ovnen
children.the have pushed witch.the in in oven.the
sin$_i$.
refl.3.p.sg
'The children have pushed the witch into her oven.'
b. Barna har dyttet heksa$_i$ inn i ovnen hennes$_i$.
children.the have pushed witch.the in in oven.the hers
'The children have pushed the witch into her oven.'
c. Læreren bør følge elevene$_i$ inn i klasserommene
teacher.the should follow pupils.the in in classrooms.the
sine$_i$.
refl.3.p.pl
'The teacher should follow the pupils into their classrooms.'
d. Læreren bør følge elevene$_i$ inn i klasserommene
teacher.the should follow pupils.the in in classrooms.the
deres$_i$.
theirs
'The teacher should follow the pupils into their classrooms.'

With respect to accent placement, again only one order is possible:

(53) a. Hunden har fulgt barna inn i ROMmet.
dog.the has followed children.the in in room.the
'The dog has followed the children into the room.'

The findings so far are clear: on the one hand, we get a clear split between locative and directional PPs, where directional PPs appear low down in the clause, and locative PPs appear in positions that are structurally higher. On the other hand, we get a split within the class of goal-denoting PPs with respect to their displacement properties. While locative PPs which could be assigned directional readings could not be moved away from the verb, PPs containing an overt directional expression could easily be displaced.

2.6 Analysis

In the first part of this chapter, I examined different types of combinations of verbs and spatial prepositional phrases, in order to examine the patterns of distribution and the types of interpretations which arise. Locative and directional PPs were seen to behave differently with respect to a number of diagnostics which are assumed to be sensitive to syntactic differences, but I did not go into any greater detail with respect to the types of structures projected. And that, specifically, is the purpose of the remaining part of this chapter, where I will outline a type of analysis which will hopefully be able to account for all the properties observed.

I start by looking at cases where a locative PP (specifically, a PlaceP) is ambiguous between denoting a goal or a location. I propose an analysis where locative PPs are invariably PlacePs, but where a PlaceP can get a goal interpretation when it appears in the complement of a projection of the verb.[18] On the locative interpretation, I assume that the PlaceP appears higher up in the structure, right-adjoined to the highest projection of the verb, where it is modifies the complete event. Then I move on to consider the properties of unambiguously directional PPs in more detail. I assume that unambiguously directional PPs are invariably PathPs. If the verb does not in itself license an endpoint, PathPs appear in the complement to the Process subevent (cf. Ramchand 2005), where they give rise to a scale or path which is homomorphic with the progress of the event. Here, the boundedness of the PP determines the boundedness of the predicate (cf. Zwarts 2005). Directional PPs can consist of a single preposition, like e.g. *til*, 'to', or they can be more complex. Both PathPs consisting of a single preposition and more internally complex PathPs behave more or less identically with respect to the tests presented in §2.5 above, and the differences between them are simply differences in their internal structure.

The following table summarizes the behaviour of the different types of prepositional phrases with respect to the tests laid out in the first half of this chapter. LOC and DIR are here used as descriptive labels; I hence have three classes of PPs; those which in combination with a class of verbs are ambiguous between denoting a goal or a location (the first column), those which are unambiguously locative (the second column),

[18] Svenonius (2004c) assumes that the directional interpretations of locative PPs arise when these PPs appear in the complement of a null Path head, which is licensed by a verb of motion. Thus, while on the approach assumed here, the verb is entirely responsible for directional interpretations, on his approach, the directional reading stems from the argument structure of the preposition.

and those which are unambiguously directional (the last column).

(54)

	ambiguous LOC/DIR	**LOC PPs**	**DIR PPs**
VP-top.	LOC only	√	??
do so	LOC only	√	*
PP-top.	LOC only	√	√
Clefting	LOC only	√	√
Adv.order	DIR adjacent to V, LOC free	√	√
Anaphora	refl.=DIR only, pron.=ambiguous	refl./pron.√	refl./pron. √

2.6.1 Prepositions, argument structure and interpretations

The topic of the rich internal structure of spatial prepositions has been discussed e.g. by Koopman (2000), den Dikken (2003), or Svenonius (2004c), but since the main focus of this chapter is to shed light on the external distribution of spatial prepositional phrases, I will not discuss their internal structure in any great detail.

As already mentioned in the introduction to this chapter, I adopt the basic distinction between Place and Path, where Place expresses location and Path expresses goal.[19] Locative PPs which are interpreted as directional are instances of PlaceP embedded under the Res functional head. As I also mentioned in the first chapter, I adopt a Ramchandian model according to which the verb phrase can be broken down into (maximally) three subevents, where the Res subevent is responsible for licensing an endpoint/result state. Thus, the endpoint here is provided by the verbal predicate, and PlaceP serves to add content to this endpoint. All other instances of PPs getting a directional interpretation are PathPs, which are unambiguously directional. Hence, PathP do not have to be embedded under a ResP provided by the verb in order to get a goal interpretation. In cases where the verb does not provide a ResP (i.e. with atelic verbs of motion), I will assume that PathPs appear in the complement position to the Proc head, where they give rise to a path or scale which is homomorphic with respect to the process denoted by the verb.

Intuitively, a path can be conceived of as a stretch of space along

[19]Paths can also express movement from a source, or motion towards a goal, (route), but in the following, I will not consider the properties of those types of expressions, so I abstract away from it here.

which the event can be mapped out. According to Zwarts (2005), paths are best treated as a sequence of positions, where directional PPs are treated as a structured set of paths which is mapped onto a domain of events via a thematic function TRACE.[20] Zwarts makes a distinction between telic and atelic PPs, where atelic PPs are cumulative and closed under a summing operation of concatenation, which takes contiguous paths as its input. For instance, two paths which are contiguous, and which are both towards the town can be concatenated to form a new path which is also towards the town. Telic PPs, on the other hand, are never cumulative, and can not be concatenated in this way.[21]. However, there is no one-to-one relationship between the endpoint of a path and the telicity of the event. A PP can be telic without entailing an endpoint, and atelic even though it is bounded by its Ground argument.[22]

Hence, whether a predicate consisting of a verb of motion plus a directional prepositional phrase is telic or not is determined by the denotation of the prepositional phrase. Some PPs invariably denote unbounded paths, and can never give rise to telicity, other PPs always denote bounded paths which obligatorily leads to a telic interpretation of the predicate. Other PPs again are vague with respect to boundedness, and can be used both in telic and atelic contexts.

2.6.2 Ambiguous PPs and locative and directional interpretations

We started out this chapter by looking at simple locative prepositions like *i, på* or *under*, 'in, on, under', which in combination with certain verbs of manner of motion could be interpreted either as locative or directional. According to Ramchand (2005) or Gehrke (2005b) locative PPs can give rise to goal interpretations if the verb can independently license an endpoint in the form of a ResP, like e.g. *jump* or *fall*. This is possible for all speakers of English. However, there is a class of verbs where only a subset of speakers of English allow a goal interpretation for a locative PP; examples include verbs like e.g. *run*. The directional

[20]Paths have also been treated as primitives in the ontology, e.g. by Krifka (1998).

[21]The concatenation operation can also be generalized to events, as argued by e.g. Kamp (1979) or Rothstein (2004). This operation will be discussed in greater detail in chapter 4

[22]According to Zwarts, a sentence like *Alex ran away from the accident* is telic although no endpoint is specified by the path. An example of the reverse is the sentence *Alex swam towards the island*, where the predicate is atelic despite the presence of an endpoint. (The examples are taken from Zwarts 2005, his (12a-b)).

interpretation is licensed by Res also here, but since verbs of manner of motion don't imply an endpoint, I assume that the Res head here is null. Hence, whether speakers permit directional readings of locative PPs with verbs like *run* reduces to the question of the availability of a null Res head in directional contexts.[23]

Here, I assume that the null Res head is licensed by in case the verbal root $\sqrt{}$ contains a [direction] feature. PlaceP then appears as the complement to the Res head. Locative PPs are invariably instances of the category PlaceP, but they can give rise to directional readings when embedded under a null Res head. Otherwise, the only available interpretation for the PP is locative.

2.6.3 The directional reading

Thomas (2001) argues that directional readings of locative prepositions arise when the verb itself contains a feature [direction]. She argues for a split-P model in which a lexical category P is embedded inside a functional projection *p*. *p* contains a strong direction feature, which forces P to raise and adjoin to *p*. However, locative prepositions never raise to *p*. Instead, a directional interpretation is licensed when a matching relation is established between the [direction] features on the verb and on *p*.

In §2.3 above, we saw that in sentences containing a verb of motion plus a locative PP, the PP could either be interpreted as a goal of motion, or as the location for the motion, which was consistent with their different behaviour with respect to a number of tests. On their *directional* readings, these PPs patterned in the following way:

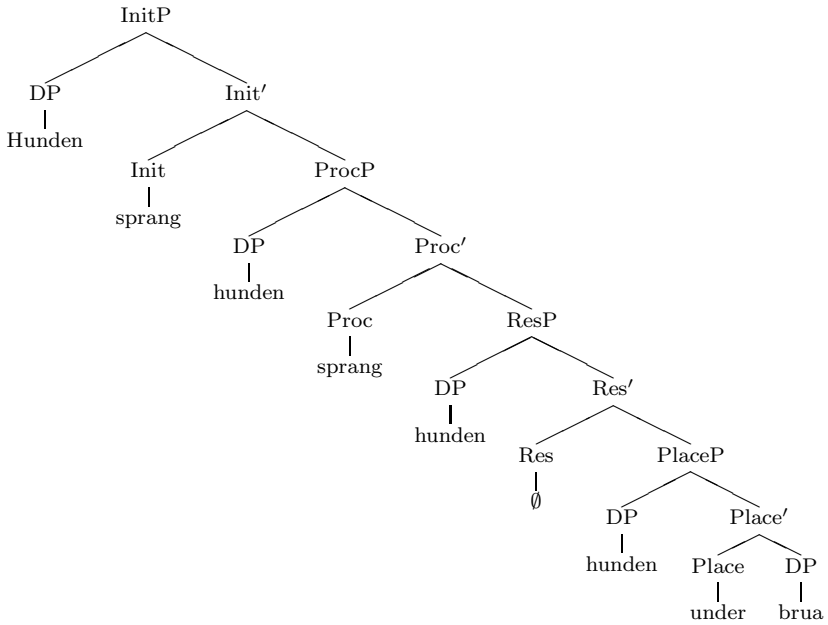
(55)
a. VP-topicalization and *do so*-substitution cannot strand the PP.
b. PP-topicalization and clefting of the PP are not possible.
c. With respect to Nilsen's (1998) hierarchy of adverbial PPs, the PP (on its directional reading) is lower down in the structure than on its locative interpretation.
d. On their directional readings, these PPs permit reflexives coreferent with the direct object. Pronouns are ambiguous between the two readings.

[23]Resultative predicates and particles are also assumed to be licensed in the complement to a null Res head, and in the next chapter, we will see that something similar is at play also in (benefactive) double object constructions, where the benefactive DP and the direct object appear in a Figure-Ground relation mediated by a null preposition $\emptyset_{POSS}$, which encodes possession.

e. Accent placement suggests that the PP on its directional interpretation is part of the same prosodic phrase as the verb.

For the directional reading of a sentence like *hunden sprang under brua*, 'the dog ran under the bridge', I propose the structure in (56):

(56)



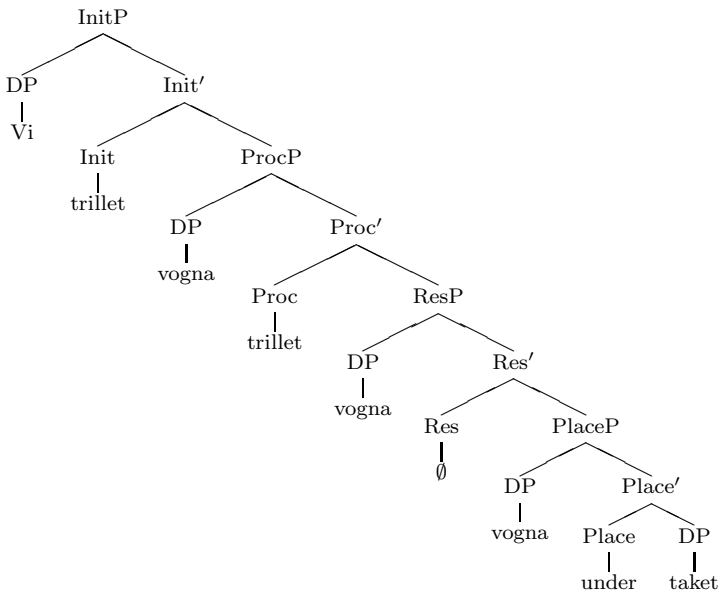
When the verb *springe*, 'run', appears without a directional PP, it refers to an unbounded activity. However, in (56), the sentence is interpreted as telic, with the PlaceP *under brua*, 'under the bridge' giving the final point of the running event. I assume that this is possible because the verb root carries an optional [directional] feature, which licenses a null Res head. The PlaceP then appears in the complement to the Res head, where it serves to further define the endpoint provided by the null Res head. The subject *hunden*, 'the dog', gets a composite semantic role by being associated to all three specifier positions in the lexical decompositional structure of the verb; It is simultaneously both the Initiator or causer of the event, its Undergoer (undergoing a change in location from the source location and to the goal location represented by the DP complement to the preposition) and its Resultee (where it is the holder of the result state defined by the PP).Locative PPs never give rise to a path or scale, they simply specify a static location. In these cases the scale is provided by the verb, and the PP simply gives the final point of the event.

How can the structure in (56) account for the behaviour of the directional PP with respect to the diagnostics in §2.2above? The impossibility of VP-topicalization and *do so*-substitution follows from the structure; a locative PP can only get a directional interpretation in one specific structural position, i.e.. in the complement to the verb (here, in the complement to ResP). Hence, if the relation between the PP and the verb is disrupted, only a locative interpretation of the PP is possible, which is confirmed by the interpretations that arise when a manner adverb like *sakte*, 'slowly', intervenes between the verb and the PP. Here, the only available interpretation for the PP is locative.

The behaviour with respect to reflexives and pronouns also point towards a low position for directional PPs, since the PP can contain a reflexive bound by the direct object. If the default position for direct objects is the specifier of ProcP, the directional PP must appear lower down in the structure than the direct object in order to establish a binding relation between a reflexive contained inside the directional PP and the direct object.

To illustrate, consider the directional interpretation of a sentence like *vi trillet vogna under taket*, 'we rolled the cart under the roof', above, where I suggest the following structure:

(57)



Here, the direct object *vogna*, 'the cart', appears higher up in the structure than the directional prepositional phrase *under taket*, 'under the

roof', and hence a binding relation can be established between the object and a reflexive contained inside the directional PP.

According to the accent placement principles in (24) and (25) above, the accent in verb-complement constructions falls on the most deeply embedded constituent, which in (57) should be the DP Ground of the preposition. And this is exactly what we get. Thus, it seems that the structures proposed in this section can account for the behaviour of the directional readings of events where a verb of motion combines with a locative PP.

2.6.4 The locative reading

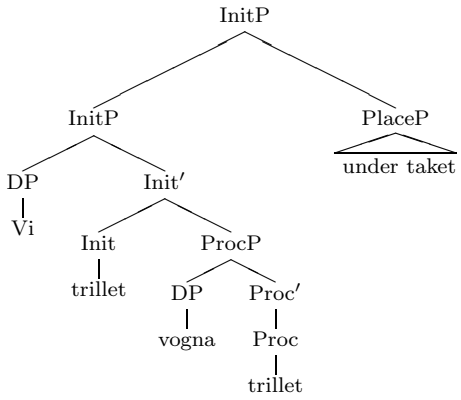
On their *locative* reading, ambiguous PPs have the following properties:

(58)
a. VP-topicalization and *do so*-substitution can strand the locative PP.
b. PP-topicalization and clefting of the (locative) PP from the verb.
c. With respect to Nilsen's (1998) hierarchy of adverbial PPs, locative PPs are higher in the structure than directional PPs.
d. Locative PPs can contain pronouns coreferent with the direct object.
e. The locative PP appears in a distinct prosodic phrase from the verb.

I propose that these PPs (specifically, PlacePs) appear in adjoined positions where they define the location for the motion event. Hence, the locative reading of a sentence like *Vi trillet vogna under taket*, 'we rolled the cart under the roof' is paraphrasable as an event of us rolling the cart, which took place under the roof.[24] For the locative reading, I assume a structure like the one in (59):

[24]There are different ways in which this can be formalized; one way is to assume that the locative PP takes the event in its specifier position, as proposed by Barbiers (1995). However, this proposal runs into trouble when it comes to explaining how the event is subsequently linked to tense, which is not something PPs are thought to be able to. Here, I will simply assume that the specifier of the PlaceP is filled by a *pro* which is coindexed with the event.

(59)



The structure in (59) can account for the observed properties of locative PPs with respect to stranding of the PP under topicalization, *do so*-substitution and the distribution of anaphora. Since the locative PP appears higher up in the structure than the direct object, I predict that a pronoun coreferent with the direct object can appear inside the PP. And this is exactly what we observe.

2.7 Unambiguously directional PPs

While locative PPs could be interpreted as directional only in conjunction with a limited set of verbs, unambiguously directional PPs are freer with respect to what types of verbs they can combine with. This was summed up in the table in (7) above, repeated here for convenience:

(60)

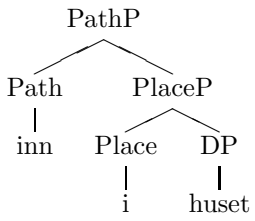
	dir. reading of loc. PP	**dir. PP**
falle, 'fall',	√	√
løpe, 'run',	%	√
svømme, 'swim',	*	√
synge, 'sing',	*	*

While predicates with verbs like *svømme.* 'swim', could never get a goal interpretation unless a clearly directional PP was present (cf. (61a) (locative) vs (61b) (directional)), verbs like *falle*, 'fall', are inherently directional, and permit both locative and directional PPs (cf. (61c) and (61d)).

(61) a. Hans svømte i elva.
Hans swam in river.the
'Hans was swimming in the river.'
b. Hans svømte inn i elva.
Hans swam in in river.the
'Hans swam into the river.'
c. Jens falt i vannet.
Jens fell in water.the
'Jens fell in the water.
d. Jens falt ut i vannet.
Jens fell out in water.the
'Jens fell into the water.'

This section is structured in the following way. I start out by considering instances containing the preposition *til*, 'to', Then I move on to looking at different types of complex PathPs, which consist of a PlaceP embedded under a directional particle like *inn, ut, opp, ned*, 'in, out, up, down'. Directional particles can either appear on their own, or combine with a PlaceP complement, but I will only consider the latter type in any great detail. I assume that all unambiguously directional PPs are instances of the category PathP which embeds a PlaceP complement, where the head of PlaceP can in some cases be empty. The type of structure which I will assume for a directional prepositional phrase like *inn i huset*, 'into the house', is depicted schematically in (62), where we have a Path head *inn*, 'in', which takes a PlaceP complement:

(62)



2.7.1 'Simple' directional PPs

In §2.5.1, I showed that directional particles can combine with verbs of motion to give a directional reading, they could not combine directly with a DP complement, but they take PlaceP complements. This is shown in the sentences in (63), which are repeated from (35) above:

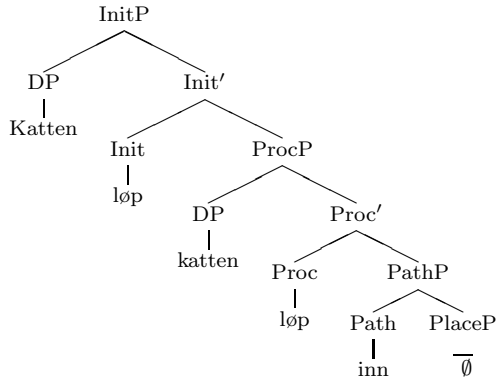
(63) a. Katten løp inn.
cat.the ran in
'The cat ran in.'
b. *Katten løp inn huset.
cat.the ran in house.the
'The cat ran in the house.'
c. Katten løp inn i huset.
cat.the ran in in house.the
'The cat ran into the house.'

Like directional particles, *til* can in a very limited number of cases be used as a particle, in which case its Ground is contextually implied, as in (64a) (repeated from (38a) above). However, this is not possible in English, as (64b) shows (from Svenonius 2004c, his (71a), p. 24):

(64) a. Tilskuerne strømmet til.
spectators.the rushed to.
'The spectators came rushing to (the place).'
b. *The boat drifted to.

I will not consider in any great detail the properties of bare directional particles, but I will simply assume that because they are unambiguously directional, they are Path heads in their own right, even when they do not appear with an overt complement. The structure for a sentence like (63) will thus look approximately like the one in (65):

(65)



But let us shift the focus onto the *til*-phrases, which can generally combine with different types of motion verbs, irrespective of whether the verb itself implies an endpoint or not. A few examples with different types of verbs are given in (66):

(66) a. Hunden jaget sauene til kanten av klippen.
dog.the chased sheep.the to edge.the of cliff.the
'The dog chased the sheep to the edge of the cliff.'
b. Vi seilte til Karibien.
we sailed to Caribbean.the
'We sailed to the Caribbean.'
c. Klovnen danset til døra.
clown.the danced to door.the
'The clown danced to the door.'

In §2.5.2 above, we saw that PPs with *til* had the following properties:

(67) a. VP-topicalization and *do so*-substitution cannot strand the PP.[25]
b. PP-topicalization and clefting are possible.
c. Adverbial ordering is relatively free, and *til*-PPs can be separated from the verb by e.g. manner adverbials.
d. Both pronouns and reflexives coreferent with the direct object can appear inside the PP.
e. Accent placement suggests that the PP forms a prosodic phrase with the verb.

With respect to VP-topicalization and *do so*-substitution, these PPs behaved in the same way as the directional readings of locative PPs, where I argued that a directional reading was only possible when these PPs appear as complements to ResP, where ResP is licensed by an (optional) [direction] feature on the verbal root. However, with respect to the other tests, the *til*-PPs seem to be much freer with respect to the positions they can appear in. Whether this flexibility stems from movement, or whether these PPs have more than one alternative base position, must to be determined, but lies outside of the scope of this study.

Zubizarreta and Oh (2004) argue that some directional PPs have the option of being merged directly as adjuncts, where they modify the event as a whole. Thus, a sentence like *John danced into the room* can have two different interpretations. On the analysis in which the PP *into the room* is merged as a complement to the verb of motion, the PP is predicated of the subject, which is interpreted as ending up in the room as a result of the movement. On the adjunct analysis, the PP can be merged in a high position (possibly adjoined to the verb phrase

[25] Although VP-topicalization was not as bad as expected, as (40) showed. I have no good explanation for this.

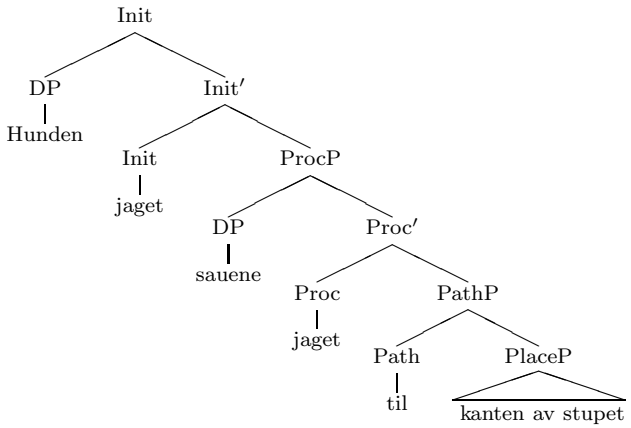
as a whole), and the interpretation is one where it modifies the whole event. This reading can be paraphrased as follows: *on his way into the kitchen, John danced*. While this proposal is interesting, exploring its full potential is well beyond the limits of this chapter. Still, assuming that all directional PPs can be adjoined is not entirely unproblematic; for instance, if all directional prepositional phrases have the option of appearing in adjoined positions, why are sentences such as (40) and (41) ungrammatical?

Here, I argue that all PPs which get a directional interpretation, are merged as complements to a projection of the verb. While a PlaceP can only be interpreted as directional when it is embedded under the Res head, this is not so for PathPs, which are *always* interpreted as directional, independently of the properties of the verb, as witnessed by their greated freedon with respect to the types of verbs they could appear with, as seen in (39). Hence, the limited displacement properties of PlaceP (on its directional interpretation) in comparison to PathP follow; while PlaceP can only get a directional reading when it appears in the complement to Res, this is not so for PathPs, which are invariably interpreted as directional.[26]

[26]This is in many ways reminiscient of the difference between DPs and NPs, where only DPs are independent referential entities. While a NP, for instance, cannot be separated from the determiner, as the ungrammaticality of **Idiot tror jeg ikke Per er en* (lit. fool think I not Per is a) shows, this is not so for DPs: *En idiot tror jeg ikke Per er*.

For a sentence like (66a) above, I propose the following structure:

(68)



The structure in (68) is interpreted as a chasing process which has as its endpoint the final point of the path denoted by the *til*-PP, i.e. the edge of the cliff. This structure can explain the behaviour of *til*-PPs summarized in (67) above, where they behave like arguments of the verb with respect to most tests, but are different in that they can be separated from the verb under clefting and PP-topicalization. Above, I speculated that the reason for this may be related to the fact that these elements are PathPs, and as such inherently directional.[27]

2.7.2 Complex directional PPs

Til can combine with directional particles like *ut, inn, opp, ned*, 'out, in, up, down.' This presents a challenge to the analysis presented here, where both *til* and directional particles are assumed to be Path heads, and as such should be mutually exclusive. Nevertheless, such examples are perfectly fine, as seen in (69):

(69) a. Vi padlet ut til den lille øya.
we paddled out to the little island.the
'We paddled out to the small island.'
b. Løven sprang opp til turistene.
lion.the ran up to tourists.the

[27]Note that in (68), there is no overt Place head present in the structure, so on the surface, it looks like a Path head taking a DP complement directly. For the present, I will assume that a covert Place head is present also here, but this issue will have to be looked into in more detail.

'The lion ran up to the the tourists.'

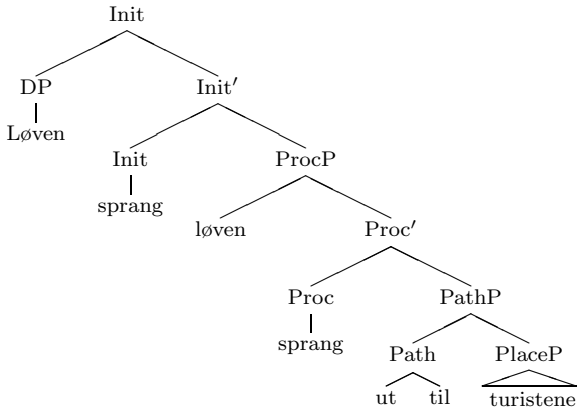
c. Han dykket ned til bunnen av innsjøen.
he dived down to bottom.the of lake.the
'He dived to the bottom of the lake.'

d. De kjørte inn til sentrum av byen.
they drove in to centre.the of city.the
'They drove into the city centre.'

So how should cases such as these be analyzed? Svenonius (2004c) discusses different possible analyses, but he ends up assuming that the directional particles may adjoin to Path, which is what I will adopt here.[28]

Hence, a tentative structure for the sentence in (69b) will look something like the one in (70). Here, I don't give an exact structure for the *ut til*-combination, but if *ut* is adjoined to *til*, it can be treated as a modifier of the Path head *til*.

(70)



2.7.3 Directional PPs as adjuncts?

Above, I hinted that there might be cases where a directional PP is best treated as adjoined, similarly to the assumptions made by Zubizarreta and Oh (2004). One such case includes examples such as the following, which are taken from Rothstein (2004), but also discussed by Wechsler (1997):

(71) a. The wise men followed the star out of Bethlehem.
b. The sailors caught a breeze and rode it clear of the rocks.

[28]This assumption is not entirely unproblematic, but I will leave the question of what is the correct analysis open for further research.

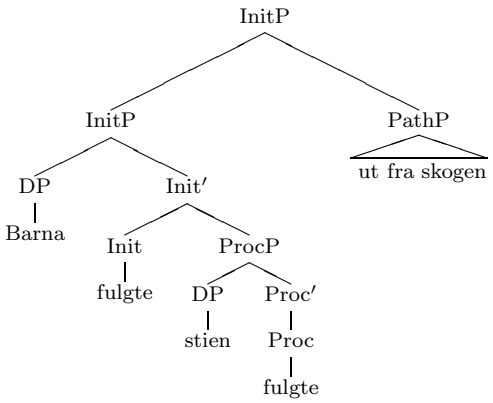
c. He followed Lassie free of his captors.
d. John walked the dog to the store.

This type of sentences is not common, and even more restricted in Norwegian, where translations of sentences such as (71b) and (71d) are impossible here, but some examples with the verb *følge*, 'follow', can be found also here:

(72) a. Vismennene fulgte stjernen ut av Betlehem.
wise.men.the followed star.the out of Bethlehem
'The wise men followed the star out of Bethlehem.'
b. Vi fulgte borgermesteren til bygrensen.
we followed mayor.the to city.limits.the
'We followed the mayor to the city limits.'
c. Barna fulgte stien ut fra skogen.
children.the followed path.the out from forest.the
'The children followed the path out of the forest.'

PPs like the ones in (72) behave like adjuncts with respect to the diagnostics, and (72c) will be assigned the following structure (cf. the structure for locative adjuncts in §2.6.4 above):

(73)



This structure is interpreted as an event in which the children followed the path, and which was out of the forest.

2.8 Summary

The topic of this chapter has been spatial prepositional phrases, and how they combine with verbs of motion to give rise to locative and directional

readings. I started out by examining the properties of verbs which are able to license a goal interpretation for a locative PP, e.g. as in *John fell in the water*, where the most salient interpretation is one where he fell into the water. Some verbs were seen to allow this quite freely, and I argued that this was because these verbs provide an endpoint in the form of a ResP in the fine-grained structure of the verb phrase. The locative PP, which I argued was an instance of the functional category PlaceP, then appears in the complement to the Res head, which is the only position in which a locative prepositional phrase can give rise to a directional interpretation.

In some instances, a PlaceP can be ambiguous between denoting located motion or directed motion, as in the Norwegian sentence *Jens syklet i grøfta*, 'Jens biked in the ditch'. A directional reading is possible if a null Res head is present in the verbal structure. This Res head is licensed by an optional feature [direction] on the verbal root of a class of manner of motion verbs. The PlaceP appears in the complement of ResP where it specifies a final location for the event. On the located motion reading, I argued that the PlaceP appears in a different structural position, which was supported by differences in the syntactic behaviour of the locative and directional interpretations of PlacePs. Specifically, I assumed location-denoting PlacePs to be adjoined to the highest projection of the verb where they function as modifiers to the verb phrase.

After having briefly considered the properties of prepositional phrases which are interpreted as locations, I moved on to instances of clearly directional PPs, which I assume are instances of the category PathP. PathPs are freer in their distribution than PlacePs, which could only get a directional interpretation in a local relation to the verb. Hence while PathP can move around quite freely without losing its path-denoting properties, this is not so for PlaceP, which can only be interpreted as directional when appearing in the complement to the Res head.

I argued that when PathPs combine with atelic manner of motion verb, their base position is the complement position to the Process head in a Ramchandian decompositional structure, where the PathP gives rise to a path which is homomorphic with the process denoted by the verbal predicate. Hence, whether the event is telic or not, is not a matter of the properties of the verb, but instead it can stem from the semantics of the prepositional phrase, as argued by Zwarts (2005) Some PPs are unbounded (e.g. *towards*) and can never give rise to telicity, while other PPs (e.g. *to*) are bounded, and result in the event being telic.

While I have assumed that all directional PPs had more or less the

same internal structure, it is possible that bounded and unbounded PPs differ from each other in their internal structure. At this stage, I leave that question open for further research.

Chapter 3

Possession and the notion of affected participants

3.1 Overview and aims

In this chapter, I take a closer look at sentences with Beneficiaries in Norwegian, and then I will investigate the same type of sentences in German, which in addition to the constructions permitted in Norwegian allows both Beneficiaries and Maleficiaries with a much wider range of verbs and with a wider range of interpretations.[1]

These constructions will be given an analysis in terms of a decompositional event structure as outlined in the introductory chapter, combined with assumptions about the specific properties of double object constructions which I will present below. I will follow work by e.g. Freeze (1992) or Kayne (1993) in assuming that the possession relation can be further decomposed in the syntax into an abstract verbal predicate Pred plus a prepositional component which I will represent as $\emptyset_P$. With some minor adjustments, I will adopt the implementation of this decomposition presented by den Dikken (1995), who assumes that the indirect object in the double object construction is the internal argument of a null preposition which takes the direct object as its external argument. The resulting word order is then derived via a movement operation similar to predicate inversion.

The differences between Norwegian and German will eventually be argued to be reducible to differences in the way the languages choose to represent possession.The analysis will be seen to carry over also to Ger-

[1]The observations for Norwegian hold also for English, and it is quite plausible that the proposed analysis can be carried over to English.

man double object constructions with verbs of creation, but for the other cases where a dative argument which I will discuss, will receive a slightly different analysis. I will argue that these datives are really Experiencers, which are related to the event via a very abstract possession relation. In this way, Experiencers can probably also ultimately be reduced to (abstract) possessors, as argued by e.g. Adger and Ramchand (2005).

The chapter is structured as follows: In the next section, I present a chronological overview of some of the previous work on double object constructions. Then, I will move on to discussing Norwegian, where an extra participant can be added to verbs which are compatible with a 'creation' interpretation. Here, the extra argument is invariably interpreted as a future or intended possessor of the direct object. Having done that, I will move on to similar cases in German, where an extra participant (which is marked by dative case) can be added to a much wider range of predicates than what is possible in Norwegian.

3.2 Previous treatments of double object constructions

The topic of this chapter is benefactive double object constructions, which I assume to be essentially similar to double object construction with verbs of transfer of possession. Thus, before going into any detail, I find it natural at this stage to take a step back and have a look at some of the previous treatments of double object alternations. The amount of literature written on this construction is vast, so this section is not meant to represent a complete picture of the previous treatments, the intention is rather to give a more general overview, and I have chosen to discuss the works in a chronological order. Most of the references discuss data from English, but it will be seen in §3.4 that Norwegian works in essentially the same way. Questions which are important for the present purposes are especially the question of whether the prepositional dative variant and the double object variant represent identical θ-relations or not, and what the nature of the relationship between the two alternants is, if there is such a thing at all.

In early generative grammar, the prepositional dative and the double object construction were assumed to represent the same underlying meaning and were associated with identical Deep Structures. Different transformations then applied to derive the different surface structures. As we will see, the idea that the prepositional dative and the double object

versions represent the same underlying thematic relations has been very influential, and underlies much of the work on the alternation (e.g. Baker 1988, Larson 1988, or den Dikken 1995, to mention just a few). All these authors assume a version of Baker's (1988) *Uniformity of Theta Assignment Hypothesis* (UTAH), which states that "identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure" (Baker 1988:46). A natural consequence of the UTAH is that if the double object structure and the prepositional dative structure are alternative expressions of the same thematic relationships (essentially between a predicate like *give* and its two internal arguments, a Goal and a Theme), then a derivational relationship between the two suggests itself quite naturally.

3.2.1 Oehrle (1976)

Oehrle (1976) represents a break with the transformational approach to the dative alternation. Instead, he argues that the two alternants have distinct Deep Structures. For instance, the verb *give* is associated with two distinct subcategorization frames, and can satisfy the conditions for lexical insertion into both the double object structure and the prepositional dative structure. The relationship between them is stated in terms of a lexical redundancy rule. Oehrle also extends his analysis of possessional double object alternations involving *to* to the benefactive alternation. Again, he assumes that the two alternants represent different Deep Structures. For instance, while the *for*-dative alternation is productive, this is not so for the double object alternant, as the following sentences show(=Oehrle's (29-40), p. 120):

(1) a. John fished a trout for Mary.
b. #John fished Mary a trout.
c. John fished out an apple for Mary.
d. John fished Mary out an apple.
e. #John bit a piece of licorice for himself.
f. #John bit himself a piece of licorice.
g. John bit off a piece of licorice for himself.
h. John bit himself off a piece of licorice.
i. #John hacked a piece of steak for himself.
j. #John hacked himself a piece of steak.
k. John hacked off a piece of steak for himself.
l. John hacked himself off a piece of steak.

Oehrle concludes that "[h]aving established the productivity of the *for*-dative alternation, it is obvious that semantic properties of a given verb that occurs in the *for*-dative construction cannot provide sufficient conditions for it to occur in the double object construction" (p. 121). In addition, which will be mentioned below, the two alternants give rise to different entailment patterns. According to Oehrle, the double object version entails that the indirect object actually receives the direct object, while this entailment does not hold for the prepositional dative construction. Hence, in an example such as (2a), *Himmler* is ambiguous between a pure Beneficiary reading (more appropriately: a Maleficiary reading) and one in which he is also a Recipient, while in (2b), a Recipient interpretation is necessary (=Oehrle's (27-28), pp. 118-119):

(2) a. Helmut built an electric chair for Himmler (ambiguous).
b. Helmut built Himmler an electric chair (unambiguous).

As a consequence, the possession relation is cancellable in the prepositional dative variant, but not in the double object version, as the sentences in (3) show (=Oehrle's (7-8), p. 104):

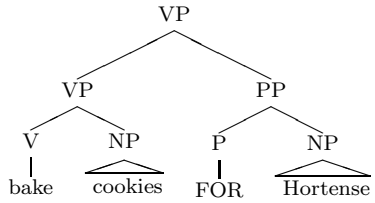
(3) a. Originally, I bought this tea-kettle for my wife, but I decided to keep it.
b. #Originally, I bought my wife this teapot, but decided to keep it.

On this basis, Oehrle concludes that the two alternants are not transformationally related via one common Deep Structure, but rather represent distinct Deep Structures and Surface Structures.

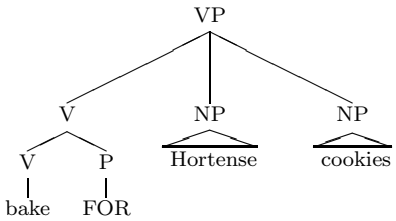
3.2.2 Marantz (1984)

While Oehrle's main focus is on the differences between the double object structure and the *to*-variant , other authors again stress the similarities between the two, and conclude that they both involve the same thematic relations. Marantz (1984) assumes a fairly transparent relation between sentences such as *I baked Hortense cookies* and *I baked cookies for Hortense*. Specifically, he proposes that although they are not derived from a common underlying structure, they do involve essentially the same thematic roles. The DP-DP variant is derived from the DP-PP variant via Merger of the P with the head of the governing verb, deriving the structure in (5) from the structure in (4) (from Marantz 1993):

(4)



(5)



The preposition FOR which merges with the verb is assumed to be slightly different from the non-incorporating preposition *for*, so although the same thematic relations are involved, the underlying structures are different.

3.2.3 Kayne (1984)

Like Oehrle's analysis, the analysis presented by Kayne (1984) is non-derivational in nature, i.e. he assumes different base structures for the double object structure and the prepositional dative structure. Kayne bases his analysis on the differences between French and English in the existence of the double object alternation. While English has the possibility of expressing the arguments of verbs such as *give* in two different ways, French lacks the counterpart of the English double object structure:

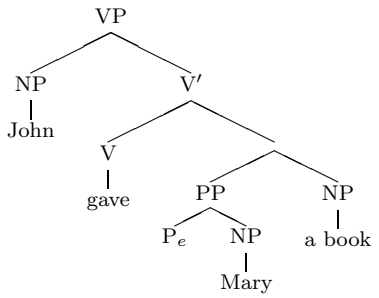
(6) a. John gave Mary a book.
b. John gave a book to Mary.

(7) a. *Jean a donné Marie un livre.
b. Jean a donné un livre à Marie.

Kayne argues that both alternants include a preposition, which in the case of double object structures is null (cf. Marantz's proposal in §3.2.2). This preposition transfers case from the verb to the indirect object. While empty prepositions are assumed to exist in all languages, English null prepositions have a property which French null prepositions lack, namely

that they can assign objective case. In French, on the other hand, prepositions assign oblique case, and thus, the case assigned by the verb cannot percolate to the complement of the null preposition. For the sentence *John gave Mary a book*, Kayne assumes the following type of structure, where P_e is an empty preposition:

(8)

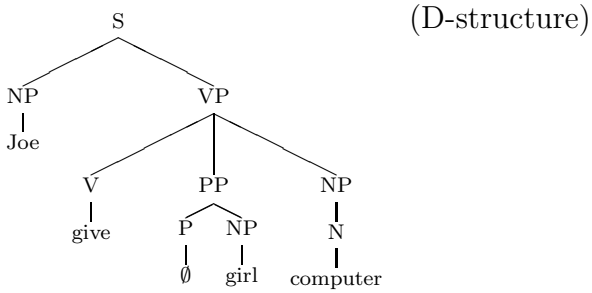


Here, the verb *give* assigns case and θ-role to *a book*. The empty preposition P_e transmits objective case from the verb to the indirect object *Mary*. Although Kayne leaves the question open of the exact label of the constituent which dominates the empty-headed PP and the direct object, but this analysis has later come to be known as the first small clause analyses of double object constructions (cf. e.g. Hellan (1991)).

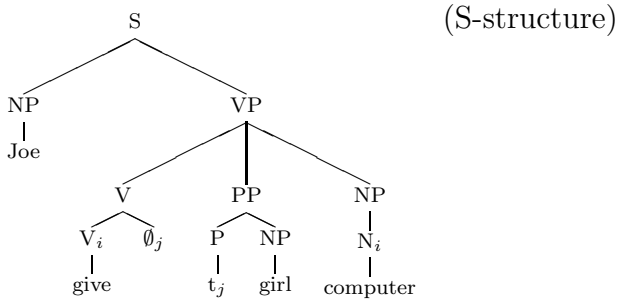
3.2.4 Baker (1988)

Baker (1988) assumes that the two variants involve the same thematic relationships at D-structure, and as such have similar, although not identical underlying structures. Like Marantz and Kayne, Baker assumes that a preposition is present in the D-structure of both variants, and that in the double object alternant, the preposition is empty. The D-structure for a sentence like *Joe gave his girlfriend a computer (for her birthday)* is shown in (9). The resulting structure in (10) is derived via application of P-incorporation into V, and N-reanalysis, which amounts to abstract incorporation of the N head into V, for case reasons. This is possible because N is θ-governed by V (the structures are from Baker 1988, his (131a-b), p. 286):

(9)



(10)



3.2.5 Larson (1988, 1990) and Jackendoff (1990)

Larson (1988) bases his analysis on the observations made in Barss and Lasnik (1986), who show that the configurational asymmetry (at S-structure) is different in the two structures. The indirect object c-commands the direct object in the double object version, while in the prepositional dative version, the direct object c-commands the indirect object. This is not straightforwardly true of the trees in (4), (8) or (10).

Larson takes the Barss-Lasnik asymmetries as evidence that a flat ternary branching structure cannot be right for this type of construction. Instead, he posits a hierarchical structure for the VP, which involves two *VP Shells*. The Theme is generated as the specifier of the lower VP, and the Goal (plus the preposition *to*) as its complement. The double object structure is derived via a passive-like operation which applies to the lower VP, and moves the Goal to the specifier position, and demotes the Theme to an adjunct position similar to the one of agentive *by*-phrases in passives. In this structure, the preposition *to* has the status of a pure dative case-marker, which is absorbed when dative shift applies, analogous to case absorption taking place in passive constructions.

Larson bases his proposal on a relativized version of the UTAH, given in (11), according to which a set of thematic relations may be repre-

sented in different D-structure representations, with the *relative* prominence among the arguments being the same.

(11) Identical thematic relationships are represented by identical relative hierarchical relations between items at D-structure.

Together with the version of the Thematic Hierarchy that Larson adopts, Agent>Theme>Goal>Oblique, the result is that if an argument α is higher on the Thematic Hierarchy than β, α must c-command β at D-structure.

As a consequence of these assumptions, both the prepositional dative and the double object structure involve D-structures which conform to UTAH, but the double object construction is derived from a UTAH-conforming structure and into a structure which does not conform to the UTAH. One problem with a derivational approach like Larson's concerns examples like the ones in (12), pointed out by Jackendoff (1990) in a response to Larson's paper, who points out the difficulties of accounting for the different prepositions appearing in these sentences:

(12) a. John blamed the accident on Max.
b. John blamed Max for the accident.

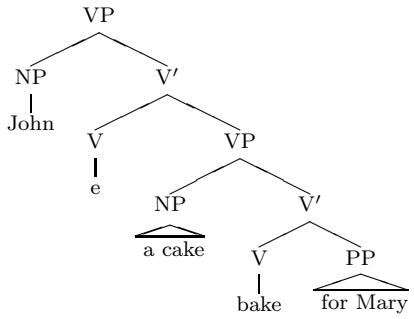
In a response to Jackendoff (Larson (1990)), Larson argues that this type of alternation is only apparent; there is no derivational relationship between (12a) and (12b). Instead, the two alternants stem from two different base-generated structures. However, in order for this to be true, Larson has to assume that the thematic relations have to be different in the two cases. He appeals to an animacy constraint on the direct object in (12b), which does not apply to the complement of *on* in (12a). Hence, he can assume without violating the UTAH that (12a) and (12b) represent different D-structures.

Jackendoff also mentions the observation already made by Oehrle, that the distribution of prepositional *for*-datives is much wider than the distribution of Beneficiary objects in the form of a noun phrase. He argues that since *for*-datives are adjuncts, the analysis of dative shift assumed by Larson for *to*-datives fail to carry over to benefactive double object constructions. Hence, he assumes that the two variants really represent different base-generated structures. However, Larson's response is to say that the benefactive double object construction is *not* derived from the prepositional variant, but rather, that there is an argument structure altering rule like (13), which adds a Beneficiary object in case the verb is of a certain type.

(13) a. (optional) Add θ_{BENEF} to the θ-grid of α.
b. Condition: α denotes an event of creation or preparation.
c. Result: The Theme is for the benefit of the beneficiary.

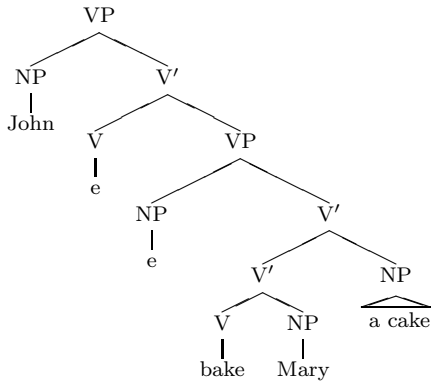
Thus, ditransitive *bake* can be projected into a structure like the one in (14), where *for* case-marks the benefactive argument and redundantly assigns it the benefactive role. This yields the prepositional dative form.

(14)



Since the preposition *for* is thematically redundant, it can be 'absorbed' as case-marking, and the Theme argument is then projected into an adjoined position. The result is the double object form in (15):

(15)



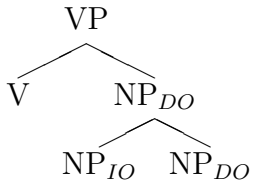
Thus, Larson assumes that while Beneficiaries in general are adjuncts, they are able to become arguments with a certain class of verbs, via a benefactive augmentation rule. However, while Larson is able to state the generalization here, he does not give an explanation for why it is exactly this class of verbs that enter into the benefactive alternation.[2]

[2]However, the structure in (15) is unable to account for the fact that the c-

3.2.6 Hellan (1991)

Hellan (1991) discusses the syntactic properties of Norwegian double object constructions, and while he only discusses the specific properties of double objects, he mentions that he assumes a non-derivational relationship between double objects and prepositional datives. Hellan proposes a structure where the direct object and the indirect object form a cluster where the indirect object is left-adjoined to the direct object. This is reminiscent of the small clause-type structure which was first proposed by Kayne (1984). The structure is shown in (16):

(16)



The direct object is governed by the verb, which assigns accusative case and a θ-role to it. The indirect object is not governed by the verb, but instead licensed by a combination of its structural position (as adjoined to the direct object) and the fact that it encodes a specific θ-role benefactive. Hellan argues that the direct object is the head of the cluster based on two observations: First, the two objects differ in behaviour with respect to *hva for*-extraction ('what for'), which is assumed to take place only if the constituent is governed. Thus, since *hva for*-extraction is possible with direct objects but not with indirect objects, as (17) show, Hellan concludes that only the direct object is governed by the verb.

(17) a. Hva$_i$ ga du barna [t$_i$ for noe]?
what gave you children.the for something
'What did you give the children?'
b. *Hva$_i$ ga du [t$_i$ for noe] mat?
what gave you for something food
'What did you give food (to)?'

The second difference concerns the indefiniteness restriction which only direct objects have to obey:

command relations between the Goal and the Theme in benefactive double object constructions are identical to those in Recipient double object constructions.

(18) a. Det ble gitt Jon et stort
it was given Jon a great
ansvar/*ansvaret.
*responsibility/*responsibility.the*
'Jon was given a great responsibility.'

This analysis has the advantage that it can account for the fact that the indirect object can bind into the direct object. But as far as I see, on the most common definitions of c-command, nothing prevents the direct object from c-commanding into the indirect object in the structure assumed, so the analysis is unable to account for the Barss-Lasnik asymmetries. In addition, this analysis posits a structure where one argument is adjoined to another argument, which is not an unproblematic assumption. However, Hellan assumes that this is parallel to the structure for small clauses like *Vi så Marit sint*, 'we saw Marit angry', where he assumes *Marit* to be adjoined to the predicate of the small clause, *angry*.

3.2.7 Åfarli (1992)

An analysis according to which the indirect object and the direct object form a constituent is also assumed in Åfarli (1992). The verb is only able to assign one θ-role, which it assigns to the direct object. The indirect object receives a θ-role from the structural position it appears in, and this role is similar to the one assigned by *to* in prepositional dative constructions. Two observations are taken to support the claim that indirect objects are not θ-marked by the verb: first, we have the fact that an indirect object can be added to verbs like *kjøpe*, 'buy', or *koke*, 'boil'. Here, since the indirect object is optional, it is clearly not an argument of the verb. In addition, he assumes that the definiteness restriction which applies only to direct and not to indirect objects makes a distinction between those noun phrases which are arguments of the verb, and those which are only indirect arguments.

Double object verbs like *gi*, 'give', can assign postverbal case twice; once to each object. The morpheme *PASS*, which he assumes is present in passive constructions, does not require case in Norwegian, allowing for impersonal passives of double object verbs, like in (19a). However, in English, *PASS* needs case, so the corresponding impersonal passive in (19b) is ruled out:[3]

[3]cf. also the more recent analysis of this construction by Holmberg (2002), who proposes an anlysis in terms of phases and Agree.

(19) a. Det vart gitt soldaten ei medalje.
there was given soldier.the a medal
'The soldier was given a medal.
b. *There was given the soldier a medal.
'The soldier was given a medal.'

Of the analyses discussed so far, most assume that the double object structure and the prepositional dative structure are both derived from similar bases, in accordance with the UTAH, or they are simply vague with respect to the relation (if any) between the two variants. Another thing which many of them have in common, is that they assume something like a null preposition to be present in the underlying structure for the double object construction, which is similar to what I will argue in the following.

Of these analyses, only Oehrle (1976) argues specifically against a derivational approach, which he bases on differences in the semantics for the two variants, and he also extends the analysis to the benefactive alternation. Jackendoff (1990) also argues against a derivational relationship in his response to Larson, and Larson ends up assuming that in some cases, the relation between the two variants is transparent and derivational, while others are not derivationally related, as we saw with the two variants of *blame*. With *blame*, however, he argues that there is a difference in animacy, so the constructions don't really have identical underlying structures, and do not conflict with the UTAH. However, while all of Larson, Jackendoff and Oehrle observe that a Beneficiary noun phrase can only be added to verbs which denote events of creation in a broad sense, they seem to assume that this is lexically specified, and fail to account for *why* Beneficiaries are restricted in exactly this way.

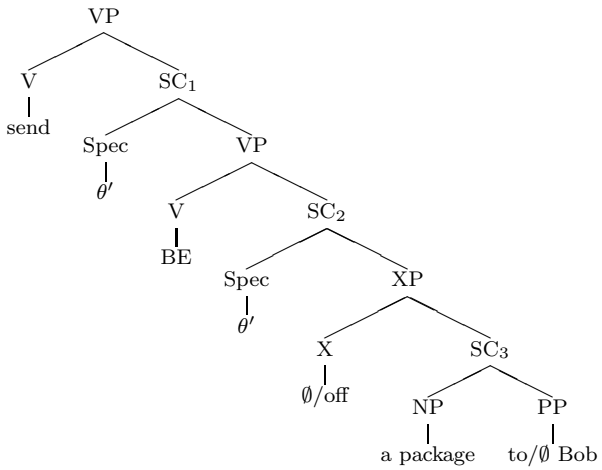
3.2.8 Den Dikken (1995)

den Dikken (1995) proposes an analysis in terms of a fine-grained decompositional structure for the verb phrase. In accordance with the UTAH, he assumes that both prepositional datives and double object constructions are derived from underlying structures containing a preposition. In the case of double object constructions, this preposition is empty. He makes two important claims, which I repeat in (20) (=his (23), p. 123) This approach is similar to the approaches by Kayne (1984), Marantz (1984) and Baker (1988) in that it posits a null preposition also in double object constructions, and in that this null preposition incorporates into the verb at some stage of the derivation.

(20) a. The dative PP is a SC predicate.
b. Triadic verbs take a *propositional* (SC) complement; the Theme and Goal θ-roles are assigned by the dative preposition.

The underlying structure for triadic constructions assumed by Den Dikken is reproduced in (21) (=Den Dikken's (63), p. 141):

(21)



The empty preposition which is present in double object constructions must be licensed, which can take place in either one of two ways: either it can be identified by dative case morphology, as in languages with morphological dative case, like e.g. German or Icelandic, or it must incorporate into a verb, which is what happens in languages which lack morphological case.

The double object construction is derived from an underlying construction containing an empty preposition via the application of the operation of 'Dative shift', which is similar to the Predicate Inversion operation taking place e.g. in Locative Inversion constructions. According to Den Dikken, this is an instance of A-movement, which is partially motivated by case considerations. While in prepositional datives, it is the Theme which undergoes case-driven movement, in double object constructions, the empty-headed PP moves instead, allowing the Theme NP to receive case in situ, while the Goal is case-marked by the matrix verb.

The derivation goes as follows: First, the dative PP (whose head is empty in the double object structure) shifts around the direct object, to the subject (specifier) position of the particle-headed SC (=Spec SC_2). From this position, the empty head of the dative PP can incorporate into

the head of the SC headed by the abstract predicate BE, a step which den Dikken motivates by a need for empty prepositions to be formally licensed.

As a result of incorporation, the head of the lower VP comes to govern what the empty preposition governed in its base position, by Baker's (1988) *Government Transparency Corollary*. Thus, the Theme can receive case in situ, from the V+P complex. After incorporation, the remnant PP containing the Goal plus the trace of the incorporated preposition fronts to the specifier of SC_1, and the order where the Goal precedes the Theme results. The Goal noun phrase gets case from the higher verb *send*. This step of the derivation is motivated by the fact that in double object constructions, the Goal is interpreted as a possessor.

A decompositional analysis of the verb *have* has also been proposed by e.g. Kayne (1993), who argues that the verb *have* (both in its main verb and auxiliary verb uses) decomposes syntactically into two heads; a verbal predicate BE plus a prepositional component, which incorporates into BE syntactically to form HAVE, an abstract predicate which in English can be spelt out as *have*.

An analysis like this one has several advantages. We have seen that while indirect objects and Recipients could undergo passivization and *wh*-extraction, they could not undergo *tough*-movement. According to den Dikken (1995), the ban on *tough*-movement results from the fact that these objects are not DPs, but empty-headed PPs, which cannot undergo pied-piping under empty operator movement, as indicated by the ungrammaticality of examples such as (22) (=den Dikken's (12b), p. 188).

(22) *John is not easy [$[_{PP}$ to Op]$_j$ to talk t_j]

Den Dikken argues that the ban on pied-piping of the dative PP under empty operator movement follows from the assumption that empty operators are identical to PRO, which may not be governed at S-structure. However, since the empty dative preposition governs its empty operator, pied-piping of the PP results in a violation of the PRO Theorem.

The restrictions on particle placement in double object constructions also follow from this analysis. When a particle cooccurs with a Goal noun phrase, the particle must obligatorily appear in the position preceding the direct object; it cannot appear in the position following the object. Den Dikken argues that this follows from the availability in the structure of a particle-headed projection immediately preceding the small clause projected by the dative PP.

In addition, this analysis captures the similarities between prepositional dative constructions and double object constructions, at least for transfer of possession verbs, but not for benefactive constructions, which are *not* identical in meaning to *for*-datives, as pointed out e.g. by Oehrle (1976), and also by Jackendoff and Larson in the debate concerning Larson's original paper on the dative alternation. If double object constructions are only available in languages where possession (which den Dikken represents as HAVE) is decomposable into BE plus a prepositional element, it follows that only languages which possess this abstract preposition can ever be able to form double object constructions.

3.2.9 Pesetsky (1995)

Pesetsky (1995) presents an analysis where double object constructions and prepositional datives project different, unrelated structures (cf. Oehrle 1976). In both cases, the verb *give* takes a PP complement, which in the double object construction is headed by a null affixal preposition G, with the Theme in its complement and the Goal in its specifier. In the prepositional dative structure, the PP is headed by *to* with the Theme in its specifier and the Goal in the complement. G raises by head movement and affixes to the verb *give*, similar to the analysis presented by den Dikken.

Pesetsky only briefly discusses the failure of some verbs to participate in the alternation, but instead of relating it to properties of the verbs in question, he phrases the restriction in terms of a restriction of the distribution of the prepositions G and *to*, where G (with verbs of motion) can only combine with verbs of ballistic motion. In effect, this is more or less identical to the solution adopted by den Dikken.

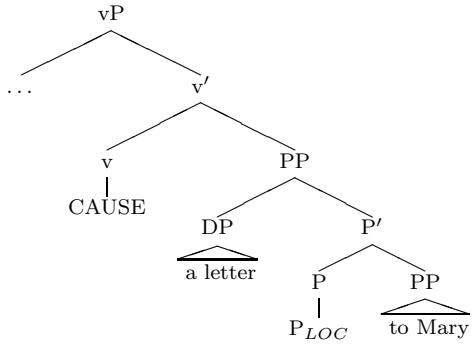
3.2.10 Harley (2002)

In the spirit of Oehrle (1976), Harley (2002) argues extensively that double object constructions and prepositional dative constructions represent different underlying meanings, and that they are best treated as NOT thematically related in any ways to each other. The analysis which she adopts, is sketched in the spirit of Pesetsky's proposals, but she is more explicit regarding the different semantics of the constructions, and also regarding the specific contribution of the prepositions in each case.

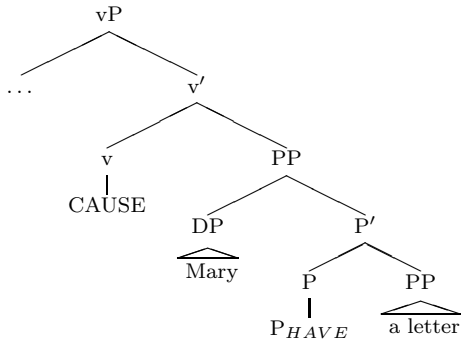
Harley proposes that double object verbs decompose into two heads; an external argument-selecting v which represents CAUSE, and a prepositional element P_{HAVE} or P_{LOC}. She argues that Pesetsky's G morpheme

can be identified with the prepositional content of main verb *have*, and terms it P_{HAVE}. An argument in the specifier of P_{HAVE} is interpreted as a possessor. The PP complement to V in the prepositional dative construction is headed by an abstract locative preposition P_{LOC}, which takes the PP headed by *to* in its complement. The null preposition P_{LOC} is motivated by facts from idioms of the type *send X to the showers*. The structure with P_{LOC} is interpreted as an event in which the Theme (or rather, Figure of the preposition P_{LOC}) is caused to go to Mary. The structures which she is assuming, are repeated in (23) and (24) (=Harley's (3a-b)):

(23)



(24)



In the following, I will assume that a decompositional approach to the possession relation is essentially on the right track, and I have chosen to represent this syntactically in terms of a derivational analysis like the one presented by den Dikken (1995), with slight modifications.

3.3 Norwegian: Verb types and interpretations

According to Beth Levin's (1993) extensive study of English verb classes, only a small subset of English verbs permit the addition of a noun phrase which is interpreted as the participant benefitting from the event described by the verb. Specifically, "the benefactive alternation is found with verbs that can broadly be characterized as either verbs of obtaining or verbs of creation, including some verbs that are verbs of creation in an extended use" (from Levin 1993: 49). Levin lists approximately 100 verbs that permit this alternation, before listing an array of verbs that only permit a Beneficiary participant to be added by means of a preposition (*for*). Although a few verbs appear in both categories, in the following, I have taken Levin's list of verbs as my point of departure for the discussion of benefactive constructions in Norwegian and English.

3.3.1 What types of verbs?

That much being said, the question arises of whether it is possible to make any generalization with respect to the types of verbs that allow the addition of an extra Beneficiary noun phrase? Some examples are given in(25), which demonstrate that in Norwegian, a Beneficiary DP can only be added to a transitive verb which can be conceptualized either as an event of creation ((25a)-(25b)) or of obtaining ((25c)).

(25) a. John bygget barna en snømann i hagen.
John built children.the a snowman in garden.the
'John built the children a snowman in the garden.'
b. Bestemor strikket John en genser.
grandma knitted John a sweater
'Grandma knitted John a sweater.'
c. Jeg booket henne en tur til Paris til bursdagen hennes.
I booked her a trip to Paris to birthday.the hers
'I booked her a trip to Paris for her birthday.'

The sentences in (26) show that a Beneficiary or Maleficiary cannot appear with transitive verbs which are not compatible with a creation/obtaining interpretation:

(26) a. *Sharon vasket moren sin huset.
Sharon cleaned mother.the hers house.the
'Sharon cleaned her mother the house.'

b. *Sykepleieren åpnet pasienten døra.
nurse.the opened patient.the door.the
'The nurse opened the patient the door.'

However, an extra Beneficiary or Maleficiary DP cannot be added to predicates that are unaccusative ((27)), not even if the events can be conceived of as events of creation (cf. (27b)-(27c)):

(27) a. *Nøkkelen falt meg i vannet.
key.the fell me in water.the
'The key fell me into the water.'
b. *Blomstene blomstret gartneren.
flowers.the bloomed gardener.the
'The flowers bloomed the gardener.'
c. *Istapper frøs barna.
icicles froze children.the
'Icicles froze the children.'

Also, Beneficiaries and Maleficiaries cannot combine with unergative predicates, not even when the events can be conceived of as events of creation, the sentences in ((28)) are all ungrammatical:

(28) a. *Han sang søsteren sin.
he sang sister.the his
'He sang his sister.'
b. *Hun arbeidet meg fem timer på fredag.
she worked me five hours on Friday
'She worked me five hours on Friday.'
c. *Hun løp meg 5000 meter.
She ran me 5000 meters
'She ran me 5000 meters.'

Nor can they combine with stative predicates, as in (29):

(29) a. *Bjørn holdt moren sin handleposen.
Bjørn held mother.the his shopping.bag.the
'Bjørn held his mother the shoppingbag.'
b. *Marit så Jens bildet.
Marit saw Jens picture.the
'Marit saw Jens the picture.'
c. *Musefamilien bor meg i hagen.
mouse.family.the lives me in garden.the
'The mouse family lives me in the garden.'

It is also not possible to add a Beneficiary to atelic events where no natural endpoint is implied, as the ungrammaticality of sentences in (30) show. As (30c) shows, the grammaticality does not improve when the verb can be conceived of as referring to an event of creation. The verbs in (30) all refer to atelic processes, which is made explicit by the choice of temporal adverbials with *i* 'in', which measure the duration of the event:

(30) a. *John rullet faren sin ballen i timesvis.
John rolled father.the his ball.the in hours
'John rolled his father the ball for hours.'
b. *Hun jaget meg edderkoppen hele ettermiddagen.
she chased me spider.the whole afternoon.the
'She chased me the spider the whole afternoon.'
c. *Han kjevlet meg marsipan i flere timer.
he rolled me marzipan in more hours.
'He rolled me marzipan for hours.'

The preliminary conclusion seems to be that an extra Beneficiary participant can only be added in case the verb is consistent with a creation/obtaining interpretation. However, there is variation with respect to the relative acceptability of Beneficiary DPs with these verbs. Sæther (2001) did a comparative study between different dialects of Norwegian, and she concluded that informants from the northern parts of Norway more readily accepted extra Beneficiary participants than informants from the Asker area close to the capital, Oslo.

Moreover, there is also variation in relative acceptability of a Beneficiary with one and the same predicate, and it is generally very hard to come up with generalizations that are valid for a large class of predicates. For instance, while the informants from the northern regions accepted both (31a) and (31b), all of the Asker informants rejected (31a), but the Asker informants were considerably split with respect to the acceptance of (31b). I represent this by putting % in front of the examples, to indicate that they were judged grammatical by some speakers (these sentences are from Sæther 2001, p. 66):

(31) a. %Hun bakte ham ei kake.
she baked him a cake
'She baked him a cake.'
b. %Den nye brødbakemaskinen bakte oss ferskt brød
the new bread.bake.machine.the baked us fresh bread
hver morgen.
every morning

'The new bread machine baked us fresh bread every morning.'

A plausible explanation for the problematic nature of (31b) could be because the event has an inanimate causer, which cannot as easily be conceived of as performing an act to the benefit of another participant. However, then we would expect all informants to reject this sentence, while (31a) should be considerably better. But this is not what we observe. Rather, it seems to be arbitrary whether participants reject one or the other of these sentences, which may point in the direction that pragmatic factors concerning use play a role in determining which sentences are acceptable and not. If this assumption is correct, it would probably be more correct to mark the odd examples with # rather than with *, to signal that the oddness is of a pragmatic nature. However, this issue will have to be looked deeper into, and in the following, I will continue to use the * to signal that something is impossible.

Some predicates are compatible both with creation interpretations and with interpretations in which the direct object undergoes change in course of the process. A Beneficiary can only be added on the creation interpretation. The sentences in (32) (creation verbs) and (33) (non-creational verbs) show a few examples:

(32) a. Jens bakte Marit ei kake.
Jens baked Marit a cake
'Jens baked Marit a cake.'
b. Jens malte Marit et bilde.
Jens painted Marit a picture
'Jens painted Marit a picture.'

(33) a. ?Jens bakte Marit en potet.
Jens baked Marit a potato
'Jens baked Marit a potato.'
b. ?Jens malte Marit en vegg.
Jens painted Marit a wall
'Jens painted Marit a wall.'
c. ?Jens malte Marit Eiffeltårnet.
Jens painted Marit Eiffel.tower.the
'Jens painted Marit the Eiffel Tower.'

A sentence like (33c), for instance, is only good on a creation interpretation where it is understood from the context that what was painted was *a picture* of the Eiffel Tower, and not the actual tower in Paris. The

contrast between (32) and (33) points in the direction that in order to license a Beneficiary argument, the predicate must be compatible with a creation interpretation.

Another test which points in the same direction is the possibility of adding *litt*, 'a little', to the event. *Litt* signals that the event is incomplete and unfinished, and *litt* is incompatible with creation predicates where the culmination of the event is tightly connected to properties of the direct object. The sentences in (34) (typical process verbs) and (35) (creation predicates) show the contrast:

(34) a. Han dyttet vogna litt.
he pushed cart.the little
'He pushed the cart a little.'
b. Han klappet hunden litt.
he patted dog.the little
'He patted the dog a little.'
c. Han tørket håret litt.
he dried hair.the little
'He dried his hair a little.'

(35) a. *Hun modellerte en krukke litt.
she moulded a pot little
'She moulded a pot a little.
b. *Jeg strikket et skjerf litt.
I knitted a scarf little
'I knitted a scarf a little.'
c. *Han tegnet en skisse litt.
he drew a sketch little
'He drew a sketch a little.'

While it is impossible to add a Beneficiary in the form of a noun phrase to the the atelic process predicates in (36), this is fine with the creation predicates in (37), where the added participant is interpreted as a future possessor of the created object:

(36) a. *Han dyttet meg vogna.
he pushed me cart.the
'He pushed me the cart.'
b. *Han klappet meg hunden.
he patted me dog.the
'He patted me the dog.'
c. Han tørket meg håret.
he dried me hair.the

'He dried me the hair.'

(37) a. Hun modellerte ham en krukke.
she moulded him a pot
'She moulded him a pot.
b. Jeg strikket henne et skjerf.
I knitted her a scarf
'I knitted her a scarf.'
c. Han tegnet oss en skisse.
he drew us a sketch
'He drew us a sketch.'

This is also true for the creation vs. non-creation uses of verbs like *bake*, 'bake', and *male*, 'paint'. When these predicates refer to events of in which a participant is affected by the event, as in (38), adding *litt* is possible, but if the predicates refer to creation events, *litt* cannot appear, as shown by (39):[4]

(38) a. Jens bakte en potet litt.
Jens baked a potato little
'Jens baked a potato a little.'
b. Jens malte en vegg litt.
Jens painted a wall little
'Jens painted a wall a little.'
c. Jens malte Eiffeltårnet litt.
Jens painted Eiffel.tower.the little
'Jens painted the Eiffel Tower a little.'

(39) a. *Jens bakte ei kake litt.
Jens baked a cake little
'Jens baked a cake a little.'
b. *Jens malte et bilde litt.
Jens painted a picture little
'Jens painted a picture a little.'
c. *Jens malte Eiffeltårnet litt.
Jens painted Eiffel.tower.the little
'Jens painted (a picture of) the Eiffel Tower a little.'

In (38), the sentences refer to processes which can be performed only to a certain extent, so adding *litt*, which measures the extent, is possible.

[4]The ungrammaticality of (39c) refers to the creation reading, i.e. where Jens is painting a picture of the Eiffel Tower. (38c) is grammatical because it refers to an act in which paint is added to the surface of the Eiffel Tower.

However, the sentences in (39) cannot be performed only to a certain extent in the same way, as the impossibility of adding *litt* shows.

To sum up the findings so far, we have seen that in Norwegian, a Beneficiary participant can be added to predicates which refer to events of creation or obtaining. However, there is variation among speakers with respect to whether they accept the addition of Beneficiary DPs, and there is also (inter-speaker, as well as intra-speaker) variation with respect to whether they accept a Beneficiary with one and the same predicate; much seem to rely on contextual factors. Thus, it is difficult to come up with a valid generalization concerning the class of predicates where a Beneficiary participant can be added. The acceptability of Beneficiaries seems to be conditioned by two factors: (i) the verb must be compatible with a creation interpretation and (ii) pragmatic factors relating to use.

3.3.2 The interpretation of the added participant

Going back to the examples in (25), we see that one property which the grammatical examples in (25a)-(25c) all share is that the extra noun phrase is interpreted as an (intended) Recipient or possessor of the direct object. If you bake someone a cake, the intention is that this person actually receives the cake, and that the act is not simply done for that person's benefit, so that she does not have to perform it herself. In the ungrammatical sentences in (26) there is no sense of possession between two participants; if you open a door for someone, they do not necessarily come to possess the door, for instance. Thus, the notion of (future) possession between the Beneficiary DP and the direct object seems to be necessary in these cases.

According to Oehrle (1976), the sense of possession between the Beneficiary and the direct object is quite tight, and is hence not cancellable, as the contrast between the examples in (40) (from Oehrle 1976) show. In the sentences where the Beneficiary appears with the preposition *for*, the entailment that the Beneficiary actually comes to possess the object, is cancellable and the interpretation of the Beneficiary DP is vague between a reading where it is interpreted as a future possessor and one where it is simply the Beneficiary of the performed act. However, if the Beneficiary has the form of a noun phrase, the entailment of possession cannot be cancelled, hence the oddness of (40b) and (40d).

(40) a. I baked a cake for Max, but now that you're here, you may as well take it.
b. #I baked Max a cake, but now that you're here you may as

well take it.
c. John made the pancakes he gave Mary for Jack.
d. #John made Jack the pancakes he gave Mary.

In Norwegian and English, a Beneficiary DP *cannot* combine with transitive verbs where there is no sense of creation or obtaining at all, as witnessed by the ungrammaticality of the sentences in (26) above. More examples of this type are given in (41):

(41) a. *Han vasket henne bilen.
he washed her car.the
'He washed her the car.'
b. *Hun masserte mannen sin ryggen.
she massaged man.the hers back.the
'She massaged her husband the back.'
c. *Han bar moren sin handleposene.
he carried mother.the his shopping.bags.the
'He carried his mother the shopping bags.'
d. *Han spiste henne spinaten.
he ate her spinach.the
'He ate her the spinach.'
e. *Han vasket meg soverommet.
he washed me bedroom.the
'He cleaned me the bedroom.'

In the sentences in (41), the intended reading of the Beneficiary DP is one where it is interpreted as the person benefitting from the action, not as an intended possessor (a possessor reading is quite unnatural in most of these cases, at any rate).[5]

Note that while an English *for*-PP is ambiguous between a pure Beneficiary reading and a Beneficiary/Recipient reading, this is not so for Norwegian. When *for* is used here, only a pure Beneficiary reading of the PP is possible; (42a) gets an interpretation where Jens painted a picture so that Marit didn't have to do it herself. If a *til*-PP is used, the participant is interpreted as a future possessor (cf. (42b)), in the same way as with verbs of transfer:

[5]Kristine Bentzen informs me that (41e) is a possible utterance in her dialect of Norwegian, but only on a reading where *meg*, 'me', is an intended Recipient of the room. This could, for instance, be the case in a situation in a hotel where the room has to be cleaned before you can make use of it. So the notion of possession again seems to be highly involved here.

(42) a. Jens malte et bilde for Marit.
Jens painted a picture for Marit
'Jens painted a picture for Marit.'
b. Jens malte et bilde til Marit.
Jens painted a picture to Marit
'Jens painted a picture for Marit.'

Moreover, in Norwegian, the added nominal cannot be interpreted as a participant who is negatively affected by the event, although this type of interpretation is frequent in German. Hence, the examples in (43) are not possible in Norwegian, although the German equivalents would be perfectly grammatical.[6]

(43) a. *Innbruddstyven ødela naboen vår leiligheten.
burglar.the ruined neighbour.the ours flat.the
'The burglar ruined our neighbour the flat.'
b. *Hun knuste foreldrene sine speilet.
she broke parents.the hers mirror.the
'She broke her parents the mirror.'
c. *Hun spiste meg sjokoladen.
she ate me chocolate.the
'She ate me the chocolate.'

In order to signal that a participant is negatively affected, Norwegian has to employ a prepositional phrase, as in (44):

(44) a. Innbruddstyven ødela leiligheten for naboen vår.
burglar.the ruined flat.the for neighbour.the ours
'The burglar ruined our neighbour's flat on him.'
b. Hun knuste speilet for foreldrene sine.
she broke mirror.the for parents.the hers
'She broke the mirror on her parents.'
c. Hun spiste sjokoladen for meg.
she ate chocolate.the for me

[6]In the sentences in (43), the added nominal cannot be interpreted as a future possessor of the Patient/Theme, which is a necessary condition on Beneficiaries in Norwegian, but not in German, where the relation between the extra participant and the Theme is not one of physical possession, but rather a more abstract relation in which the added participant stands in a Experiencer relation to the event. However, in Norwegian, if the possession requirement in met, context can be added which signals that the participant need not necessarily benefit from the action, in the ordinary sense of benefit; an example like *han mikset meg en kvalmende drink*, 'He mixed me a sickening drink.' is perfectly fine.

'She ate the chocolate on me.'

The sentences in (44) are ambiguous, and the extra participant can either be interpreted as a Maleficiary OR as a Beneficiary. However, the most probable interpretation of the PP in these cases is one in which the participant is negatively affected by the event. This leads to the suspicion that the interpretation of the added noun phrase as a Beneficiary or Maleficiary is actually governed by pragmatic and contextual factors, and has little or nothing to do with grammar *per se*. This initial suspicion is essentially on the right track, as we will see.

The notion of possession which is present in all of these cases, is a direct consequence of the structure that is projected, where the possession relation decomposes syntactically to a null prepositional head in the complement to an abstract verbal predicate. Since possession seems to be a necessary condition on Beneficiary nominals in Norwegian, we expect that only animate noun phrases are able to appear as Beneficiaries/Recipients. This is in most cases true, but not invariably so. Consider the sentences in (45). These are again marked with %, because there was considerable disagreement among speakers with respect to their acceptability. Note, however, that while all asked speakers accepted, the same speakers judged (45c), (45d) as considerably worse. Yet another example, (45e), involving the same verb *sy*, 'sew', was judged even worse than (45d):

(45) a. %Jeg kjøpte døra et nytt dørhåndtak.
I bought door.the a new door.handle
'I bought a new door handle for the door.'

b. %Jeg strikket genseren nye ermer.
I knitted sweater.the new sleeves
'I knitted new sleeves for the sweater.'

c. %Vi sydde sofaen et nytt trekk.
we sewed sofa.the a new cover
'We sewed a new cover for the sofa.'

d. %Vi sydde vinduet nye gardiner.
we sewed window.the new curtains
'We sewed new curtains for the window.'

e. %Vi sydde soverommet nye gardiner.
we sewed bedroom.the new curtains
'We sewed new curtains for the bedroom.'

Thus, what seems to guide whether a sentence containing an inanimate

possessor is judged acceptable or not, is the presence of a part-whole relation between the possessor and the created object, perhaps similar to possessor datives in German. If there is no such part-whole relation, or it is difficult to construct, the sentences were not accepted as readily.

Later on, I argue that the possession relation between the direct object and the added participant is a direct consequence of the structure they appear in, where the possession relation decomposes syntactically into an abstract verbal component Pred, plus an empty-headed prepositional phrase, and where head of the PP in turn incorporates into Pred. However, the bene/Maleficiary aspect of the meaning of these participants arises as the result of a Gricean conversational implicature, which assigns to the structure the type of interpretation which is most likely, given Grice's Principle of Cooperation. While entailments are never cancellable, implicatures can be cancelled quite easily given an appropriate context. The sentences in (46) are repeated from (40) above, and they show the non-defeasibility of possession, where the examples in (46b) and (46d) are odd:

(46) a. I baked a cake for Max, but now that you're here, you may as well take it.
b. #I baked Max a cake, but now that you're here you may as well take it.
c. John made the pancakes he gave Mary for Jack.
d. #John made Jack the pancakes he gave Mary.

The sentences in (47) give more examples, which show that the possession relation cannot be cancelled; even in the presence a proper context in which cancelling the possession relation should be plausible, the entailment of possession survives.

(47) a. #Jens bakte Marit ei kake, men ga den til hunden.
Jens baked Marit a cake, but gave it to dog.the
'Jens baked Marit a cake, but gave it to the dog instead.'
b. #Marit strikket Jens en genser, men ga den til broren sin.
Marit knitted Jens a sweater, but gave it to brother.the hers
'Marit knitted Jens a sweater, but gave it to her brother.'

However, the sentences in (48) show that the notion of benefactivity can be cancelled or rejected quite easily if a proper context is added:

(48) a. Jens kjøpte Marit masse sjokolade enda han visste at
Jens bought Marit loads chocolate even he knew that
hun var veldig allergisk mot det.
she was very allergic against it
'Jens bought Marit a lot of chocolate although he knew that she was terribly allergic to it.'

b. Jens bestilte Marit en pizza enda han visste at hun var
Jens ordered Marit a pizza even he knew that she was
på Atkinsdietten.
on Atkins.diet.the
'Jens ordered Marit a pizza although she was on the Atkins diet.'

Hence, while the notion of possession is non-cancellable, the notion of 'benefactivity' can quite easily be rejected given an appropriate context. These findings add support to the present analysis where I have argued that while possession is structurally present in the form of a null prepositional phrase, plus an abstract verbal predicate, the notion of positively or negatively affected is simply a matter of pragmatics/world knowlegde.

3.4 Analysis

In this section, I lay out an analysis of constructions with Beneficiaries in Norwegian. I argue that the indirect object is introduced as the internal argument of a null prepositional head $\emptyset_P$, which in turn appears in the complement to an abstract verbal predicate Pred. For Norwegian, the null preposition which I represent as $\emptyset_P$ can possibly be thought of as a null version of the preposition *til*, 'to' which is commonly used to signal possession between two participants, as in (49):

(49) a. Hunden til Jens.
dog.the to Jens
'Jens's dog.'

b. Skjermen til lampen.
shade.the to lamp.the
'The lampshade.'

The syntactic decomposition of the possession relation into an abstract verbal predicate plus a prepositional component is nothing new (cf. e.g. Freeze 1992, Kayne 1993, or den Dikken 1995, among others), and I will adopt a slightly modified implementation of the analysis presented

in den Dikken (1995) laid out in §3.2.8 above. In addition, I assume a Ramchandian decomposition of the verb phrase into maximally three subevents, which are syntactically represented in terms of the functional heads Init, Proc and Res. The specifics of this system are presented in the introductory chapter.

3.4.1 Benefactive double object constructions

There are many similarities between constructions with Beneficiaries and traditional double object constructions with verbs like e.g. *give*, and the two types of constructions have in many instances been treated identically (cf. e.g. Oehrle 1976, or Brøseth (1997), for Norwegian). Based on the optionality of the Beneficiary noun phrase in comparison with the indirect object with verbs of transfer of possession, one might at first expect sentences in which a Beneficiary object has been added to project different syntactic structures from those of ditransitive verbs.

However, the similarities between the two types of constructions go beyond the merely superficial; Beneficiaries and indirect objects with ditransitive verbs behave more or less identically with respect to passivization and *wh*-extraction of the indirect object, *tough*-movement and *it*-clefting. The sentences in (50) show the behaviour of indirect objects with a prototypical ditransitive verb like *gi*, 'give':

(50) a. Mannen ble gitt ei bok.
man.the was given a book
'The man was given a book.'

b. Hvilken mann ga du ei bok?
which man gave you a book
'Which man did you give a book to?'

c. ?Slike mennesker er umulige å gi bøker.
such people are impossible to give books
'Such people are impossible to give books to.'

d. Det var onkel Jens jeg ga ei bok.
it was uncle Jens I gave a book
'It was uncle Jens who I gave a book to.'

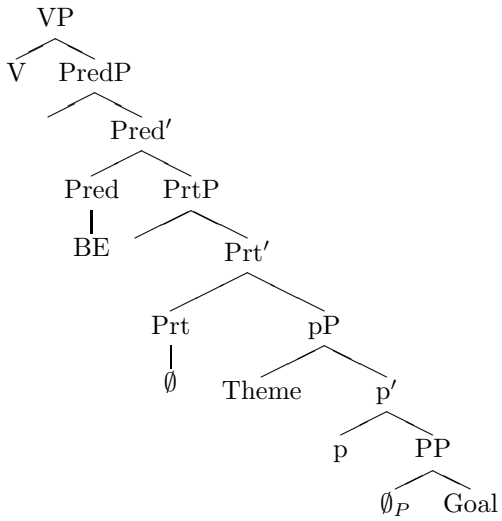
The sentences in (51) show the parallel sentences with a Beneficiary noun phrase:

(51) a. Jens ble bakt ei kake.
Jens was baked a cake
'Jens was baked a cake.'

b. ?Hvilken onkel bakte du ei sjokoladekake?
which uncle baked you a chocolate.cake
'Which uncle did you bake a chocolate cake.'
c. *Slike mennesker er vanskelige å bake kake.
such people are difficult to bake cake
'Such people are difficult to bake cakes for.'
d. ?Det var onkel Jens jeg bakte ei sjokoladekake.
it was uncle Jens I baked a chocolate.cake
'It was uncle Jens I baked a chocolate cake for.'

While there are slight differences in acceptability, as the sentences in (50) and (51) show, the grammaticality of examples like (51b) can often be improved if enough context is provided. The only real difference concerns *tough*-extraction, which is consistently worse for benefactive constructions than for the other ditransitive structures. I assume that sentences with Beneficiaries project syntactic structures identical to those of other double object constructions, despite the differences with respect to *tough*-movement, which I will return to below, and which I will analyze in terms of preposition deletion. Specifically, I assume that the structure for all double object constructions can be schematically represented like the one in (52), where I am abstracting away from the decomposition of the verb:

(52)



Here, the Goal is generated in the complement position to a null preposition $\emptyset_P$, while the Theme is introduced by the p head in a split

PP model (cf. e.g. van Riemsdijk 1990, Rooryck 1996, or Svenonius 2003). The projection of the null preposition is dominated by PrtP, a projection headed by a particle whose head may be null. The presence of this particular head is motivated by the fact that a particle can in a limited number of cases appear in double object constructions (for more detailed arguments for the motivation of PrtP, I refer the reader to den Dikken (1995), in particular §3.11). PrtP is in turn dominated by PredP, which is headed by the abstract verbal predicate Pred. Furthermore, the verb decomposes into InitP, ProcP and ResP, as outlined in chapter 1.

Den Dikken argues that double object particle constructions are non-existent in Mainland Scandinavian languages, but this conclusion is probably too strong, given that examples such as those in (53) can be productively formed in Norwegian. Hence, I will adopt den Dikken's assumptions which were originally made for English, and assume that the presence of a particle in double object constructions is well motivated also for Norwegian.

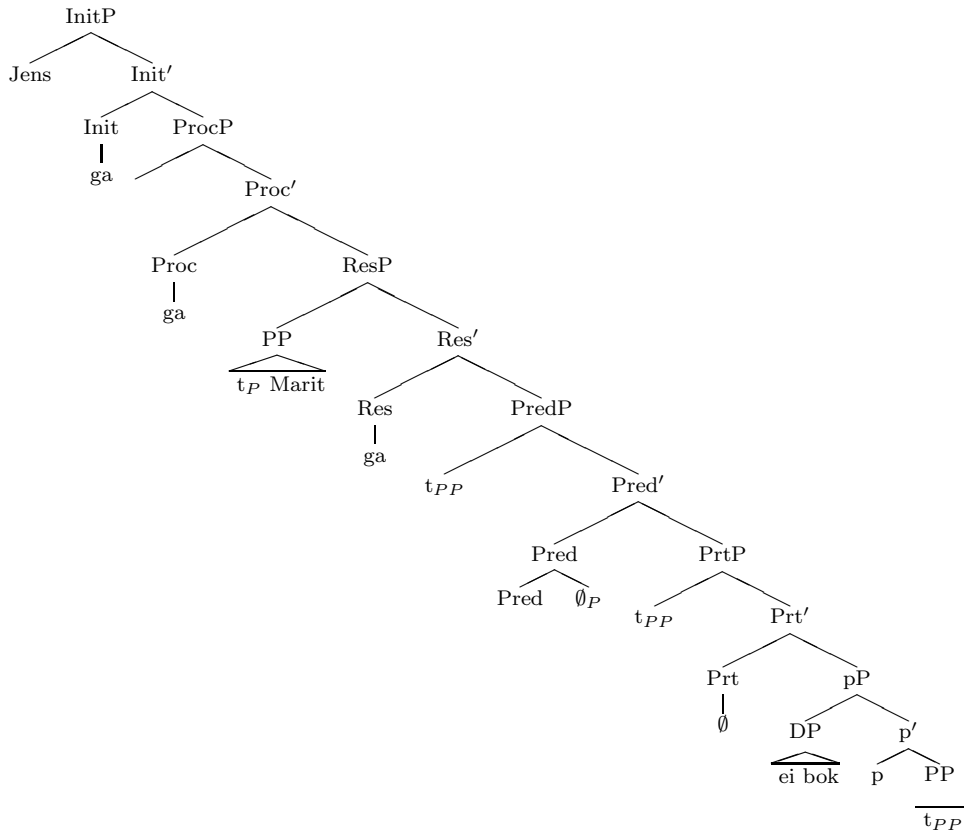
(53) a. Legen skrev meg ut en resept.
Doctor.the wrote me out a prescription
'The doctor wrote me out a prescription.'

b. Jeg kan tegne deg opp et kart over områthe.
I can draw you up a map over area.the
'I can draw you up a map over the area.

c. Skal jeg varme deg opp litt suppe?
Shall I heat you up little soup
'Do you want me to heat you up some soup?'

A sentence like *Jens ga Marit ei bok*, 'Jens gave Marit a book', is derived in the following fashion: First, the empty-headed PP containing *Mary* is shifted into the specifier of PrtP, in an operation similar to predicate inversion (cf. den Dikken 1995). This operation results in the empty head of this PP being then in a local relation with the abstract predicate which I represent as Pred, so it can incorporate into Pred. The PP whose head has been moved out then shifts into Spec PredP, and further up to the specifier of ResP. The resulting structure is shown in (54):

(54)



Den Dikken argues that these movement operations are driven by case considerations, plus the need for empty prepositions to be licensed. Specifically, he assumes that PP movement plus subsequent incorporation of $\emptyset_P$ into the abstract verbal predicate is necessary in order to ensure case to the Theme argument, which cannot be assigned case in its base position. The next step of the derivation, where $\emptyset_P$ incorporates into the verbal predicate is necessary because $\emptyset_P$ needs to be licensed, which in languages lacking morphological case only can take place via incorporation into a governing predicate (cf. also Marantz 1984). However, den Dikken's analysis is stated in terms of Government and Binding Theory, and not all assumptions which he makes can be readily translated into Minimalist terms. Hence, while I assume the basic observations made by den Dikken to hold, the motivation behind the movement operations will have to be reformulated to fit into a Minimalist framework like the one I am assuming.

I assume the following: In the structure in (54), the Goal gets case from the $\emptyset_P$ preposition, while the Theme gets case from the matrix verb. The derivation is driven by strong features, which can be inserted in course of the derivation, and which forces elements to move (cf. Chomsky 1995). Specifically, I assume that Prt has an EPP-feature, i.e. it requires a filled specifier. This strong feature attracts the empty-headed PP to the specifier of PrtP. Then, a strong feature on Pred attracts the $\emptyset_P$, which incorporates into Pred. Pred also has an EPP-feature, which attracts the PP whose head has incorporated into Pred.[7].

In the last step, the remnant PP is attracted to the specifier of ResP, by an an EPP-feature on Res. In addition, the Theme undergoes covert movement to the specifier of ProcP, driven by an EPP-feature on the Proc head. Positing these features may be stipulative, but it has the advantage of making the analysis explicit. Still, if the same observations could be explained without having to resort to stipulations of this kind, that would be a better solution, but the analysis presented does not bear directly on the correctness of these stipulations.

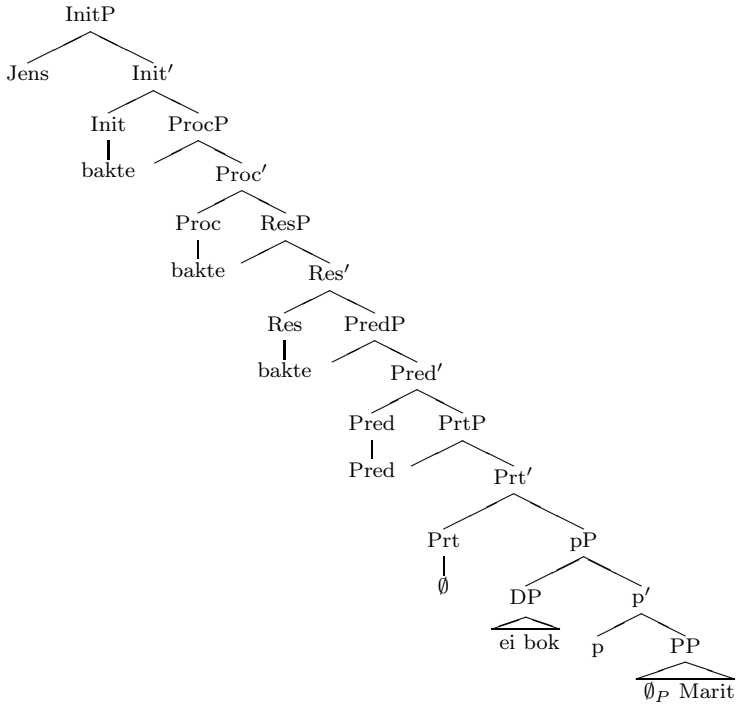
3.4.2 Deriving the structure

Above, I argued that Beneficiary DPs in Norwegian receive a composite interpretation which is the result of the structure it appears in as well as contextual factors. While the notion that a participant was positively affected by the event could be cancelled under certain circumstances, all cases in which a Beneficiary could be added in Norwegian involved possession between the direct object and the Beneficiary DP. Trying to cancel the possession relation resulted in a contradiction. Thus, I concluded that while possession is structurally represented, the notion of benefactivity arises as the result of a conversational implicature, which is cancellable given sufficient context.

[7]Here, one might ask why it is the empty preposition which incorporates, and not the Prt. At present, I do not have a good explanation for this, but hopefully, it can be made follow from the analysis without further stipulation.

The base structure for a benefactive double object construction like *Jens bakte Marit ei kake*, 'Jens baked Mary a cake', is shown in (55):

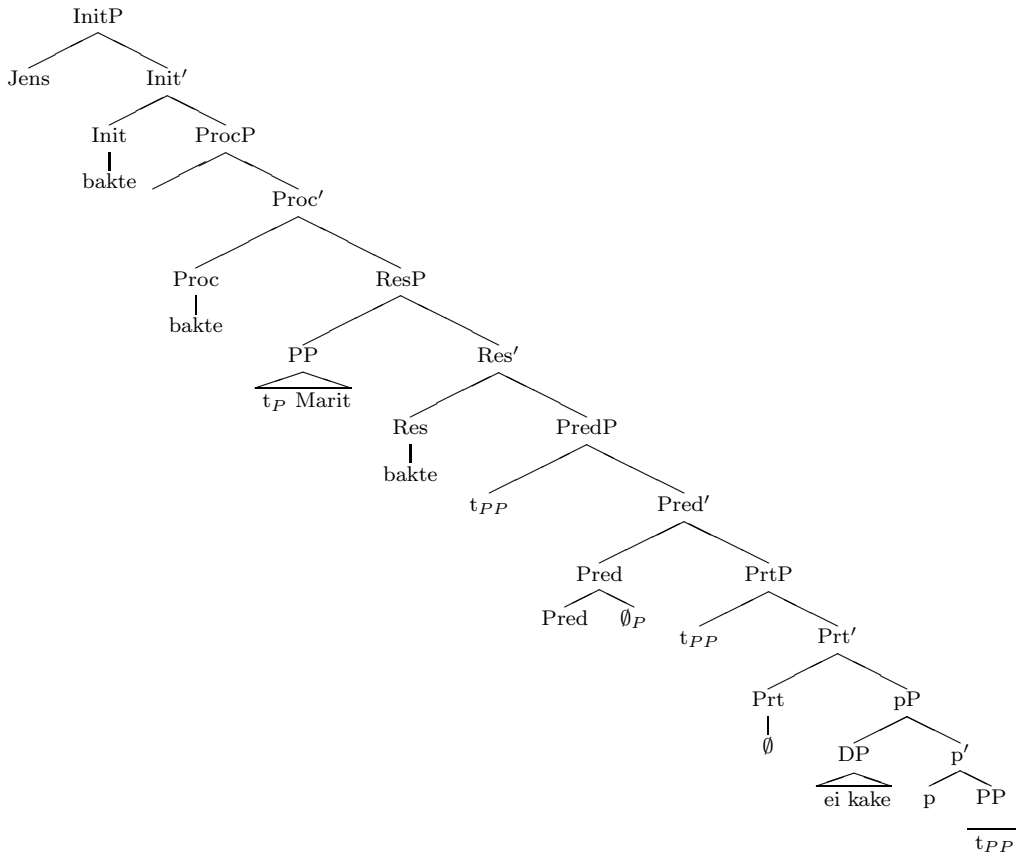
(55)



The resulting structure is derived in exactly the same way as in (54) above. First, the empty-headed PP $\emptyset_P$ *Marit* fronts to the specifier of PrtP, which results in $\emptyset_P$ being in a local relationship with the abstract predicate Pred. P then adjoins to Pred, and then, the PP whose head has moved out, moves into Spec PredP (headed by the complex head consisting of Pred+$\emptyset_P$), and further up to Spec ResP, where it is interpreted as a Holder of the result state represented by its complement. For motivation and technical implementation of this proposal, I refer back to the discussion of (54) in the previous section.

Above, we saw that in Norwegian, a Beneficiary DP could only be added to predicates which are telic. Importantly, when a verb like *bake* was used to refer to an atelic process, a Beneficiary DP could not appear, not even if the sentences could be conceived of as referring to events of creation. Hence, I assume that the verb itself gives the endpoint here, which I represent by associating it to all three head positions Init, Proc and Res. (56) shows the final structure:

(56)



This structure can be interpreted as an event in which Jens baked and which resulted in Mary having a cake. With verbs of creation, the direct object is crucially not a participant which exists prior to the initiation of the event, but only upon its completion.

Den Dikken assumes that the difficulty of A′-moving the indirect object under empty operator movement follows from the presence in the structure of an empty preposition. Grammatical extraction of the indirect object (e.g. under overt *wh*-extraction) results when the dative PP whose head is empty is pied-pied to the specifier of CP. However, when an empty operator is present in the structure, pied-piping cannot apply, which he relates to a violation of the PRO Theorem.

However, the differences between indirect objects with ditransitive verbs and Beneficiaries with respect to *tough*-movement remain to be explained. As the contrast between (50c) and (51c) show, while *tough*-movement is only slightly degraded with 'ordinary' indirect objects, with Beneficiaries, attempts at *tough*-movement become almost impossible to

parse.

The contrast can be explained if we assume that the underlying structure for ditransitive verbs with Goal indirect objects contain a null preposition similar to TO, which can be deleted when the DP is fronted. Parallel to this, the underlying structure of a ditransitive with a Beneficiary should contain a null preposition FOR, which can also be deleted when the DP is fronted. However, this is not true, as we have seen. There is no such thing as a null preposition FOR. The preposition which is present in the underlying structure of benefactive double constructions is the same as the one present with other ditransitives, namely a null counterpart of TO. As a consequence, because a sentence like (57a) can be derived by deletion of the null preposition after DP-fronting, the result is only moderately degraded. However, since there is no null counterpart to the benefactive preposition *for*, which can be deleted after DP-fronting, there is no way of deriving (57b), which accounts for the ungrammaticality.

(57) a. ??Slike personer er vanskelige å vise film TIL.
such persons are difficult to show film TO
'Such persons are difficult to show films to.'
b. *Slike personer er vanskelige å bake kaker FOR.
such persons are difficult to bake cakes FOR
'Such persons are difficult to bake cakes for'

3.4.3 Summary

We have seen that in Norwegian, only predicates that are compatible with an interpretation in which they refer to events of creation or obtaining (in a broad sense) are able to appear with an extra noun phrase which refers to the participant who is positively affected by the event. In addition, there are restrictions on the interpretation of the added participant. First, it must be interpreted as an (intended) possessor of the object which is created through the verbal process, and second, it can only be interpreted as a Beneficiary. I argued that while possession is syntactically present in terms of an empty-headed PP embedded under an abstract verbal predicate, the notion of benefactivity stems not from the syntactic structure, but is rather the result of a conversational implicature.

I adopted a modified version of the analysis presented in den Dikken (1995), according to which all double object constructions are derived from an underlying structure containing a null preposition, by a movement operation similar to predicate inversion, with subsequent incorpo-

ration of the null preposition into the abstract verbal predicate.

3.5 German

In Norwegian, only verbs which are compatible with a creation interpretation permit the addition of an extra noun phrase argument, which is interpreted as an intended possessor of the created object. However, German permits the addition of an extra participant in a wide range of cases, and the added participant can get a wide range of interpretations. German has morphological case, and the added participant is invariably marked with dative in all the instances which I wil be considering. In the following, I will restrict myself to discussing cases in which the extra participant is interpreted either as a possessor or as a participant who is (positively or negatively) affected by the event.

I start by laying out the data, in order to get an overview over the types of predicates that permit the addition of an extra Beneficiary or Maleficiary participant. As we will see, while on the surface, it seems that a dative-marked participant can be added to virtually any verb, the distribution of Beneficiaries and Maleficiaries is not completely free. Specifically, their distribution is limited to telic verbs which have an internal argument.[8]

First, I examine the distribution of dative participants with verbs that permit a creation interpretation, and these will be seen to behave more or less identically to the instances from Norwegian presented in the first half of the chapter. Having done that, I move on to discussing the cases in which Norwegian does not permit the addition of an extra argument. While these on the surface look very similar to the Beneficiaries/Recipients with creation predicates, they will be seen not to get a slightly different interpretation. With creation predicates, the added participant is interpreted as a future possessor of the created object, in the now familiar fashion. However, in some cases, while the dative participant looks like a possessor, I will argue that they are better treated as Experiencers, which stand in a very abstract possession-like relation to the event.

[8]The data from German does not have one specific source. Some of the examples were found while googling on the internet, but most often, the examples are constructed on the basis of similar examples, with the aid of native speakers. I wish to thank Berit Gehrke and Klaus Abels for being helpful and patient with me in this process, and for correcting any mistakes I might have come up with. Any remaining mistakes are of course, my responsibility.

3.5.1 Distribution of Beneficiaries and Maleficiaries

German allows a Beneficiary or Maleficiary participant to be added in a wide range of cases, but the distribution is nevertheless not completely free, as we will see. A dative-marked noun phrase can be added to verbs which permit a creation interpretation, exactly as in Norwegian. The sentences in (58) give some examples (I only gloss the dative case here):

(58) a. Der Schüler hat seiner Lehrerin einen Kuchen
the pupil has his.DAT teacher.fem a cake
gebacken.
baked
'The pupil baked his teacher a cake.'

b. Wir haben den Kindern einen Schneemann gebaut.
we have the.DAT children. a snowman built
'We built the children a snowman.'

c. Ich habe ihm einen CD bestellt.
I have him.DAT a CD ordered
'I ordered him a CD.'

d. Der Popstar hat seiner Mutter ein neues Auto gekauft.
the popstar has his.DAT mother a new car bought
'The popstar bought his mother a new car.'

In (58), the verbs are either verbs of creation ((58a) and (58b)) or verbs of obtaining ((58c) and (58d)), and the dative-marked participant is interpreted as a Recipient or future possessor of the direct object. Simultaneously, it is interpreted as the participant benefitting from the event, but as in Norwegian, I assume that the notion of benefactivity (and malefactivity) does not stem from the structure, but rather from conversational implicatures arising from the context of utterance.

In addition to the familiar creation cases, German permits a dative argument also with other types of verbs, as the sentences in (59) show. In these sentences, the dative argument is interpreted as an *inalienable possessor* of the direct object, but it is simultaneously also an Experiencer of the action which the event refers to.[9] In (59a) and (59c), the most salient interpretation of the dative participant is one in which it is a Beneficiary; in (59c), an interpretation as a Maleficiary is more salient:

[9]Inalienably possessed entities typically have a very tight relationship with the possessor; typical examples include body parts or objects which can be conceived of in the same way as body parts, e.g. glasses.

(59) a. Der Arzt reinigte dem Patienten die Wunde.
the doctor cleaned the.DAT patient the wound
'The doctor cleaned the patient's wound.'
b. Er hat seiner Mutter der Brille zertreten.
he has his.DAT mother the glasses on.stepped
'He destroyed his mother's glasses by stepping on them.'
c. Der Mann hat seiner Frau den Rücken massiert.
the man has his.DAT wife the back massaged
'The husband massaged his wife's back.'

In order to account for this type of tight possession relation between the dative participant and the Theme, such sentences have often been analyzed in terms of raising of the possessor from a position internal to the larger nominal and into a position where it can be interpreted as an affected participant of the event (cf. Landau 1999 or Lee-Schoenfeld 2004), or in terms of a relationship of binding or control between the possessor and the possessee (cf. e.g. Borer and Grodzinsky 1986, or more recently Hole 2004). However, I will not follow that line of thinking here. Instead, I assume that the dative participants in examples like (59) are Experiencers. Experiencers can possibly be treated as standing in an abstract type of possession relation to the event, but I will not go into any more detail with respect to that question here. There are pragmatic conditions under which a dative participant can be conceived of as experiencing the result of an event, and one such way of licensing this type of relation is in the case where the Experiencer is (inalienably or not) the owner of the Theme prior to the initiation of the event.

Something to this effect has also been noted in the literature on English *have*, where people have argued that locational or experiencer uses of *have* (e.g. *I had my car broken into*) require that the subject of *have* (i.e. the Location or Experiencer) must be coindexed with a pronoun or variable somewhere in its complement (cf. e.g. Belvin and den Dikken 1997). Belvin and den Dikken (1997) formulates this as follows (=their (30), p. 166):

(60) *The link requirement of experiencer* have *constructions*
The embedded clause in an experiencer *have* sentence must contain a link with *have*'s surface subject.

There are different ways in which this condition can be satisfied, e.g. by having a pronoun in the complement clause which is coreferent with the subject of *have*, as in the sentences in (61) (from Belvin and den Dikken 1997, =their (28a-b), p. 166):

(61) a. *John* had mosquitoes buzzing all around *his* head.
b. *she* had people asking for *her* autograph all the time.

In addition to the tight possession cases, a dative participant can often be interpreted as a participant experiencing the event, as in (62). A sentence like (62a), for instance, gets interpreted as an event in which the behaviour of the drunk host destroyed the experience of the party for his guests. Likewise, in (62b), there is no necessary possession relationship between *mir*, 'me', and *den Wald*, 'the forest'; what is being ruined, is the dative participant's possibility of enjoying the forest.

(62) a. Der betrunkene Wirt hat mir die ganze Party
the drunk host has me.DAT the whole party
verdorben.
destroyed
'The drunk host destroyed the party on me.'
b. Die Teenager haben mir den wunderschönen Wald
the teenagers have me.DAT the wonderful forest
verbrannt.
down.burned
'The teenagers burned down the wonderful forest on me.'
c. Der Stromausfall hat uns den Harry Potter-Film
the electricity.cut has us.DAT the Harry Potter
zerstört.
movie destroyed
'The powercut destroyed the Harry Potter movie on us.'

In a broad sense, this can be thought of as a possession relation between the guest and the experience of the party, in that Experiencers can sometimes be considered possessors. Both in German, English and Norwegian, the verb *have* is often used to refer to experiencer relations between a participant and an event, a few examples are given in (63) and (64):

(63) a. Jeg har vondt i magen.
I have pain in stomach.the
'I have stomach ache.'
b. Ich habe Hunger.
I have hunger
'I am hungry.'

(64) a. John had his sleep ruined.
b. Bill had his car stolen.

Still, I think the notion of possession here does not derive from the structure, but is rather a consequence of various pragmatic factors; it seems that it is easier to conceive of a participant as being affected by the event if (s)he possesses the object undergoing the change. As McIntyre (2005) puts it: "it is easy for an event to affect people positively or negatively if it results in the loss or gain of possessions . . . or affects their possessions" (p. 7).

The claim that possession in these cases derives from the context, is supported by the fact that two possessors can cooccur in the same sentence, which would be surprising if possession is structurally represented.(65) shows that a dative 'possessor' and a genitive possessor can cooccur, and (66) show that event two dative participants can occur in the same sentence. (66a) is from Hole (2004), (66b) is from Steinbach (1998), and (66c) is from Vogel and Steinbach (1998):

(65) a. Erich wäscht seinem Vater Maria's Auto.
Erich washes his.DAT father Maria's car
'Erich washes Marias car for his father.'

b. Das Kind trägt seiner Mutter Omas
the child carries his/its.DAT mother grandmother's
Koffer.
suitcase
'The child carries her grandmother's suitcase for her mother.'

(66) a. Die Schwester zog dem Patienten den Mantel
the nurse pulled the.DAT patient the coat
des Nachbarn aus.
the.GEN room.mate off
'The nurse helped the patient take his room-mate's coat off.'

b. Dem Peter habe ich gestern abends seinem neuen
the.DAT Peter have I yesterday evening his.DAT new
Auto einen neuen Motor eingebaut.
car a new engine inbuilt
'I inserted yesterday for Peter a new engine in his car.'

c. Ich habe der Maria dann ihre Falafel dem Oliver
I have the.DAT Maria then her falafel the.DAT Oliver
mit auf den Teller legen lassen.
with onto the plate put let
'I had the falafel for Maria out onto Oliver's plate.'

Hole (2005) makes use of the system of Proto-Roles developed in Dowty (1991), and he argues that the dative participant is an affected participant, and that the notion of possession is induced by the dative argument 'binding' a possessor variable of the more deeply embedded nominal. His notion of Affectee seems quite similar to what I here have chosen to term Experiencers. According to Hole, Affectees have properties of both Proto-Agents and Proto-Patients, as stated in (67) (=Hole's (12a-b)):

(67) a. Affectees are consciously/sentiently involved in the eventuality at hand, i.e. they have one property of the Agent Proto-Role.
b. Affectees are causally affected by the eventuality at hand, i.e. they have one property of the Patient Proto-Role.

Hole accounts for this in a Kratzerian Event Semantics framework (cf. Kratzer 1996) by assuming that Affectee participants are introduced by an Affectee Voice head dominating the verb phrase. While this proposal is interesting, I will not go into any further detail about the specific properties of the analysis.

To summarize, while a dative participant can appear with a wide range of transitive verbs, their distribution is not unlimited, which an approach in terms of adjunction of the dative argument (cf. Vogel and Steinbach (1998)) would have problems in accounting for. For instance, a dative participant cannot combine with atelic process verbs, as shown by the ungrammaticality of the examples in (68):

(68) a. *Hans hat mir die ganze Nacht Klavier gespielt.
Hans has me.DAT the whole night piano played
'Hans played piano on me all night long.'
b. *Er hat seiner Mutter das Auto gefahren.
He has his.DAT mother the car driven
'He drove the car for/on his mother.'

Moreover, note the contrast between the pair of sentences in (69). The example in (69a) contains a prefixed verb *herumlaufen*, lit. 'around.run', which refers to a pure process. Here, adding a dative participant is ungrammatical. However, the sentence in (69b), with the verb *weglaufen*, lit. 'away.run', contains the prefix *weg*, 'away', which provides an endpoint for the event, and here, adding a dative participant is perfectly grammatical:

(69) a. *Der Hund ist mir herumgelaufen.
the dog is me.DAT around.run
'The dog ran around on me.'
b. Der Hund ist mir weggelaufen.
the dog is me.DAT away.run
'The dog ran away on me.'

In addition to telic transitives, a dative participant can also combine with certain intransitive predicates; the sentences in (70) show that a dative argument can also appear with unaccusative predicates:

(70) a. Der Schlüssel ist mir ins Wasser gefallen.
the key is me.DAT in.the water fallen
'The key fell in the water on me.'
b. Das Auto ist mir kaputtgegangen.
the car is me.DAT down.broken
'The car broke down on me.'
c. Das Glas ist mir auf den Boden gefallen.
the glass is me.DAT on the floor fallen
'The glass fell on the floor on me.'

In the sentences in (70), the most salient interpretation for the added dative participant is one in which (s)he is negatively affected by the event, but this is probably due to pragmatic factors. It is quite difficult to conceive of an event not involving an agent, and where the added participant is interpreted as positively affected by the outcome. However, this is not totally ruled out, as the sentences in (71) show:

(71) a. Das Geld ist mir in die Hände gefallen.
the money is me.DAT in the hands fallen
'The money (surprisingly) came into my possession.'
b. Endlich sind mir die letzten Insekten verschwunden.
finally are me.DAT the last insects disappeared
'Finally have the last insects disappeared for me.'

While a dative object can be added with unaccusative verbs, this is not possible with unergatives, as the sentences in (72) show:

(72) a. *Fritz hat seinem Bruder geschwommen.
Fritz has his.DAT brother swum
'Fritz swam for/on his brothe.'
b. *Er hat seiner Schwester gelachen.
he has his.DAT sister laughed

'He laughed for/on his sister.'

c. *Sie haben mir getanzt.
they have me.DAT danced
'They danced for/on me.'

Likewise, a dative participant cannot be added to stative situations, as indicated by the ungrammatical examples in (73). A situation like the one described by (73a) can, for instance, be conceivable in a situation where the dative participant is embarrassed by the photo, where the agent saw the photo either by accident or on purpose. Still, the example is ungrammatical.

(73) a. *Maria hat ihm das Foto gesehen.
Maria has him.DAT the photo seen
'Maria saw the photo for/on him.'

b. *Ich habe ihm seinen Hund geliebt.
I have him.DAT his dog loved
'I loved his dog for/on him.'

c. *Die Maus hat mir im Garten gewohnt.
the mouse has me.DAT in.the garden lived
'The mouse lived in my garden for/on me.'

Thus, I conclude that in German to conditions must be met in order to permit a dative participant: (i) the event must be telic (excludes statives and process transitives/unaccusatives) and (ii) there must be an internal argument present in the structure (allows transitives and unaccusatives, but excluding unergatives).

3.6 Analysis

According to Vogel and Steinbach (1998), dative objects have properties like those in (74) (from Vogel and Steinbach 1998, p. 66):

(74) a. the unmarked order of German dative and accusative objects varies, depending on a variety of conceptual constraints.

b. dative objects, in contrast to accusative objects, cannot serve as A-binders and are extraction islands.

c. German has 'free' dative objects that have a thematic interpretation which is independent of the verb and other syntactic predicates–this never occurs with nominative and ac-

cusative.

On the basis of such observations, Vogel and Steinbach (1998) propose that all dative objects are introduced as syntactic adjuncts, which are inserted directly into the position where they surface, and they do not have to undergo movement.

den Dikken (1995) argues that the operation which he terms dative shift (in terms of predicate inversion)is not available at all in German. Instead, he proposes that double object constructions in German are covert prepositional dative constructions, and that the order where the Goal precedes the Theme is derived via scrambling of the dative PP to a position where it is adjoined to the VP. He assumes the dative shift operation to be driven by the need for the empty preposition to be licensed, and he proposes that this licensing can take place in one of two ways. Either, the null preposition can be identified by dative case morphology, or it must incorporate into the verb. In German, only the former licensing strategy is at play. The fact that while German allows both the Theme>Goal order and the Goal>Theme order, while only the latter order is permitted in English, is assumed to follow from these assumptions. In German, the dative PP can remain in situ, being licensed by dative case morphology. Alternatively, it can scramble to a position in which it comes to precede the Theme. However, in English, the PP has to move, and only the Goal>Theme order order is available.

Binding facts from German suggest that the order where the accusative Theme precedes the dative Goal is the underlying order for German, at least at the level where binding relations are calculated. The data in (75) and (76) (from Grewendorf 1984, cited in Anagnostopoulou 2003, =(196-197), pp. 133–134) show that while an accusative Theme may bind an anaphor to its left, a dative Goal cannot bind an accusative anaphor:

(75) a. daß der Arzt$_i$ dem Patienten$_j$ sich$_{i/*j}$ t$_i$
that the doctor the.DAT patient REFL.DAT
im Spiegel zeigte.
in.the.DAT mirror showed
'that the doctor showed himself to the patient in the mirror.'

b. *daß man den Gästen$_i$ einander$_i$ vorgestellt
that one the.DAT guests each.other.ACC introduced
hat.
has
'That someone has introduced the guests each other.'

(76) a. daß der Artz$_i$ den Patienten$_j$ sich$_j$ t$_i$
that the doctor the.ACC patient REFL.DAT
im Spiegel zeigte.
in.the.DAT mirror showed
'that the doctor showed the patient to himself in the mirror.'

b. daß man die Gäste$_i$ einander$_i$ vorgestellt hat.
that one the.ACC guests each.other.DAT introduced has
'That someone has introduced the guests to each other.'

These facts can be explained in alternative ways; either the order where the dative-marked nominal precedes the accusative Theme must somehow be derived from the underlying order via movement, or, assuming alternative base positions for the dative nominal, the binding facts have to be taken care of in another fashion, e.g. along the lines of Reinhart and Reuland (1993), as proposed by Vogel and Steinbach (1998).

Müller (1995) argues that German *does* indeed have Dative Shift, which is he assumes to be an instance of case-driven A′-movement (scrambling). This conflicts with standard assumptions about the properties of A′-movement, but it helps explain why categories which have undergone dative movement show mixed properties with respect to properties which are considered to be the result of A-movement vs. A′-movement. For 'free' datives, Müller assumes that they are directly inserted into the position which he postulates as the landing site for dative shift, namely the specifier of a position μ in an extended VP shell structure. This position is formally an A′-position, but it differs from other A′-positions in being a case position.

In the following I will argue that with German creation verbs, the dative DP (or rather, the dative PP) undergoes predicate inversion with subsequent incorporation of the null P into an abstract predicate Pred, in the same fashion as I argued was the case for Norwegian. I will not go into any detail with respect to the specific properties of the movement, other than assuming it to be driven by strong features (cf. Chomsky 1995).

For 'free' datives with unaccusative and transitive verbs, I will assume that they are empty-headed PPs which are merged directly in the position where they surface. In Norwegian, this is not possible because the null preposition must obligatorily incorporate into the verb, which happens after the empty-headed PP has shifted to a position where the P is in a local relation with the abstract Pred predicate.

den Dikken assumes that in German, the null preposition can be licensed by morphological dative case on the complement of P. Like En-

glish, Norwegian lacks morphological dative case, so in situ licensing of the null preposition is not available, leaving incorporation as the only available licensing strategy fo the null preposition. It is hard to see how the specifics of this proposal can be directly transposed into a Minimalist framework like the one I am assuming, but the availability of morphological dative case clearly plays a role in determining the distribution of Experiencers in German. In the following, I will therefore occasionally continue to talk about 'licensing' of the empty preposition in terms of movement or morphological case, but I will not assume that movement is driven by inherent properties of lexical items. Rather, I assume that all instances movement is driven by strong features on an attracting head. Hence, because Res carries a strong (EPP) feature, the dative PP can be directly merged in the specifier of ResP, where it gets an event-related Experiencer interpretation, and not one in which it is interpreted as a possessor of another participant. A dative PP which ends up in the specifier of ResP as the result of movement gets a compositional interpretation as a Recipient of the created object (in virtue of its relationship to the Pred+$\emptyset_P$ predicate), and simultaneously as a holder of the result state, stemming from the final landing site for the movement operation.

3.6.1 Creation verbs

Above, we saw that in Norwegian, an additional noun phrase participant was licensed in case (i) the predicate was compatible with a creation interpretation and (ii) the additional participant was interpreted as a future/intended Recipient of the theme. German also permits this as shown in §3.5.1, and again, the dative participant is interpreted as an intended possessor of the Theme. For datives with creation verbs, I will assume an analysis which is identical to the one I assume for Norwegian in §3.4.2 above. The sentences in (77) are repeated from (58) above, and show datives with creation verbs like *backen*, 'bake', or *bauen*, 'build'.

(77) a. Der Schüler hat seiner Lehrerin einen Kuchen
the pupil has his.DAT teacher.fem a cake
gebacken.
baked
'The pupil baked his teacher a cake.'

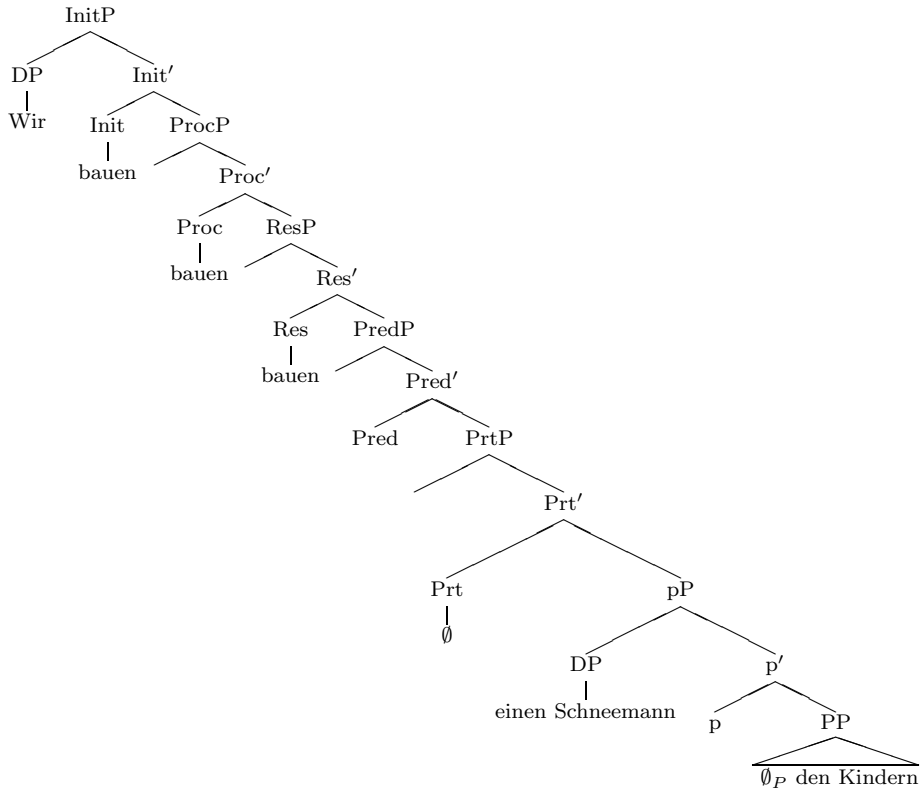
b. Wir haben den Kindern einen Schneemann gebaut.
we have the.DAT children. a snowman built
'We built the children a snowman.'

c. Ich habe ihm einen CD bestellt.
I have him.DAT a CD ordered
'I ordered him a CD.'

d. Der Popstar hat seiner Mutter ein neues Auto gekauft.
the popstar has his.DAT mother a new car bought
'The popstar bought his mother a new car.'

For a sentence like (77b), I assume the following underlying structure:[10]

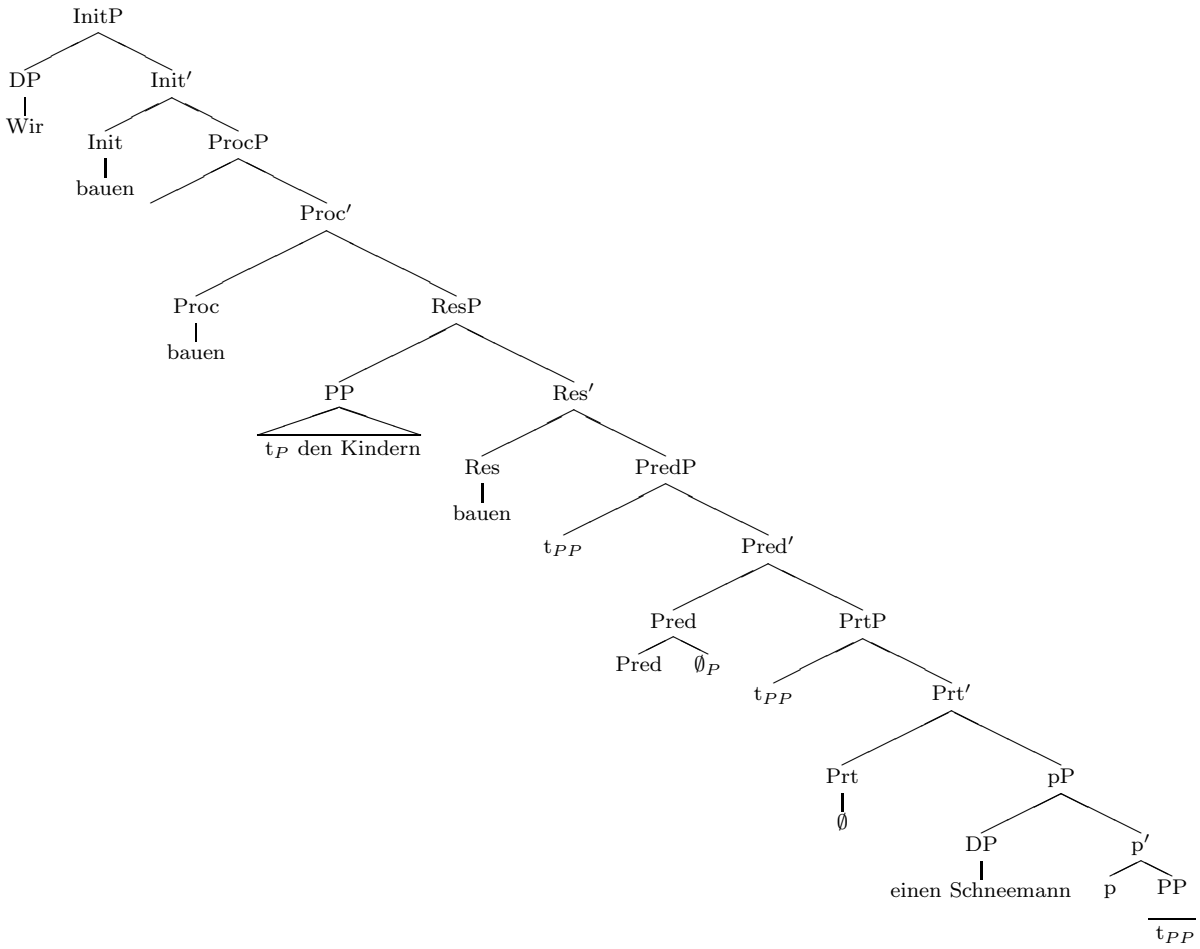
(78)



The derivation goes as follows: First, the empty-headed PP $\emptyset_P$ *den Kindern*,'the children', moves to the specifier of PrtP, where the P can incorporate into the abstract Pred, to form a complex head. Then, the remnant PP is shifted into the specifier of PredP, and subsequently to Spec ResP. Again, I assume the derivation to be driven by strong features, as outlined in 3.4.1 above. The resulting structure is shown in (79):

[10]In the following, I will only give the syntactic representation for the verb phrase, which is what is most important for the discussion in this chapter.

(79)



The structure in (79) is interpreted as an event in which *den Kindern*, 'the children', is the possessor of *einen Schneemann*, 'a snowman'. The fact that the dative-marked Recipient originates inside a PP explains the ban on A′-extraction of the Recipient in German *tough*-constructions, which are exactly as ungrammatical as their Norwegian counterparts. This is shown in (80). (80a) shows this for a prototypical ditransitive verb like *geben*, 'give', while (80b) shows that Recipients with creation verbs pattern in exactly the same way:

(80) a. *Eltern sind schwierig gute Weihnachtsgeschenke zu
parents.DAT are difficult good christmas.presents to
geben.
give
'Parents are difficult to give good Christmas presents to.'

b. *Kindern sind einfach Schokokuchen zu backen.
children.DAT are easy chocolate.cakes to bake
'Children are easy to bake chocolate cakes for.'

The order where the accusative precedes the dative simply reflects the in situ order of the objects, where the dative object can remain in situ because the null preposition is already licensed by dative case morphology on its complement.[11] While dative case clearly seems to play a role with these constructions, the topic of "licensing" is not well understood, and is used in a variety of different ways. It is beyond the scope of this chapter to go deeper into this issue, and I will simply note that there seems to be a correlation between the availability of morphological dative case and a relative freedom of dative-marked participants in comparison to Recipients with verbs of creation in Norwegian, with respect to the positions in which they can appear.

3.6.2 Transitive non-creational verbs

In addition to the cases where a Beneficiary (or Maleficiary) participant can be added to predicates which describe events of creation, German allows the addition of a dative participant also with transitive predicates which do not refer to events in which an object is being created. Roughly, the transitive non-creational verbs permitting this can be seen to fall into two classes. On the one hand, we have instances like the ones in (81) (repeated from (59)), where the extra participant is interpreted as a possessor of the direct object, where the possession relation is established prior to the initiation of the event.

(81) a. Der Arzt hat dem Patienten die Wunde gereinigt.
the doctor has the.DAT patient the wound cleaned
'The doctor cleaned the patient's wound.'

b. Er hat seiner Mutter der Brille zertreten.
he has his.DAT mother the glasses on.stepped
'He destroyed his mother's glasses by stepping on them.'

c. Der Mann hat seiner Frau den Rücken massiert.
the man has his.DAT wife the back massaged
'The husband massaged his wife's back.'

[11] In a footnote, den Dikken mentions the possibility that instead of assuming that dative case licenses the null preposition in German, dative case may actually be the direct realization of the null preposition here, but he doesn't explore the hypothesis further.

In addition, we have instances where the dative participant is interpreted not as a possessor, but rather as an Experiencer, as in (82), repeated from (62) above.

(82) a. Der betrunkene Wirt hat mir die ganze Party
the drunk host has me.DAT the whole party
verdorben.
destroyed
'The drunk host destroyed the party on me.'

b. Die Teenager haben mir den wunderschönen Wald
the teenagers have me.DAT the wonderful forest
verbrannt.
down.burned
'The teenagers burned down the wonderful forest on me.'

c. Der Stromausfall hat uns den Harry Potter-Film
the electricity.cut has us.DAT the Harry Potter
zerstört.
movie destroyed
'The powercut destroyed the Harry Potter movie on us.'

Adger and Ramchand (2005) propose on the basis of Gaelic data that Experiencers can be thought of as possessors, which goes against recent assumptions of e.g. Brandt (2003) or Landau (2005), who assume that dative experiencers are best treated as locations. However, I will not go into any deep detail concerning that issue here, and I will simply analyze Experiencers as dative participants (involving a null preposition) which are merged directly in the specifier of ResP, where they are interpreted as event-related, rather than as possessors.

In some cases, a notion of possession between the dative participant and the theme seems to be involved, as in (83):

(83) a. Er hat mir das Auto gewaschen.
he has me.DAT the car washed
'He washed the car for me.'

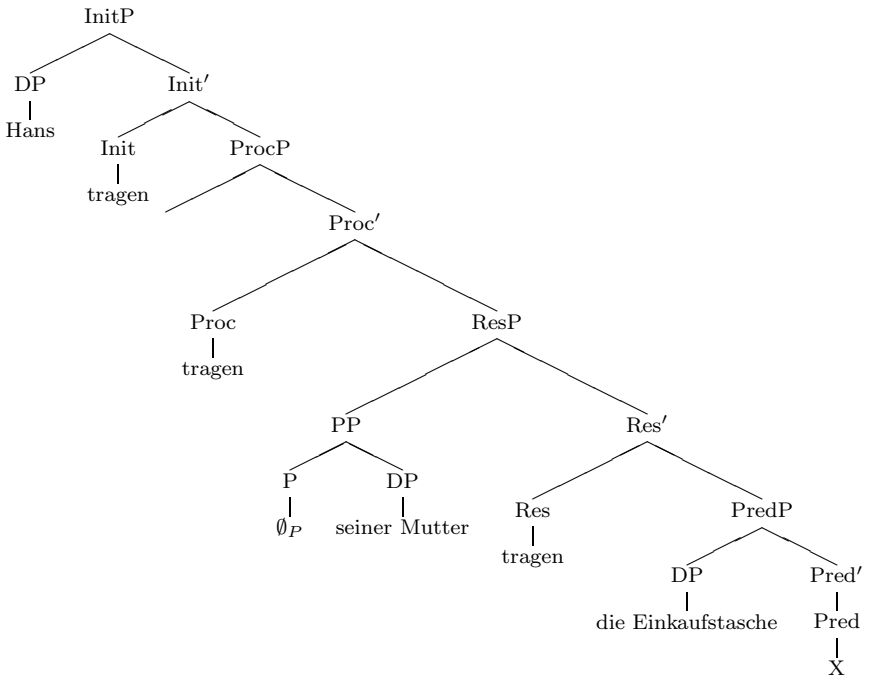
b. Der Professor hat ihr die Tür geöffnet.
the professor has her.DAT the door opened
'The professor opened the door for her.'

c. Hans hat seiner Mutter die Einkaufstasche getragen.
Hans has his.DAT mother the shopping.bag carried
'Hans carried the shopping bag for his mother.'

Pylkkänen (2002) assumes that possessor datives in languages like Hebrew or German are introduced as specifiers of a low applicative head, similar to Harley's P_{HAVE}. When used with possessor datives, this applicative head denotes Source. According to Pylkkänen's analysis, the dative participant is invariably a possessor of the direct object, but this cannot be correct in cases like (82), where the dative participant is not interpreted as a possessor. Instead, I will argue that the dative participants in sentences like (83) are better analyzed as Experiencers also here; the notion of possession is rather a pragmatic consequence; it is easier to conceive of an event as affecting a third participant if we assume that the thing undergoing the change is owned by the dative participant.

For a sentence like (83c), I assume the structure in (84) (again, I only give the structure for the verb phrase):

(84)



The direct object, *die Einkaufstasche*, 'the shopping bag', is introduced as the specifier of the PredP complement to Res, but it is simultaneously interpreted as undergoing the process, so it has to be associated with the specifier of ProcP, which I assume it does by moving into this position covertly (not indicated in (84)), driven by an EPP-feature in Proc. Pred itself is unspecified in the structure in (84), but it is denotes the final result of the event, so is probably something like the participle *getragen*,

'carried'. Thus, we have a relation between the dative Experiencer and a predicate representing the result of the event. As already mentioned, I assume that the notion of possession between the dative participant and the theme in these cases is the result of pragmatic factors, and it should hence not be structurally represented. The observation made above, that two possessors could cooccur in one and the same sentence (cf. (65) and (66)), add further support to this assumption.

While a structure where the dative participant is merged directly in the specifier of ResP might seem strange upon first inspection, data from word order differences lend support to this analysis, at least pretheoretically. Lee-Schoenfeld (2004) notes that with transitive non-creational verbs, a dative participant must obligatorily precede the direct object, unless it is a pronoun. The following examples show this (from Lee-Schoenfeld 2004, pp. 28-29):

(85) a. *Der Einbrecher ruinierte meine Mutter dem
the burglar ruined my mother.ACC the.DAT
Haus.
house
'The burglar ruined the house on my mother.'

b. ?*Mein Bruder hat das Auto der Mami zu Schrott
my brother has the car the.DAT mother to scraps
gefahren.
driven
'My brother totaled my mother's car.'

This is not so for ditransitive verbs like *schicken*, 'send', where both the ACC>DAT and the DAT>ACC orders are equally acceptable, as (86) show (from den Dikken 1995, =(55a-b), p. 135):

(86) a. daß der Hans der Maria das Buch gibt.
that the Hans the.DAT Maria the.ACC book gives
'That Hans gives Maria the book.'

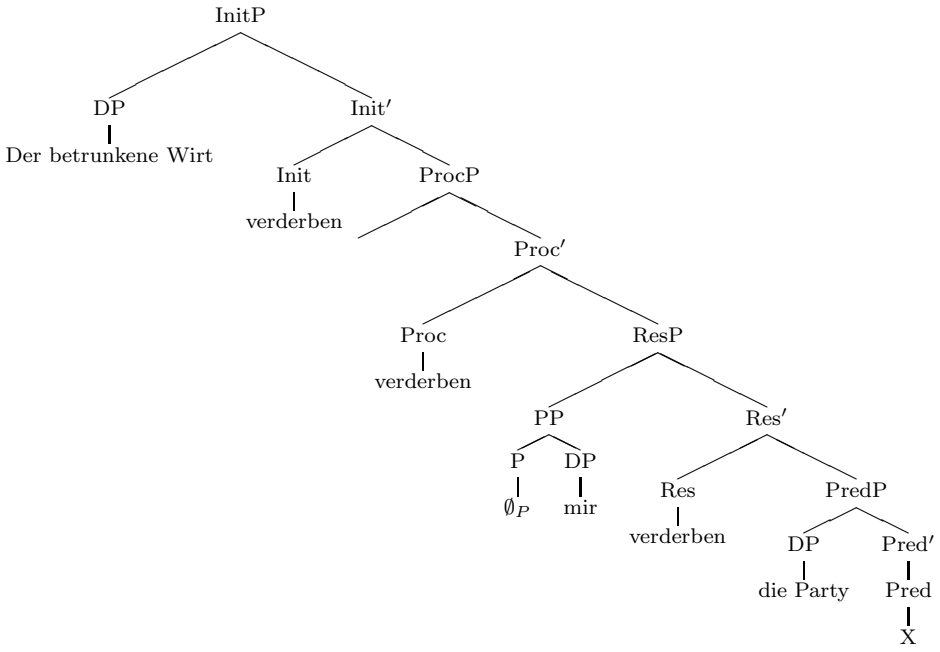
b. daß der Hans das Buch der Maria gibt.
that the Hans the.ACC book the.DAT Maria gives
'That Hans gives Maria a book.'

I am aware of the fact that the availability of covert movement of the type assumed for the step where the Theme moves into the specifier of ProcP weakens the argument from word order differences, but the data in (85)-(86) are only intended to show that Recipient datives and Experiencer datives differ with respect to their word order possibilities,

where Recipient datives have two alternative positions in which they can appear, while only one position is available for Experiencer datives.

With Experiencer datives, I assume that the Res head carries a strong feature, which can be satisfied by external Merge of the dative PP directly in the specifier of ResP, similar to what has often been assumed for expletives. The structure for a sentence in which the dative participant is a pure Experiencer is exactly identical to the one assumed for the cases involving a pragmatic sense of possession between two participants. A sentence like (82a) will be assigned the following structure:[12]

(87)



The structure in (87) is interpreted as an event in which *mir*, 'me', experiences the result of the party being destroyed by a drunk host.

Dative experiencer objects like the ones discussed in this section behave identically to other dative objects with respect to *tough*-extraction, as the sentences in (88) show:

(88) a. *Anspruchsvollen Turisten sind einfach die Reise zu
demanding tourists.DAT are easy the travel to
versauern.
ruin

[12] Again, I assume covert movement of *die Party*, 'the party', to Spec ProcP, driven by an EPP-feature on Proc.

'Demanding tourists are easy to ruin their trip for.'

b. *Vorsichtigen Besitzern sind unmöglich das Auto zu
careful owners.DAT are impossible the car to
stehlen.
steal
'Careful owners are impossible to steal the car from.'

The ungrammaticality of examples such as these follows from the fact that the dative participant is introduced by a null preposition, which cannot be pied-piped under null operator movement.

3.6.3 Unaccusative verbs and dative participants

The analysis outlined for transitive (non-creational) verbs in the previous section can also be seen to carry over to instances where an unaccusative predicate combines with a dative participant. For transitive verbs, I argued that the dative participant was really an Experiencer, and that the notion of possession which was present in some cases was pragmatic and related to things like salience and what is considered the most likely interpretation. The sentences in (89) are repeated from (70) above:

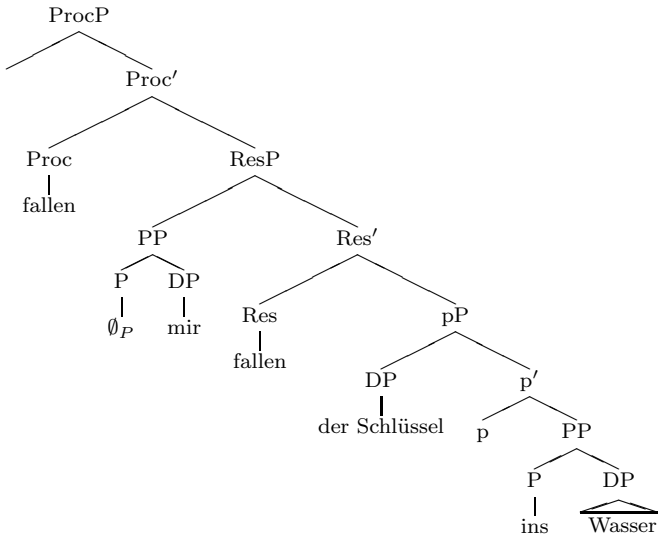
(89) a. Der Schlüssel ist mir ins Wasser gefallen.
the key is me.DAT in.the water fallen
'The key fell in the water on me.'

b. Das Auto ist mir kaputtgegangen.
the car is me.DAT down.broken
'The car broke down on me.'

c. Das Glas ist mir auf den Boden gefallen.
the glass is me.DAT on the floor fallen
'The glass fell on the floor on me.'

As already noted, the most salient interpretation of the dative participant is one in which it is negatively affected by the event. However, this is not necessarily so, and examples where a Beneficiary interpretation arises are also possible, as shown by the examples in (71). The structure for a sentence like (89) will look something like the following. Again, the dative participant is merged directly in the specifier of ResP, where it is interpreted as an Experiencer. This is forced by a strong feature on the Res head, which requires a filled specifier (which in this case is satisfied by external merge):

(90)



Because the events denoted by unaccusative predicates like *fall* are not externally caused, the initiation layer is missing, in accordance with assumptions presented in Ramchand (2005), introduced in chapter 1. The internal argument, *der Schlüssel*, 'the key', is introduced as the external argument of the PP small clause, where it is interpreted as the thing being in the water, but it must also be associated with the specifier of ProcP, where it is interpreted as the participant undergoing the falling. As already mentioned, I assume this step (not indicated in (90)) to be an instance of covert movement, driven by an EPP-feature on Proc, which requires Spec ProcP to be filled.

3.7 Summary and remaining puzzles

In this chapter, I have examined instances from Norwegian and German in which an extra participant (which was interpreted as either a Recipient or as positively or negative affected by the event) could be permitted. In Norwegian, an additional participant could only occur with verbs which are compatible with a creation interpretation, and the added participant was invariably interpreted as one in which it is a Recipient or intended possessor of the created object.

These instances were given an analysis where the possession relation decomposes into an abstract verbal predicate Pred which takes an empty-headed PP as its complement. The Recipient participant originates as the complement of this PP, while the direct object is introduced by an

additional layer p in a split PP structure. In order for the null P to be licensed, it has to incorporate into the abstract Pred predicate, and thus, the PP has to front to a position from which such incorporation can take place. After incorporation, the remnant PP fronts to the specifier of ResP, where it is interpreted as a holder of the result state in which the dative participant is interpreted as a possessor of the Theme.

Alongside Recipients with creation verbs, German also permits extra dative-marked participants with a wide range of verbs, which have the properties in common that they must entail the attainment of a result state (which is true also for Norwegian), the predicate must introduce an internal argument, and must involve a certain dynamicity (statives not allowed). The Recipient datives were given an analysis in terms of predicate inversion, exactly as in Norwegian, where I presented an analysis driven by strong features. The fact that the ACC>DAT order is permitted with Recipient datives support den Dikken's analysis. according to which German doesn't have dative shift in terms of predicate inversion. Instead, he assumes the DAT>ACC order to be derived via scrambling. I didn't go into any further detail about the nature of the movement which results in the order where the dative precedes the accusative; that will have to be the topic of further research.

Instances in which a dative participant could appear with verbs that are either telic transitive verbs or telic unaccusatives, were given an analysis where the dative PP is merged directly in the specifier of the ResP, required by an EPP-feature on Res. With these verbs, the dative argument is interpreted not as a possessor of another argument in the clause, but rather as an Experiencer of the event.

However, two generalizations still need to be accounted for. First, the analysis cannot explain the observation that dative Experiencers are limited to telic predicates which introduce an internal argument. Second, the fact that stative predicates do not permit a dative participant has also not been accounted for. Hole (2005) explains the fact that another participant must be present in the structure in terms of a process which he terms Variable Identification between a participant role introduced by the dative argument and a possessor slot of the internal argument. However, that is merely a stipulation, and not an independent explanation. For the present, I do not have a theory-independent solution to this puzzle, but it can be seen to follow from the observation that in order to license a dative participant (Recipients as well as Experiencers), the event needs to have a result state. In the Ramchandian framework assumed here, predicates which entail the presence of a result state have

a ResP functional projection in their subeventual structure.

On the analysis presented in this chapter, dative participants (Recipients and Experiencers) are associated with the specifier of ResP, either via movement, or by being base-generated in that position. If this generalization is correct, the failure of Experiencer datives with unergative verbs can be seen to follow from the fact that typical unergative verbs like *dance*, or *laugh* refer to pure processes and do not entail a result state. This analysis would predict that telic unergative predicates like *heiraten*, 'marry', should be able to combine with a dative Experiencer. But this is, for some reason, not permitted; a sentence like (91a), which could be possible in a context where my best friend got married on me, thereby ruining our close relationship. Still, the example is out. Also, the grammaticality does not improve if an internal argument is present, as in (91b):

(91) a. *Er hat mir geheiratet.
he has me.DAT married
'He got married on me.'

b. *Er hat mir meine beste Freundin geheiratet.
he has me.DAT my.ACC best friend.FEM married
'He married my best friend on me.'

The ungrammaticality of (91a) and (91b) indicates that the obligatory presence of a result state identified by the verb is not sufficient here. Neither can the presence of an internal argument (in the form of a direct object with transitive verbs, or the subject of unaccusatives) save the sentence. Thus, the distribution of dative participant is clearly dependent upon the subevent structure of the predicates in question, which must involve a certain amount of dynamicity.This conclusion is supported by the fact that dative Experiencers cannot appear with stative verbs like *wissen*, 'know', which do not have a process portion at all in their subeventual structure. However, the question of *why* this is so has to be left open to further research.

Chapter 4

Abstract Places and Results

4.1 Introduction

It is well known that a directional PP can combine with an otherwise atelic predicate containing a verb of manner of motion to give rise to a telic interpretation, as in the sentences in (1). While (1a) describes an atelic event, the event described by (1b) is telic, and the PP *to the airport* gives the endpoint of the event. This is shown by the possibility of appearing with completive temporal adverbials with *in* α_{time} or durative adverbials with *for* α_{time}, which indicate that the event in question is telic or atelic, respectively:

(1) a. John biked for an hour/*in an hour (atelic).
b. John biked to the airport *for an hour/in an hour (telic).

In the following, I will occasionally employ the traditional Vendlerian quadripartite classification of predicates into *states*, *activities*, *accomplishments*, and *achievements* (cf. Vendler 1967, Dowty 1979) as useful classificatory labels. In addition, I will assume a distinction between *semelfactives* and *degree achievements* (cf. e.g. Smith 1997, Dowty 1979, Hay et al. 1999, Rothstein 2004). The table in (2) give examples from Norwegian for each class of predicate:[1]

[1]Although I (somewhat loosely) talk about classes of *verbs* as having specific properties, I do not strictly mean that verbs themselves are associated in the lexicon with tags such as 'accomplishment','activity', or 'semelfactive', but that certain verbs can appear in syntactic structures which give rise to interpretations of these types. Still, while I do not assume that properties such as 'accomplishment' or 'semelfactive' are properties of lexical items themselves, but only useful labels in classifying verbs which share certain properties, I do assume that verbs in the lexicon must carry information as to what types of structures they can be inserted into. This is maybe done in the

(2)

Predicate class	**example**
State	*sitte fast*, 'be stuck'
Activity	*sykle*,'bike'
Accomplishment	*strikke en genser*, 'knit a sweater'
Achievement	*vinne kampen*, 'win the match'
Semelfactive	*hoppe, skvette*, 'jump', 'start'
Degree achievement	*fryse, mørkne*, 'freeze', 'darken'

In Norwegian, the preposition *til*, 'to', can combine with predicates that are either *degree achievements* (cf. Dowty 1979,) as in (3) or *semelfactives* (from Latin *semel*, 'once' and *facere*, 'make') (cf. Smith 1997), as in (4):[2]

(3) a. Elva frøs på få timer/i tre timer.
river.the froze on few hours/in three hours.
(i) 'The river froze in a few hours.'
(ii) 'The river froze for three hours.'

b. Elva frøs til på få timer/#i tre timer.
river.the froze to on few hours/in three hours.
'The river got frozen in a few hours/for three hours.'

(4) a. Hun hoppet da telefonen ringte.
she jumped when telephone.the rang
(i)'She jumped (once) when the phone rang.'
(ii)'She was jumping when the phone rang.'

b. Hun hoppet til da telefonen ringte.
she jumped to when telephone.the rang
'She jumped (once) when the phone rang.'

c. Han sparket bowlingkula.
he kicked bowling.ball.the
(i)'He kicked the bowling ball (once).'
(ii)'He was kicking the bowling ball.'

d. Han sparket til bowlingkula.
he kicked to bowling.ball.the
'He kicked the bowling ball (once).'

form of features which specify what kind of projections these lexical items can be associated with in the decompositional structure of the verb phrase.

[2]The verbs used in (4c) and (4d) can also be characterized as verbs of contact, but following Rothstein (2004), I will subsume them under the category of semelfactives, and I will treat them as cases of transitive semelfactives.

In (3) and (4), the effect of adding *til* is slightly different from the spatial endpoint interpretation in (1). While a sentence like (3a) can be interpreted both as unbounded and as bounded, as indicated by the compatibility both with durative and completive time adverbials, (3b) can only get a completive interpretation. Similarly for the degree achievements in (4); the sentences without *til* are ambiguous between a punctual single-occurrence reading and an activity reading consisting of a series of single occurrences. However, when *til* is present, as in (4b), only the punctual interpretation is possible.

At first, this seems to conform to the familiar pattern in (1), where the *til*-PP serves to add a spatial endpoint to an atelic event. Thus, we should expect *til* to be able to combine with all types of activity verbs to give rise to a telic interpretation. However, the sentences in (5), which contain different types of activity verbs, show that this is not possible at all; *til cannot* combine with these verbs to get a telic reading.[3]

(5) a. *Jens danset til.
Jens danced to.
'Jens danced.'
b. *Koret sang til.
choir.the sang to
'The choir sang'
c. *Soldatene marsjerte til.
soldiers.the marched to
'The soldiers marched.'

The single-occurrence reading of a semelfactive predicate like *hoppe*, 'jump', clearly *has* an endpoint even when it appears without *til*, i.e. the point in which the feet are back on the ground. The presence of this endpoint is, however, difficult to measure with the aid of temporal adverbials, because temporal adverbials of this type all require durational events. Thus, it seems that the contribution of *til* in the sentences in (3) and (4) goes beyond simply that of adding an endpoint to an otherwise atelic event.

In this chapter, I will focus on Norwegian data like those outlined in (3) and (4) above, where *til* combines with predicates that are either semelfactive or degree achievements. I will show that the PP with *til*

[3]Some verbs of manner of motion do actually combine with *til*, as in *tilskuerne strømmet til*, 'the spectators came running to the place', but here *til* is interpreted as a directional particle (with a contextually filled Ground), and that interpretation is not relevant in the present context.

contributes to the aspectual interpretation in a very specific way, by removing the possibility of a process/activity interpretation which is available on the version without the PP.[4] In the case of semelfactives, adding *til* has the effect of rendering the event not just telic, but also punctual. With degree achievements, adding *til* gives rise to an accomplishment reading of the predicate.

Although semelfactives and degree achievements at first seem very unlikely candidates to form a natural class, they will be seen to share an important set of properties, which explains the fact that both appear with *til*.

The English equivalent of *til*, the preposition *to*, is often treated as the prototypical case for a Path-denoting expression, as discussed in chapter 2. However, English *to* crucially is never able to appear in contexts like the ones addressed in this chapter; sentences like (6), which are parallel to the Norwegian examples in (3)-(4), are totally ungrammatical:

(6) a. *John jumped to from the sound.
b. *His eyes flashed to from anger.
c. *The river froze to in the course of the night.
d. *The sky darkened to.

According to Beavers (2005), while PPs with both *to* and *into* can appear with durative events in English, only *into* is compatible with punctual event descriptions. But as we have already seen, in Norwegian *til* is actually able to combine with punctual events, as with the semelfactive predicates. Thus, the *til* appearing with semelfactives and degree achievements must be slightly different from the Path-denoting spatial preposition *til*. The fact that, in Norwegian, *til* can actually appear in other contexts which are normally considered quite static adds support to this hypothesis. *Til* can, for instance, be used to mark physical and more abstract possession, as in (7), and it can also mark position/location, as in (8):

(7) a. Dette er hunden til Jens.
this is dog.the to Jens.

[4]Here, I make a distinction between aspect at the verb phrase/predicate level and aspect at the sentential level. I will refer to the former as aktionsart and to the latter as aspect. While aktionsart is concerned with the way in verbs combine with elements in the verb phrase to give rise to telic interpretations, (from Greek *telos*, 'goal'), aspect is closely related to notions such as perfectivity, imperfectivity, durativity, iterativity, and so forth. However, in this chapter, only the former will be of any importance, and I will use the term *aspectual* as a cover term unless otherwise stated.

'This is Jens's dog.'

b. Den siste boka til J. K. Rowling er veldig spennende.
The last book.the to J. K. Rowling is very exciting
'J. K. Rowling's last novel is very exciting.'

c. Vekten til bokseren var litt for høy.
weight.the to boxer.the was little for high
'The boxer weighed a bit too much.'

d. Skjermen til lampa er grusom.
shade.the to lamp.the is hideous
'The lamp shade is hideous.'

(8) a. Bjørka sitter fast til klippen.
birch.the sits stuck to cliff.the
'The birch is stuck to the cliff.'

b. De små landsbyene klamrer seg fast til
the small villages.the cling refl.3.p.pl stuck to
fjellsidene.
mountain.sides.the
'The small villages cling to the mountainsides.'

In some dialects, *til* and its dialectal equivalent *åt*, which both have the meaning 'to', can be employed to mark mental states/experiencers, as in (9):[5]

(9) a. Er det varmt åt/til deg?
is it warm to you?
'Do you think it's hot here?'

b. Det var kaldt åt/til ho ute.
it was cold to her out
'It was too cold for her outside.'

This way of marking experiencers via the use of locative prepositions is widely known. In Scottish Gaelic, for instance, the preposition *aig*, 'at', is used to mark location, possession, and experiencer (cf. Adger and Ramchand 2005). Landau (2005) has argued that object experiencer constructions are essentially locative, but according to Adger and Ramchand (2005), what locatives and experiencers have in common is not location, but instead a notion of abstract possession.

Moreover, the *til* which combines with semelfactives and degree achievements has different syntactic and semantic properties than the

[5]This was confirmed by my father Jan Tungseth, who speaks a dialect from Ytre Nordmøre. I thank him for the data.

Path-denoting spatial preposition *til*. In its Path-denoting use, *til* denotes a relation between two event participants, the Figure and the Ground. For instance, in a sentence like *Marit sprang til huset*, 'Marit ran to the house', the preposition relates its Figure, *Marit*, to its Ground, *huset*, 'the house'.

I propose that *til* as it is used when it combines with semelfactives and degree achievements does not introduce an external (Figure) argument at all, and hence, that it does not denote a dynamic relation between two participants. There are different ways of representing this syntactically; either these prepositions syntactically lack an external argument, or their Figure argument contains a *pro* which is controlled by the result state subevent, in which case there is actually an external argument of the preposition present in the structure. However, I will not go into any great detail with respect to that question here, and I will represent these subjectless PPs as not denoting small clause relations between a Figure and a Ground. Instead, they simply modify the endpoint introduced by the predicate[6]

The base readings of both semelfactives and degree achievement lexically specify an endpoint which is represented in the form of a Res head in their lexical decompositional structure. When a subjectless PP with *til* is present, it will, as we will see in the next section, appear in the complement to the Res head, where it adds content the endpoint introduced by the Res head. Hence, I will assume that Norwegian possesses two different types of *til*; one spatial *til*, which denotes a Path and which combines with activity verbs to give rise to telicity, and in addition, a different type of *til*, which has no obvious Figure argument, and which combines with semelfactives and degree achievements where it adds content to the endpoint. It might be possible to arrive at an abstract semantics that could unify the properties of all instances of *til*, but for the present, my main objective is to characterize the properties of *til* in its degree achievement/semelfactive use.

[6]Svenonius (2003), Svenonius (2004a) argues that the external argument of a preposition is introduced by a functional head *p*. While verbal particles like *out* in sentences like *John threw the dog out* are assumed to be instances of prepositions which do not introduce a Ground, but he also mentions instances of particles which do not introduce a Figure, which is possible in OV Germanic languages like Dutch.

4.2 *Til* and lexically specified endpoints

As already mentioned, the predicates which can appear with *til* fall into two classes. On the one hand, we have intransitive verbs combining with a seemingly bare particle *til*. On the other hand, we have transitive verbs which alternate between taking a DP complement or a PP with *til*. The sentences in (10) and (11) give examples of both types:

(10) a. Han spratt til og kom seg unna.
he jumped to and came himself away
'He jumped and got away.'
b. Hun skrek til. Trollet holdt henne i et jerngrep.
she screamed to. troll.the held her in an iron.grip
'She let out a scream. The troll held her in an iron grip.'
c. Hunden frisknet til etter dyrlegebesøket.
dog.the recovered to after vet.visit.the
'The dog got better after the visit to the vet.'
d. Konkurransen hardnet til mot slutten.
competition.the hardened to towards end.the
'The competition got harder towards the end.'

(11) a. Han slo til uhyret så hardt han kunne.
he hit to monster.the so hard he could
'He hit the monster as hard as he could.'
b. Jens sparket til porten i vilt sinne.
Jens kicked to gate.the in wild rage
'Jens kicked the gate in wild rage.'
c. Pirajaen bet til hånden på den ene turisten.
piranha.the bit to hand.the on the one tourist.the
'The piranha snapped at the hand of one of the tourists'

I start out by looking at examples like the ones in (10), where a predicate with an intransitive verb can appear with or without *til*. The intransitive predicates which combine with *til* fall into two categories. On the one hand, we have the so-called semelfactive predicates (cf. Comrie 1976, or Smith 1997) (cf. (10a)-(10b)), where the clause without *til* is ambiguous between a single-occurrence reading or a composite reading consisting of a series of single occurrences. On the other hand, we have predicates of the degree achievement class (cf. Dowty 1979, Hay et al. 1999) (cf. (10c)-(10d)), which when they occur without *til* are vague with respect to whether the event reaches an endpoint or not. In both cases, adding *til* takes away the possibility of an extended reading.

While semelfactive predicates and degree achievements on the surface may seem as different as predicates can possibly be, they will be seen to behave identically in certain important respects. On their base readings, both denote telic events, but they can also form the input to a concatenation operation called *S-summing* (cf. Rothstein 2004), which takes as its input single events to give rise to extended activity readings. I will argue that S-summing can only apply in case the endpoint of the event can be conceived of as non-distinct from the starting point, which, as we will see, is a characterizing property of both semelfactives and degree achievements. In the normal case, the result state and the endpoint introduced by a predicate are non-distinct, but these predicates crucially always introduce an *endpoint*, but *no* result state and no participant which is interpreted as the holder of this result state. This is where *til* comes into the picture; for both types of predicates *til* specifies a result state which is distinct from any potential starting point. Remember from above that I assume that the *til* which appears with semelfactives and degree achievements does not introduce an external argument, and that its semantics is static, close to that of the English preposition *at*. However, *til*, as we will see, *does* introduce a Ground argument, which with the intransitive predicates is contextually defined. Thus, the addition of *til* has the effect of specifying a final point in relation to the Ground of the preposition. This final point is distinct from any potential starting point for a new event, which blocks S-summing from applying. The result is that the activity reading is unavailable.

Having examined the properties of intransitive predicates combining with *til*, I will move on to sentences like the ones in (11), where transitive verbs of contact-by-impact can alternate between taking a DP direct object and a PP complement with *til*. These predicates share many important properties with the intransitive semelfactives, and an analysis in terms of S-summing will be seen to carry over also to these cases.

4.3 Intransitive predicates and *til*

As already mentioned, some intransitive predicates have the option of appearing either with or without *til*, as in the sentences in (3)-(4) above. More examples are given in (12) and (13):

(12) a. Blikket hans lynte av sinne.
glance.the his flashed of anger
'His eyes flashed from anger.'

b. Blikket hans lynte til av sinne.
glance.the his flashed to of anger
'His eyes flashed from anger.'
c. Tyven skvatt da han hørte politibilen.
thief.the started when he heard police.car.the
'The thief started when he heard the police car.'
d. Tyven skvatt til da han hørte politibilen
thief.the started to when he heard police.car.the
'The thief started (once) when he heard the police car.'

(13) a. Elva frøs over natta.
river.the froze over night.the
'The river froze overnight.'
b. Elva frøs til over natta.
river.the froze to over night.the
'The river got frozen overnight.'
c. Vinden frisknet utover dagen
wind.the freshened in.course.of day.the
'The wind got stronger in the course of the day'
d. Vinden frisknet til utover dagen
wind.the freshened to in.course.of day.the
'The wind got stronger in the course of the day'
e. Himmelen mørknet og det begynte å regne.
sky.the darkened and it started to rain
'The sky got dark(er) and it started raining.'
f. Himmelen mørknet til og det begynte å regne.
sky.the darkened to and it started to rain
'The sky got darker and it started raining.'

Consider first the sentences in (12). (12a) is ambiguous between a punctual reading consisting of one single flash, and an activity reading which consists of a series of flashes. (12b), on the other hand, where *til* is present, only has single-occurrence reading. This behaviour is typical of semelfactive predicates, a class of predicates which was first discussed by Comrie (1976). Judging from the literature on semelfactives, there is little or no consensus with respect to the specific properties of this class of predicates, or whether they constitute a class at all. I will have a closer look at some of the earlier treatments under a separate heading.

The verbs used in the sentences in (13) are instances of degree achievements, the properties of this class of predicates were first discussed by Dowty (1979), but which has also been discussed e.g. by Tenny (1994), Levin and Rappaport Hovav (1995), by Hay et al. (1999), or by Roth-

stein (2004). A significant subset of degree achievements are typically derived from gradable adjectives by the suffix *-en*, e.g. *widen, lengthen.* In Norwegian, the suffix *-ne* is used to form degree achievements, cf. e.g *mørkne*, 'darken', or *friskne*, 'freshen', in (13). The interpretation of a sentence like (13e) is vague; it can either be interpreted as an atelic event in which the sky gradually got darker, but with no endpoint implied, or it can denote a telic event in which the sky got darker up to some contextually relevant point.[7] However, (13f) can only get the latter type of interpretation, where the event develops up to a final point. The existence of an endpoint is entailed by the verbal predicate, but the *til*-PP modifies the endpoint, making it distinct from any potential starting point for a new change.

4.3.1 What are the properties of semelfactives?

In the previous section, we saw that sentences containing verbs like e.g. *cough* are ambiguous between referring to a single cough and to an activity reading consisting of a series of coughs (cf. Smith (1997)). Comrie (1976) employs the terms *semelfactive* to refer to a situation which takes place only once (a single cough), and the term *iterative* to refer to the coughing activity.

In the following, I will use the term *semelfactive* as a cover term for the class of predicates which have the property that they can give rise both to punctual single-occurrence readings and to activity readings consisting of a series of single occurrences. Some languages mark this distinction overtly, e.g. Russian, which has a class of (strictly perfective) verbs which appear with the suffix *-nu*, and which do not have any imperfective counterparts, e.g. *kašljanut*, 'cough', *blesnut*, 'flash' (examples from Comrie 1976).

Smith (1997) treats semelfactivity as related to the property of predicates, which she terms situation aspect. Based on a number of diagnostics, she concludes that the four-way system of predicate classification developed by Vendler (1967) and further refined by Dowty (1979) must be augmented by a fifth class, i.e. the one of of semelfactive.[8] She de-

[7]With 'contextually relevant' point I mean that a verb like e.g. *stivne*, 'stiffen', the endpoint is not necessarily the same in all its uses. For instance, there is a clear difference in stiffness between egg whites which have been beaten stiff, and for instance, concrete, although in Norwegian, the same verb can be used to describe both types of processes.

[8]Smith's diagnostics are the following: the ability to appear with punctual time adverbs, the ability to appear as the complement of *persuade*, in pseudo-cleft sentences,

fines semelfactives as "events that occur very quickly, with no outcome or result other than the occurrence of the event" (p. 29). Specifically, she assumes that semelfactives are instances of atelic achievements. The five predicate classes can be defined in terms of a combination of three binary features, where [+/-telic] refers to whether the event has an inherent endpoint or not, [+/-dynamic] distinguishes between events and states, and [+/-durative] makes a distinction between durative and punctual events. Smith's system of situation types can be summed up in the following way (from Toivonen 2003:133):

(14)

Aspectual class	**telic**	**dynamic**	**durative**	**examples**
State	-	-	+	*know, hate*
Activity	-	+	+	*run, paint*
Accomplishment	+	+	+	*destroy*
Achievement	+	+	-	*notice, win*
Semelfactive	-	+	-	*cough, tap*

According to this classification, semelfactive situations share with achievements the properties of being [+dynamic] and [-durative], but differ from achievements in being [-telic].

Rothstein (2004) criticizes Smith's treatment of semelfactives as a fifth aspectual class. Instead, she argues that on their base readings, semelfactives (i.e. the single-occurrence readings) are telic interval predicates which are joined under an operation of *S-summing* (or *S-cumulativity*) to form activities. [9] S-summing takes two singular entities to form a new singular entity if they stand in the appropriate R relation. In the domain of events, S-summing is restricted to events which are temporally adjacent and which have the same participants.

In Rothstein (2004) (p. 151) S-summing (or S-cumulativity) is defined in the following way:

(15) $\exists e \exists e'[X(e) \wedge X(e') \wedge \neg e \sqsubseteq e' \wedge \forall e \forall e'[X(e) \wedge X(e') \wedge R(e,e') \rightarrow X^{S}(e \sqcup e')]]$

While all activities can be seen as iteration of minimal activity events via S-summing, only some of those minimal events can be lexically accessed as semelfactives. Rothstein defines this in the following way:

"An activity predicate P denotes a set of events P, and

etc.

[9] Cf. also Kamp 1979, or Zwarts (2005), who assumes something similar for the prepositional domain.

> contains a subset P_{min} which is the set of minimal events in the denotation of P. If a predicate has a semelfactive use, then there will be a natural atomic function which picks out the set P_{min}, and P_{min} will be an atomic set. If the predicate does not have a semelfactive use, then P_{min} will be a singular set and not an atomic set, containing minimal, but overlapping events" (from Rothstein 2004:186).

I adopt the basic insights of Rothstein's proposal where semelfactives are telic predicates which S-sum to form activities. On their single-occurrence reading, semelfactives pattern with achievements with respect to telicity tests. Hence, I take them to be telic, contrary to Smith's (1997) claims. However, semelfactives and achievements differ in one important respect. While achievements entail the presence of a final state or endpoint which is distinct from the starting point, the base readings of semelfactive predicates refer to events where the starting point and the final point are potentially identical, i.e. they do *not* denote changes from ϕ to $\neg\phi$. For instance, an achievement event of Mary winning the race clearly has a result where Mary has won the race, while a semelfactive jumping event starts off and ends with the feet of the person jumping being firmly placed on the ground. As will become evident, this last point is also the source for the special property of semelfactives, viz. the possibility to be able to give rise to multi-occurrence or activity readings through S-summing.

4.3.2 What are the properties of degree achievements?

Degree achievements are typically verbs derived from gradable adjectives. In Norwegian this is commonly done by the addition of a suffix *-ne* to the base adjective, e.g. *mørkne*, 'darken', (from *mørk*, 'dark'), or *råtne*, 'rot', (from *råtten*, 'rotten'). As was first discussed by Dowty (1979), degree achievements show mixed properties with respect to standard (a)telicity tests, (e.g. the entailments arising for the progressive, the acceptability of temporal adverbials with *in* α_{time} and *for* α_{time}, and the interpretations of the event when *almost* is added).

Hay et al. (1999) argue that all degree achievements involve the notion of an affected argument undergoing change with respect to some property. For deadjectival degree achievements, which is the class of degree achievements which is interesting here, the change is in the property associated with the meaning of the base adjective. Specifically, they argue

that "when the degree to which this property changes can be interpreted as bounded, a telic interpretation of the predicate arises, and when the degree of change must be considered nonbounded, an atelic interpretation arises" (p. 129). But whether an adjective counts as gradable or non-gradable can also be influenced by contextual factors. Some adjectives always reflect binary oppositions (like *dead* or *pregnant*), and these normally cannot form the base for degree achievements. Others reflect contrasts that can either be conceived of as binary or have various shades (e.g. the opposition between *hot* and *cool*). If the adjective is conceived of as involving a bounded scale, the derived verb is telic, but given a suitable context, the same verb can also be conceived of as atelic.[10]

For some speakers, the Norwegian verb *våkne*, 'awaken', is interpreted as a transition from a state of not being awake to one of being awake, while for others, the same verb can be conceived of as representing degrees along a scale of "awakeness". For this last class of speakers, it is also perfectly fine to use the comparative for the adjective; *Jeg er mer våken nå enn i morges*, 'I am more awake now than this morning.' According to Beavers (2005) the difference between underspecified scales (like the one entailed by *cool*) and strictly non-gradable scales (e.g. *pregnant*) is largely a matter of real world knowledge, and I agree with him in this.

I follow Rothstein (2004) in assuming that degree achievements denote changes in degrees along a scale, where each change in degree is telic, but can also be conceived of as the starting point for the next change. Because the base readings of degree achievements are telic, I will assume that they contain a Res head in their subeventual structure.[11]. But this endpoint is crucially underspecified, and hence, S-summing can apply to form unbounded activity readings. I will argue that the PP with *til* further specifies the final degree of change, so that S-summing is blocked, and the only available reading is telic.

4.4 Semelfactives and degree achievements

The focus of this section is data. I start out by presenting the data for semelfactives, where I show that the versions with and without *til*

[10]However, the following example shows that even adjectives reflecting binary oppositions can give rise to unbounded degree achievements, e.g. in sentences like *The noise gradually deadened my senses*, which is based on the non-gradable adjective *dead*.Hence, it seems that almost every degree achievement can give rise to atelic interpretations, given the right context.

[11]For more discussion on this point, I refer back to chapter 1

behave consistently differently with respect to a number of tests. As I will argue, the results are as expected on the assumption that the effect of adding *til* is to add content to a lexically underspecified endpoint, which blocks the application of an extended reading stemming from S-summing. Then I will move on to the degree achievements, where I will apply the same tests. Again, it turns out that the versions with and without *til* pattern differently, which I will relate to the presence of *til* which adds an endpoint which is distinct from the starting point of any potential subevent.

4.4.1 Semelfactives with and without *til*

On their base readings, semelfactive predicates are ambiguous between punctual single-occurrence readings and atelic activity readings. The situation in Norwegian is a bit more complicated. In addition to the ambiguous cases, a semelfactive predicate can combine with the preposition *til*, in which case only the single-occurrence reading is possible. The sentences in (16) and (17) give some examples. While the sentences in (16) are potentially ambiguous between activities and single occurrences, the examples in (17) can only be interpreted as single occurrences.[12]

(16) a. Han spratt og kom seg unna monstrene.
he bounced and came himself away monsters.the
'He jumped and managed to get away from the monsters.'

b. Hun skrek. Forfølgerne holdt henne i et
she screamed. Persecutors.the held her in an
jerngrep.
iron.grip.
'She screamed. Her persecutors held her in an iron grip.'

(17) a. Han spratt til og kom seg unna monstrene.
he bounced to and got himself away monsters.the
'He bounced once and got away from the monsters.'

b. Hun skrek til. Forfølgerne holdt henne i et
she screamed to. Persecutors.the held her in an
jerngrep.
iron.grip.
'She screamed once. Her persecutors held her in an iron grip.'

[12]Here, the verb *skrike*, 'scream', is used in the meaning 'give a scream', and not as an extended event.

The difference in interpretation can be seen from the interpretation of the phrase *holde på å*, (lit.) 'hold on to', a test which was first described by Andersson (1977), but which has also been discussed by e.g. Platzack (1979) and Norén (1996). In its past tense form, *holdt på å* is potentially ambiguous between two readings; one in which the event was about to occur, and another reading where *holdt på å* describes an event in progress. The former reading will be referred to as the ABOUT TO [event] reading, and the latter will be referred to as the IN PROGRESS reading. This latter reading is close to the interpretation of the English *-ing* progressive.

The readings of *holdt på å* vary with respect to the properties of the verb phrase it combines with. With sentences denoting pure activities (and states, which are irrelevant in the present context), only the IN PROGRESS reading arises (cf. (18a)), while with accomplishment situations, *holdt på å* is ambiguous between the ABOUT TO [event] reading and the IN PROGRESS reading (cf. (18b)). But interestingly, when the event is punctual, the only available interpretation of *holdt på å* is the ABOUT TO [event] reading ((18c)):

(18) a. Jens holdt på å sykle.
Jens held on to bike
'Jens was biking.'

b. Jens holdt på å bygge et hus.
Jens held on to build a house
(i) 'Jens was building a house.'
(ii) 'Jens was about to build a house.'

c. Landslaget holdt på å vinne kampen.
national.team.the held on to win match.the
'The national team was about to win the match.'

It turns out that this test is sensitive to two factors, i.e. durativity and telicity. In order for the IN PROGRESS reading to arise, the event needs to be durative, and in order for the ABOUT TO [event] reading to arise, the event must be telic. Hence, with activities, which are durative, but lack an endpoint, only the IN PROGRESS reading should arise, whereas with accomplishments, which are durative as well as telic, the interpretation of *holdt på å* should be ambiguous between the two readings. The behaviour of punctual predicates also follows; since these predicates are telic, but lack duration, only the ABOUT TO [event] reading should be available, which is exactly what we get.

In many ways, this is similar to the interpretations arising for the adverbial *in* α_{time}, which also differ with respect to whether the event is durative or punctual. With durative (and telic) events, *in* α_{time} measures the interval up to the completion of the event, while with punctual events, only an inceptive reading where *in* α_{time} measures the time up to the initiation of the event is possible. These assumptions form the basis for a hypothesis which we can test. When semelfactive predicates appear without *til*, both the IN PROGRESS reading and the ABOUT TO [event] reading should in principle be available, since these events are ambiguous between a punctual single-occurrence reading and a durative activity reading. However, when *til* is present, only the ABOUT TO [event] reading should ever appear, given the punctual nature of the verb+*til* combination.

(19) show examples where *holdt på å* is added to predicates without *til*. While the most salient interpretation of a sentence like (19a) is one where the screaming nearly occurred (i), it can also less saliently be interpreted as an event of screaming which lasted up to their coming into the room, similarly to the English progressive, as indicated by the gloss in (ii):

(19) a. Han holdt på å skrike da de kom inn i rommet.
he held on to scream when they came in in room.the
(i)'He was about to screamed when they entered the room.'
(ii) 'He was screaming when they entered the room.'

b. Hun holdt på å hoppe da vi ringte på døra.
she held on to jump when we rang on door.the
(i) 'She was about to jump when we rang the doorbell.'
(ii) 'She was jumping when we rang the doorbell.'

However, when *til* is added, the activity reading is no longer available; the only reading of the sentences in (20) is one where the event nearly occurred.

(20) a. Han holdt på å skrike til da de kom inn i
he held on to scream to when they came in in
rommet.
room.the
'He was about to scream when they entered the room.'

b. Hun holdt på å hoppe til (av alle lydene).
she held on to jump to (of all noises.the).
'She was about to jump up (from all the noise).'

The fact that only the ABOUT TO [event] reading is available when *til* is present supports my hypothesis that *til* removes the possibility of an activity interpretation which is formed under S-summing. *Til* does this by specifying an endpoint to the event which is distinct from its starting point, while S-summing can only apply in case its initial and final points are non-distinct. As we will see, this also correlates with the results from other tests, in particular the Norwegian equivalent of the English "entailments from the progressive"-test.

Thus, semelfactives without *til* pattern in the same way as accomplishments (which are telic and durative) with respect to the *holdt på å*-test. However, when *til* is present, these verbs pattern with the achievements, which are telic, but punctual. Thus, the findings support my hypothesis that the effect of adding *til* is to render the event punctual. This conflicts with the commonly held belief (since Smith 1997) that the main distinction between semelfactives and achievements is related to their difference in telicity. A possible source for this belief may either be that the classification is based on the activity reading of these verbs, or alternatively, it can stem from the assumption which I believe *is* indeed correct, namely the one that while achievements entail a distinct result state predicated of a particular participant, semelfactives do not (cf. Rothstein 2004). Telicity and the notion of a result state are often assumed to be closely connected to one another, in that neither can appear in exclusion of the other. However, I will claim that this is not always true; on their single-occurrence reading (with and without *til*), semelfactives represent cases which clearly entail that the event reaches a culmination, without actually entailing any result state. The same is essentially also true for degree achievements.

Now, let us move on to the the Norwegian equivalent of the English "entailments from the progressive"-test, which is also sensitive to the distinction between telic and atelic events (cf. Dowty 1979). According to Faarlund et al. (1997), if you insert the verb into the formula *hvis du V-et, men ble avbrutt mens du V-et, har du da V-et?*, lit. *if you V-ed but were interrupted while you V-ed, have you then V-ed?* 'if you were V-ing, but were interrupted while you were V-ing, have you then V-ed?', you get different results depending on the telicity of the event. If the answer is no, the event is telic, if yes, it is atelic. Accordingly, if predicates containing semelfactive verbs without *til* are ambiguous between denoting a telic single-occurrence reading and an atelic activity reading, we expect both 'yes' and 'no' to be be possible answers, depending on the interpretation. Conversely, if *til* is present, and given that the claim that *til* specifies

an endpoint to the event which is distinct from its starting point, the expected answer should be no.

However, as the sentences in (21) and (22) show, this is not the pattern we get. While 'yes' is a suitable answer to all the questions in (21), the sentences in (22) do not behave according to the predictions. Instead of getting 'no' as the most relevant response, speakers reacted in a different way; it seemed as if the question in itself was not felicitous to ask in the given situation. The explanation is simple; we get a failure of presupposition. The situations described by semelfactive predicates combining with *til* cannot be interrupted while in progress because they lack duration. *Hoppe til* entails that there was at least one jump and hence, the question seems irelevant. It turns out that like the *holdt på å*-test, the entailment test is sensitive to two factors, telicity and durativity. Hence, the test actually singles out three classes instead of the traditional two. Activities (answer= 'yes'), which are durative but atelic, accomplishments (answer='no'), which are durative and telic, and punctual situations (answer= 'irrelevant/pragmatically odd'), which are telic, but lack duration.

(21) a. Hvis du hoppet, men ble avbrutt mens du hoppet,
if you jumped, but were interrupted while you jumped,
har du da hoppet?
have you then jumped
'If you were jumping, but were interrupted while you were jumping, have you then jumped?'

b. Hvis du skrek, men ble avbrutt mens du
if you screamed, but were interrupted while you
skrek, har du da skreket?
screamed, have you then screamed
'If you were screaming, but were interrupted while you were screaming, have you then screamed?'

(22) a. #Hvis du hoppet til, men ble avbrutt mens du
if you jumped to, but were interrupted while you
hoppet til, har du da hoppet til?
jumped to, have you then jumped to
'If you were jumping (once), but were interrupted while you were jumping, have you then jumped?'

b. #Hvis du skrek til, men ble avbrutt mens du
if you screamed to, but were interrupted while you

skrek til, har du da skreket til?
screamed to, have you then screamed to
'If you were screaming (once), but were interrupted while you were screaming, have you then screamed?'

The claim that semelfactive predicates are telic on their single-occurrence reading, differs from the claim made by Toivonen (2003). Basing her discussion on the properties of Swedish, she makes a specific proposal both about the properties of semelfactive verbs and the semantic contribution made by *till*, 'to'.[13] Sketching her proposal in terms of Smith's feature system outlined above, she argues that semelfactive predicates are [-telic,+dynamic,-durative], and that the same features are also shared by the preposition *till*. Furthermore, she argues that the addition of *till* to a semelfactive predicate, is one where "*[t]ill* marks a sudden, abrupt action" (p. 141). However, the perceived suddenness of the action is more likely a pragmatic effect stemming from the punctual nature of the event, where *til(l)* marks the event as punctual.

In Toivonen's system, *till* can only combine with verbs whose features do not clash with the inherent features of *till*. Still, the system allows for a certain amount of underspecification so as to permit cases like the Swedish examples in (23) (=Toivonen's (5.75), p.142). Here, one and the same verb can appear with different aspectual particles. Whereas *till* marks an endpoint which has the effect of making the event telic, *på*, 'on', has the opposite effect, it makes the event atelic.

(23) a. Pojken fnissade till.
boy.the giggled to
'The boy giggled (once).'
b. Pojken fnissade på.
boy.the giggled on
'The boy kept giggling.'

According to Toivonen, the verb *fnissa*, 'giggle', is underspecified with respect to durativity, so that it can combine both with [-durative] *till*, and also with [+durative] *på*. However, Toivonen's account cannot be entirely correct. First, it takes for granted Smith's claim that semelfactive situations are invariably specified as [-telic], even on their single-occurrence reading. However, as we have seen in §4.4.1, the simple forms of semelfac-

[13] *Till* (spelt with double *l*) is the Swedish equivalent of Norwegian *til*. Since both languages allow *til(l)* to combine with semelfactives, I see no reason to suspect that there are important differences between the languages in this respect.

tive predicates pattern both as telic and atelic with respect to different telicity tests; the single-occurrence reading came out as telic, and the activity reading came out as atelic. On this basis, I concluded that the base readings of semelfactive predicates are telic.

Hence, the claim that *till* is specified as [-telic, +dynamic, -durative] can't be entirely correct either, since it fails to account for the interpretations which arise when *till* combines with semelfactive predicates, where the addition of *til* has the effect of rendering the predicate telic and punctual. In addition, and more seriously, Toivonen's account is unable to unify the semelfactive case with the degree achievement case, where *til* does not have the effect of making the event punctual, but instead it provides a result state which is distinct from any potential starting points. On the present analysis, this follows without further stipulation.

4.4.2 Degree achievements with and without *til*

In the previous section, we saw that the base readings of semelfactive predicates are ambiguous between describing punctual single occurrences and activities. However, when *til* is present, only the former reading arises. This follows if *til* provides content to an otherwise underspecified endpoint, by specifying a final point in relation to the implicit Ground argument of the preposition. This blocks the formation of activity readings under S-summing, as argued in §4.3.1. As we will see, this is essentially also the case with degree achievements, where *til* does not make the event punctual, but unambiguously telic. The effect that *til* has on the interpretation is similar to the function that Hay et al. (1999) assumes for the adverbial *significantly*, which when added to a degree achievement has the effect of making the event obligatorily telic. When the endpoint implied by the predicate is contextually defined, *significantly* qualifies this contextually introduced endpoint. As will be evident especially from the discussion of the behaviour of degree achievements with respect to the adverbial *helt*, 'completely', this is also the effect that the addition of *til* has on the predicate. *Til* specifies an endpoint in relation to a contextually given point.

The following sentences show examples of degree achievements without *til* (24) and when the same verbs combine with *til* (25):

(24) a. Konkurransen om studentene hardnet.
competition.the for students.the hardened
'The competition for the students hardened.'

b. Vinden stilnet i løpet av ettermiddagen
wind.the calmed in course of afternoon.the
'The wind calmed in course of the afternoon.'
c. Himmelen mørknet og det begynte å regne.
sky.the darkened and it started to rain
'The sky got dark and it started raining.'
d. Elva frøs da det ble kaldt.
river.the froze when it got cold
'The river froze when it got cold.'

(25) a. Konkurransen om studentene hardnet til.
competition.the for students.the hardened to
'The competition for the students hardened.'
b. Vinden stilnet til i løpet av ettermiddagen
wind.the calmed to in course of afternoon.the
'The wind calmed in course of the afternoon.'
c. Himmelen mørknet til og det begynte å regne.
sky.the darkened to and it started to rain
'The sky got dark and it started raining.'
d. Elva frøs til da det ble kaldt.
river.the froze to when it got cold
'The river froze when it got cold.'

The differences in meaning between the sentences in (24) and (25) are subtle, but consistent. Similar to semelfactive predicates, degree achievements without *til* are ambiguous between a telic and an atelic reading, but once *til* is present, the telic reading is possible. A sentence like (24c) can describe a telic process as well as a change of state, whereas (25c) only has the latter reading. This is confirmed by their behaviour with respect to temporal adverbials. While (24c) is compatible both with durative and completive temporal adverbials, only completive adverbials are accepted once *til* is present.

In the previous section, I presented two tests which were both sensitive to two factors, i.e. durativity and telicity, and semelfactives with and without *til* were seen to pattern differently with respect to these tests. On that basis, I concluded that *til* has the effect of making the event telic and punctual. These same tests can be employed with degree achievements. The sentences in (26) and (27) show this with respect to the *holdt på å*-test:

(26) a. Vinden holdt på å friskne.
wind.the held on to freshen

(i)'The wind was about to get strong.'
(ii)'The wind was getting stronger.'

b. Himmelen holdt på å mørkne.
sky.the held on to darken
(i)'The sky was about to get dark.'
(ii)'The sky was getting darker.'

c. Innsjøen holdt på å fryse.
lake.the held on to freeze
(i)'The lake was about to freeze.'
(ii)'The lake in the process of freezing.'

(27) a. Vinden holdt på å friskne til.
wind.the held on to freshen to
(i)'The wind was about to get strong.'
(ii)'The wind was getting stronger.'

b. Himmelen holdt på å mørkne til.
sky.the held on to darken
(i)'The sky was about to get dark.'
(ii) 'The sky was getting darker.'

c. Innsjøen holdt på å fryse til.
lake.the held on to freeze
(i)'The lake was about to freeze.'
(ii)'The lake in the process of freezing.'

On their base readings, degree achievements are both durative and telic, so the ambiguity in (26) is exactly as predicted, given that the test is sensitive to both durativity and telicity. Similarly when *til* is present ((27)); although *til* makes the event telic by specifying an endpoint, it does not take away the durativity, so we actually predict these sentences to be ambiguous.[14]

Next, consider the behaviour of these predicates with respect to the entailment test, which is also sensitive to the same two factors. Here, another pattern emerges. The sentences in (28) pass the entailment test, because they are atelic, however, since the addition of *til* has the effect of rendering the event telic, the failure of the sentences in (29) to pass the entailment test follows; they pattern in exactly the same way as accomplishments with respect to this test, i.e. they are durative, but telic.

[14]While the sentences in (26) and (27) are ambiguous, there is still one dominant reading. In (26), the process reading is the dominant one, while in (27), the ABOUT TO reading prevails.

(28) a. Hvis vinden frisknet, men ble avbrutt mens den
if wind.the freshened, but was interrupted while it
frisknet, har den da frisknet?
freshened, has it then freshened?
'If the wind was getting stronger, but was interrupted while it was getting stronger, has it then gotten stronger?'

b. Hvis himmelen mørknet, men ble avbrutt mens den
if sky.the darkened, but was interrupted while it
mørknet, har den da mørknet, har den da mørknet?
darkened, has it then darkened?
'If the sky was getting darker, but was interrupted while it was getting darker, has it then gotten darker?'

(29) a. #Hvis vinden frisknet til, men ble avbrutt mens den
if wind.the freshened to, but was interrupted while it
frisknet til, har den da frisknet til?
freshened to, has it then freshened to?
'If the wind was getting strong, but was interrupted while it was getting strong, has it then gotten strong?'

b. #Hvis himmelen mørknet til, men ble avbrutt mens
if sky.the darkened to, but was interrupted while
den mørknet til, har den da mørknet til?
it darkened to, has it then darkened to?
'If the sky was getting dark, but was interrupted while it was getting dark, has it then gotten dark?'

The behaviour of adverbials like *igjen*, 'again', *helt*, 'completely', and *nesten*, 'almost' can also be used as a test for the presence of a specific result state.[15] These adverbials are assigned different readings according to the types of events they combine with. It turns out that an endpoint is not sufficient to license these adverbials. Rather, they require a specified result.

Consider first the behaviour of the adverbial *igjen*, 'again'. von Stechow (1996) argues for German *wieder*, 'again', that it can be assigned two different readings; a repetitive reading in which *again* modifies the whole event, and a restitutive reading in which *again* modifies the result state of the event. According to von Stechow, these different readings provide insight into the syntactic and semantic properties of the predi-

[15]Remember that I make a distinction between an endpoint and a result state. While the base readings of semelfactives and degree achievements are telic, they do not specify any result state, which is the reason they can form extended readings under event concatenation.

cates *again* applies to.

Beck and Johnson (2004) adopt the basic insights of von Stechow's proposal, and apply them to different types of ditransitive structures, where they argue for a tripartite decomposition of these verbs which is similar (though not identical) to the one assumed by Ramchand (2005). They argue that on the repetitive reading, *again* adjoins to the highest projection of the verb, i.e. to the external argument-introducing v-projection, where it scopes over the whole event. On the restitutive reading, *again* adjoins to the result state, where it modifies only the outcome of the event.

On this basis, we can make a prediction. With atelic predicates, where no result state is present, only a repetitive reading should be possible. With telic predicates, on the other hand, both readings should be available. The sentences in (30) confirm this hypothesis. (30a) gives an example of an activity verb and (30b) of an accomplishment.

(30) a. Jens syklet igjen.
Jens biked again
'Jens biked again.' (repetitive)
b. Bestemor lukket vinduet igjen.
grandmother closed window.the again
'Grandmother closed the window again.' (ambiguous)

Now, let us see how degree achievements without *til* (cf. (31)) and with *til* (cf. (32)) behave in this respect:

(31) a. Innsjøen frøs igjen over natten.
lake.the froze again over night.the
'The lake froze again during the night.'
b. Himmelen mørknet igjen.
sky.the darkened again
'The sky darkened again.'

In the sentences in (31), only a repetitive reading for *igjen* is available, which is exactly what we predict if these sentences lack a specific result state. However, when *til* is present, as in (32) a restitutive reading of *igjen* is possible in all cases. Thus, it seems that *igjen* can only get a restitutive reading in case a specific result state is present, which is exactly the aspect of interpretation contributed by the *til*-PP.[16]

[16]While it is hard to distinguish between the repetitive and restitutive readings in (32), this is not impossible, given an appropriate context.

(32) a. Innsjøen frøs til igjen over natten.
lake.the froze to again over night.the
'The lake froze again during the night.'
b. Himmelen mørknet til igjen.
sky.the darkened to again
'The sky got dark again.'

Next, consider the interpretations of *nesten*, 'almost'. According to Hay et al. (1999), "a telic predicate modified by *almost* is ambiguous between a reading in which the described event is claimed to have occurred, but not quite completed, and one in which it is asserted not to have occurred at all. An atelic predicate modified by *almost* only has the latter type of reading" (cf. also Dowty 1979).

Hence, if the degree achievement can be conceived of as having a distinct result state, we expect *nesten* to be ambiguous. If no distinct result state is imaginable, only a wide scope reading should emerge.

(33) a. Innsjøen frøs nesten i natt.
lake.the froze almost in night
'The lake almost froze last night.'
b. Himmelen mørknet nesten i går kveld.
sky.the darkened almost in yesterday evening
'The sky almost got dark last night.'

To the extent that *nesten* can appear in the sentences in (33), the interpretation is unambiguously a wide scope reading where the event was about to occur, but never did so. But consider the sentences in (34), where *til* is present. Although these sentences are potentially ambiguous between a wide and a narrow scope reading for the adverbial, the most salient reading is one where *nesten* has narrow scope over the result state of the event. Thus, it seems that like *igjen*, *nesten* requires a specific endpoint in order to be licensed.

Hence, the fact that in the sentences in (33), only a wide scope reading for the adverbial is available follows; these events are telic, but their the endpoint is underspecified, and hence, it can easily be the starting point of the next change along the scale denoted by the predicate.

(34) a. Innsjøen frøs nesten til i natt.
lake.the froze almost to in night
(i)'The lake almost froze last night.'
(ii)'The lake almost got completely frozen last night.'

b. Himmelen mørknet nesten til.
sky.the darkened almost to
(i)'The sky almost got dark.'
(ii)'The sky got almost completely dark.'

The sentences in (35) and (36) show the behaviour with respect to *helt*, 'completely'. When these sentences appear without *til*, the interpretation of *helt* is different from the one in which *til* is present (cf.(36)). Thus, a sentence like (35a) is interpreted as an event in which the lake got completely frozen, all the way to the bottom, the interpretation of (36) is one where *helt* modifies the result state introduced by *til*, which is sensitive to contextual factors. Hence, (36a) gets interpreted as an event where the surface of the lake got completely covered with ice.

(35) a. Innsjøen frøs helt i natt.
lake.the froze completely in night
'The lake froze completely last night.'
b. Himmelen mørknet helt.
sky.the darkened completely
'The sky got completely dark.'

(36) a. Innsjøen frøs helt til i natt.
lake.the froze completely to in night
'The lake froze completely last night.'
b. Himmelen mørknet helt til.
sky.the darkened completely to
'The sky got completely dark.'

Like semelfactives, the base readings of degree achievements always introduce an endpoint, hence they are telic. However, degree achievements crucially do not denote changes from ϕ to $\neg\phi$, instead they denote changes in degrees on a scale, where each change from δ_n to δ_{n+1} could also serve as the input to a change from δ_{n+1} to δ_{n+2}. However, they do *not* introduce a specific result state, which is where *til* comes into the picture. *Til* appears in the complement to the Res head where it contextualizes the endpoint introduced by the predicate, hence S-summing can no longer apply. While the fact that *helt* can appear even on the base readings of these verbs may seem problematic for the present analysis, it turns out to follow from the analysis. According to Hay et al. (1999), *completely* can appear with degree achievements when the property associated with them is closed scale. The sentence can then be perceived as telic, and *completely* picks out the maximal property on the property

scale. Thus, the reading in (35) is predicted. *Til* also specifies an endpoint, but this time, in relation to the context, and here, *completely* picks out an endpoint in relation to that contextually specified endpoint.

4.4.3 Interim summary

I started out this section by examining the properties of semelfactive predicates, which on their base reading can be used both to describe an event consisting of one single jump and a series of jumps. However, once *til* is present, only the punctual reading is possible.

Then I moved on to look at degree achievements, which on the surface looked very different from the semelfactives. Again, the same type of patterns arise. On their base reading, degree achievements could be interpreted both as telic events of change and as atelic processes, while degree achievements with *til* patterned as telic. I gave an analysis where the base readings of both semelfactives and degree achievements are telic, but where their respective result states are underspecified. With a semelfactive verb like *jump*, the endpoint is identical to the starting point, i.e. the point where the feet return to the ground. Degree achievements, on the other hand, denote changes in degrees on a scale where each change from δ_n to δ_{n+1} could also serve as the input to a change from δ_{n+1} to δ_{n+2}. Hence, the endpoint of one event of change (=telic) can either be treated as the final point of the event, or as the starting point for the next change. S-summing can only concatenate events whose endpoints are non-distinct to give rise to a process interpretation. This is possible on the base readings of both semelfactives and degree achievements, for reasons already explained. However, *til* adds content to the endpoint, making it distinct from the starting point, so S-summing is blocked, and no unbounded reading can arise.

In the next section, I will consider a possible analysis of cases like these in terms of a decompositional event structure like the one presented in the introduction (cf. Ramchand 2005). However, nothing in particular hinges on the assumptions made there; I will simply use that type of structure to illustrate the issues at stake.

4.5 Analysis

In the previous section, I presented evidence that on their base readings both semelfactives and degree achievements are telic, but with underspecified endpoints. Hence, S-summing could apply to give rise to ex-

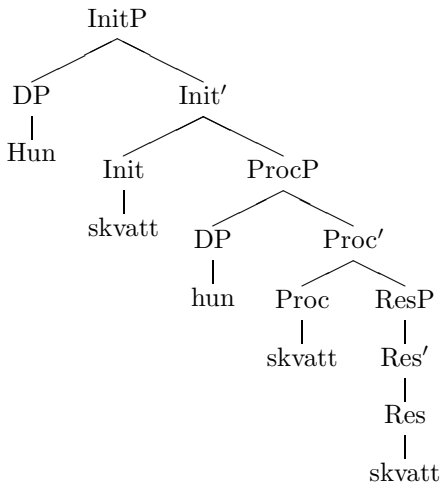
tended activity readings. In this section, I will give an analysis where the properties of semelfactives and degree achievements follow from the type of analysis assumed. Flexibilities in interpretation like the ones present with semelfactive and degree achievement predicates will be related to differences in the syntactic structures which are projected, which in turn give rise to different interpretations. Following Ramchand (2005), I relate grammatical telicity directly to the presence of a functional head Res(ult) in the fine-grained structure of the verb phrase, where the verb phrase can be decomposed into maximally three subevents, *Init(iation)*, *Proc(ess)*, and *Res(ult)* (for more about the framework, I refer back to chapter 1).[17]

4.5.1 Semelfactives

Above, I presented evidence that on their base reading, semelfactive predicates are telic. Crucially, however, their result state is underspecified, so that S-summing can apply to give rise to extended activity readings. However, when *til* is present, the interpretation is always punctual. A potentially ambiguous sentence like *hun skvatt da telefonen ringte*, 'She got startled when the phone rang', can hence be associated with two different structures, one for each of the possible readings. The structure for the single-occurrence reading would look like the following:

[17]However, this is only one way in which telicity can arise. Crucially, semantic telicity can also stem from entailments arising via a mapping between the boundedness of the event to the boundedness of a degree of change along a scale of change (cf. Hay et al. (1999), but see e.g. Krifka (1998), Dowty (1991), Tenny (1994), or Beavers (2005) for similar suggestions.

(37)



In (37), since a telic reading is possible even when *til* is not present, I assume that the verb is identifying all three subevents. At first it might seem a bit strange to assume that the single event reading of semelfactive predicates has a Process subevent in their structure, but although these events are conceived of as punctual, they have a certain duration, albeit a short one.[18] It is, after all, possible to measure the duration of these events if one uses the right type of time adverbials; a sentence such as *the jump took a fraction of a second* is perfectly fine.

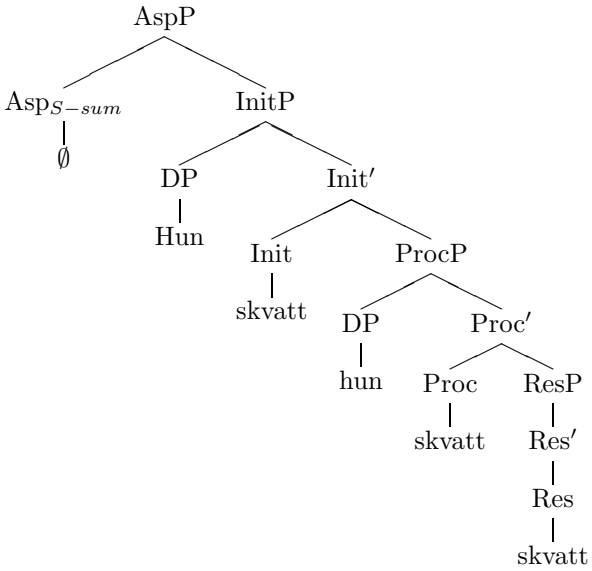
The activity reading deserves more attention. As already mentioned, singular events can be concatenated under S-summing to form a new singular event if they are temporally adjacent (not overlapping) and share the same participants (cf. Rothstein 2004). [19] As already mentioned, semelfactives are special in that their initial point and endpoints are identical, so that S-summing can apply without violating any rules of event coherence. In the following, I will assume that the activity reading stems from an aspectual S-summing operator in the form of a null functional

[18]In the Ramchandian system, ProcessP denotes a transition, whether the event is durative or not. Nothing in the present analysis hinges on that particular assumption, and ProcP could be absent from the tree in (37) without necessarily affecting the argument.

[19]Zwarts 2005 has also proposed that something along these lines is at play in the prepositional domain; he assumes a concatenation operation which can apply to Paths to give rise to extended Paths just in case the first Path ends where the second one starts. He also proposes that the prepositional counterparts to semelfactives are prepositions like *over, through, across* and *around*, which also have the property that the Paths defined by these Ps can be concatenated to form new Paths.

head which operates on the singular event to give rise to the activity reading. A possible structure could look like the one in (38):

(38)



Next, consider examples where *til* is present, as in (39):

(39) Hun skvatt til da telefonen ringte.
she jumped to when telephone.the rang
'She jumped when the telephone rang.'

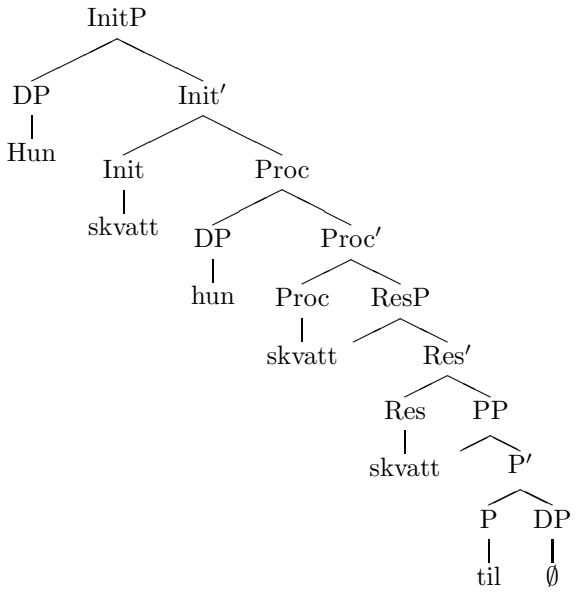
No activity reading is possible in (39), and the sentence can only be interpreted as telic. *Til* appears in the complement to the Res head where it specifies a result state. As already explained in the introduction, I assume that with semelfactives and degree achievements, Res is underspecified in the way that it only introduces an endpoint, not a result state. In its ordinary use, Res always introduces a specifier where the participant occupying that position is interpreted as the holder of the result state denoted by its complement. Here, however, Res does not introduce a specifier, but only a final point to the event.

While it is possible to iterate even events including *til*, as in *Jens hoppet til igjen og igjen*, 'Jens jumped again and again', the interpretation in those cases (including *til*) differs slightly from the one of the pure activity reading, in that the iterated event including *til* is perceived as iteration of separate events, which may not even be temporally adjacent. I assume that this latter reading is the results of the workings of a higher

aspectual head, and that it is different from the activity reading that is derived from S-summing.

The structure when *til* is present is shown in (40). As we have seen, semelfactive predicates can give rise to telic readings even in the absence of *til*, as in (37). However, the final point identified by the verb is underspecified, but the *til*-PP appears in the complement to the Res head where it provides a distinct result state by modifying the final point introduced by the predicate. Hence, S-summing can no longer apply.

(40)

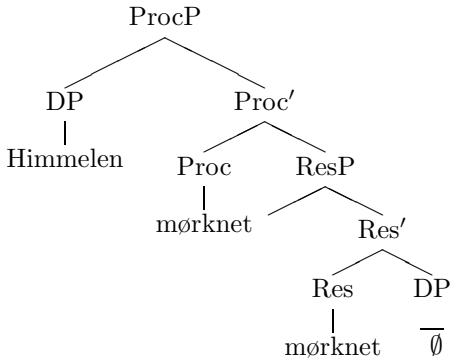


4.5.2 Degree achievements

In the previous section, we saw that the specific properties of semelfactives can be captured in terms of an analysis where the base readings of these predicates are telic, but where the endpoint is underspecified in the way already mentioned, so that S-summing can apply to form activity readings. When *til* is present, only a telic single transition reading is possible. The presence of *til* blocks the application of S-summing by modifying the Res head where it specifies a result state which is distinct from any potential starting point. It follows from these assumptions that *til* cannot be treated as *identifying* (in a technical sense) the endpoint in itself, because the endpoint is already identified by the verb. Hence, *til* cannot appear directly in the Res head since that position is already filled.

Now, consider degree achievements. A sentence like *himmelen mørknet*, 'The sky darkened' (=(24c) above) is potentially ambiguous with respect to telicity. The structure for the telic interpretation is as in (41). Here, the Res head only introduces an endpoint; it does not introduce a result state or participant which is interpreted as the holder of this result state.[20]

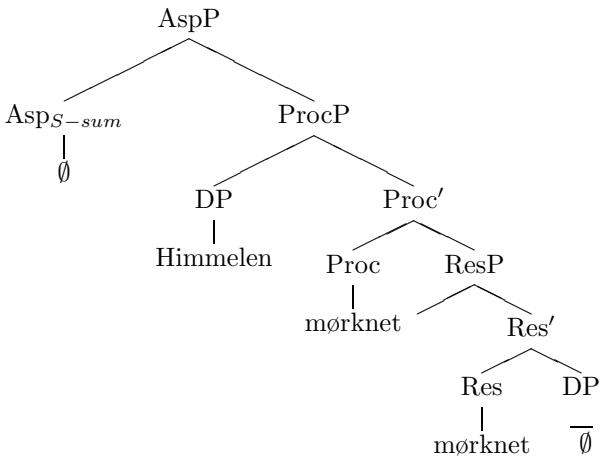
(41)



As with semelfactives, I assume that the activity reading of the sentence results from the application of the S-summing operator, which can concatenate singular events if their initial and final stages are non-distinct. With semelfactives this is quite clear, but also so for degree achievements, which denote changes in degrees along a scale, where the final point of one single change can easily be the starting point of a new change. The resulting structure is shown in (42):

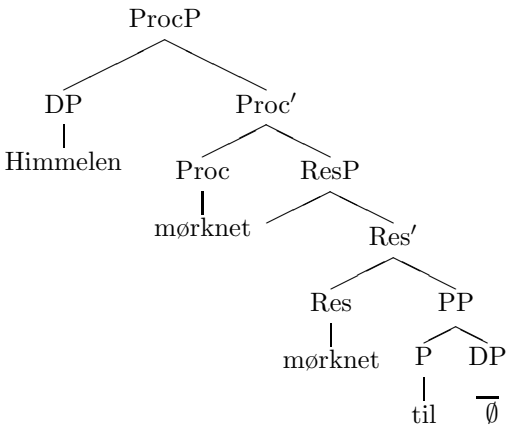
[20]In (41) I assume that the Res head takes a DP complement whose content is underspecified, but sensitive to context. The motivation for this assumption is the fact that degree achievements denote changes in degrees on a scale. In a way, then, the DP complement can be thought of as representing this scale. However, I leave this issue open for further research.

(42)



Next, consider what happens when *til* is added, as in (43):

(43)



In (43), only a telic interpretation is possible; again, the presence of a specific result state in the form of *til* blocks the application of S-summing.

4.5.3 Summary

We have seen that it is possible to give a unified analysis to two seemingly unrelated cases where *til* combines with an intransitive verb to give rise to meanings subtly different from those of the verb used without *til*. According to Rothstein (2004) both semelfactives and degree achievements can give rise to extended readings which are derived via S-summing of singular events. Furthermore, she argues that S-summing is only possi-

ble with events that are temporally adjacent and which share the same participants.

With semelfactives, the reason S-summing could apply was because the singular events in their denotation do not result in a change from ϕ to $\neg\phi$. Instead, their initial and final stage can be conceived of as identical. Similarly for degree achievements; degree achievements also do not denote changes from ϕ to $\neg\phi$; they denote changes in degrees along a scale where the final point for one minimal change may serve as input to the next change. In both cases, the PP with *til* adds specific content to the endpoint introduced by the verb, which makes it distinct from any potential start point for a new event.

4.6 Transitive semelfactives

In this section, I will have a look at transitive semelfactive predicates like *slå*, 'hit', or *sparke*, 'kick', which alternate between appearing with a DP (direct object) and a PP. When the verb combines with a DP, the interpretation is ambiguous between a single-occurrence and an activity. When a *til*-PP is present, only the single-occurrence reading is possible, and I will assume that the analysis proposed for the intransitive semelfactives can be carried over also to these cases.

4.6.1 Interpretations with and without *til*

Since I have already discussed the properties of semelfactive verbs in §4.3.1 above, I proceed directly to the relevant data and tests, before moving on to a possible analysis. The sentences in (44) and (45) give some examples where the verb appears with a DP and a PP, respectively:

(44) a. Den ondskapsfulle bonden slo eselet.
the evil farmer.the hit donkey.the
'The evil farmer hit the donkey.'

b. Per sparket jerndøra i vilt raseri
Per kicked iron.door.the in wild rage
'Per kicked the iron door in wild rage.'

c. Hans puffet heksa og kom seg unna.
Hans pushed witch.the and came himself away
'Hans pushed the witch and got away.'

(45) a. Den ondskapsfulle bonden slo til eselet.
the evil farmer.the hit to donkey.the

'The evil farmer hit the donkey.'

b. Per sparket til jerndøra i vilt raseri.
Per kicked to iron.door.the in wild rage
'Per kicked the iron door in wild rage.'

c. Hans puffet til heksa og kom seg unna.
Hans pushed to witch.the and came himself away
'Hans pushed the witch and got away.'

While the sentences in (44) can describe both single occurrences and activities, this is not an option in (45), where only a single-occurrence reading is available.

As with the intransitive semelfactives, when a *til*-PP is present, there is a notion that the hitting or kicking is sudden and unexpected (cf. Toivonen 2003). Again, this is probably just a consequence of the fact that these sentences can only be used to denote one single occurrence, which is naturally perceived of as more prominent than, e.g. one odd kick out of a series of kicks in a kicking activity. As we will see, the versions where the verb appears with a DP argument and when it appears with a PP complement behave consistently differently with respect to the tests employed in the first of this chapter.

Consider first the interpretation of the phrase *holdt på å*. In order to give rise to the IN PROGRESS reading, *holdt på å* requires events of a minimal duration. Above, we saw that with *til*-less semelfactives, this phrase is ambiguous between an interpretation where the event almost occurred (which we termed the ABOUT TO [event] interpretation) and one in which it is an event in progress. When *til* is present, only the ABOUT TO [event] reading is possible. The same patterns hold for transitive semelfactives, as (46) show. The sentences containing a DP (=(46)) are ambiguous, while the sentences containing the same verb plus a PP (=(47)) only have the ABOUT TO [event]-type reading. This is exactly as expected if these verbs are ambiguous with respect to denoting single occurrences (punctual) and extended events (durative) when they appear with a DP, but unambiguously telic and punctual once a PP with *til* is present:

(46) a. Bonden holdt på å slå eselet.
farmer.the held on to hit donkey.the
(i) 'The farmer was about to hit the donkey.'
(ii) 'The farmer was hitting the donkey.'

b. Per holdt på å sparke jerndøra.
Per held on to kick iron.door.the

(i) 'Per was about to kick the iron door.'
(ii) 'Per was kicking the iron door.'

c. Hans holdt på å dytte heksa.
Hans held on to push witch.the
(i)'Hans was about to push the witch.'
(ii)'Hans was pushing the witch.'

(47) a. Bonden holdt på å slå til eselet.
farmer.the held on to hit to donkey.the
'The farmer was about to hit the donkey.'

b. Per holdt på å sparke til jerndøra.
Per held on to kick to iron.door.the
'Per was about to kick the iron door.'

c. Hans holdt på å dytte til heksa.
Hans held on to push to witch.the
'Hans was about to push the witch.'

Next, consider the behaviour of these verbs with respect to the Norwegian "entailments from the progressive"-test, which was also seen to be sensitive to duration (cf. (48) and (49)). Again, the V+DP combination patterns both as telic (single occurrence) and atelic (activity). When a *til*-PP is present ((49)), we again get a failure of presupposition, due to a lack of durativity. *Slå til eselet* lit. 'hit to the donkey' entails that the donkey was hit at least once, and since these events crucially have very short duration, the event simply cannot be interrupted, making the question infelicitous.

(48) a. Hvis bonden slo eselet, men ble avbrutt mens
if farmer.the hit donkey.the, but was interrupted while
han slo eselet, har han da slått eselet?
he hit donkey.the, has he then hit donkey.the
'If the farmer was hitting the donkey, but was interrupted while he was hitting it, has he then hit the donkey?'

b. Hvis Per sparket jerndøra, men ble avbrutt mens
if Per kicked iron.door.the, but was interrupted while
han sparket døra, har han da sparket døra?
he kicked door.the, has he then kicked door.the
'If Per was kicking the door, but was interrupted while he was kicking the door, has he then kicked the door?'

c. Hvis Hans puffet heksa, men ble avbrutt mens
if Hans pushed witch.the, but was interrupted while

han puffet heksa, har han da puffet heksa?
he kicked witch.the, has he then pushed witch.the
'If Hans pushed the witch, but was interrupted while he was kicking the witch, has he then kicked the witch?'

(49) a. #Hvis bonden slo til eselet, men ble avbrutt
if farmer.the hit to donkey.the, but was interrupted
mens han slo til eselet, har han da slått
while he hit to donkey.the, has he then hit
til eselet?
todonkey.the
'If the farmer was hitting the donkey, but was interrupted while he was hitting it, has he then hit the donkey?'

b. #Hvis Per sparket til jerndøra, men ble avbrutt
if Per kicked to iron.door.the, but was interrupted
mens han sparket til døra, har han da sparket til
while he kicked to door.the, has he then kicked to
døra?
door.the
'If Per was kicking the door, but was interrupted while he was kicking the door, has he then kicked the door?'

c. #Hvis Hans puffet heksa, men ble avbrutt mens
if Hans pushed witch.the, but was interrupted while
han puffet heksa, har han da puffet heksa?
he pushed witch.the, has he then pushed witch.the
'If Hans pushed the witch, but was interrupted while he was pushing the witch, has he then pushed the witch?'

The tests involving the adverbials like *igjen*, 'again', *helt*, 'completely', and *nesten*, 'almost' do not give any conclusive results here. The reason is that because in order for them to work, they require *both* duration *and* a specific/distinct result state. With transitive verbs of contact by impact, these requirements are never met at the same time; on their activity readings, the result state is underspecified, while on the punctual reading, a specific result state is present, the event has too short duration to make the test work.

Still, there is one additional adverbial test which can be applied and where the verb-plus-DP and verb-plus-PP combinations behave distinctly different. This test involves the interpretation of the adverbial *sakte/langsomt*, 'slowly', (cf. Platzack 1979), which is also sensitive to duration. When *sakte* is added to an event containing a (semelfactive)

verb plus a noun phrase object, the only possible interpretation is an atelic activity reading, and the reading is one in which, *sakte* measures the intervals between each single occurrence in the complex event (cf. (50)). When the predicate combines with a PP, *sakte* is not possible at all; the adverbial would simply get an odd inceptive reading where it measures the interval up to the initiation of the event (cf. (51)):[21]

(50) a. Bonden slo eselet sakte.
farmer.the hit donkey.the slowly
'The farmer hit the donkey slowly.'
b. Per sparket jerndøra sakte.
Per kicked iron.door.the slowly
'Per kicked the iron door slowly.'
c. Hans puffet heksa sakte.
Hans pushed witch.the slowly
'Hans pushed the witch slowly.'

(51) a. #Bonden slo til eselet sakte.
farmer.the hit to donkey.the slowly
'The farmer hit the donkey slowly (once).'
b. #Per sparket til jerndøra sakte.
Per kicked to iron.door.the slowly
'Per kicked the iron door slowly (once).'
c. #Hans puffet til heksa sakte.
Hans pushed to witch.the slowly
'Hans pushed the witch slowly once.'

Sakte, 'slowly', is restricted to occurring just in case the event is of a minimal duration; if not, only a strange inceptive reading occurs. Thus, *sakte* can only appear in case the semelfactive verb describes an activity, which is only possible in the DP version. Since transitive semelfactive predicates with and without *til* behave in the same way as intransitive semelfactives with respect to the diagnostics, they will also be given a similar analysis. According to the analysis developed for intransitive semelfactives and degree achievements, the activity reading results when the single-occurrence reading of the event is embedded under the functional head Asp_{S-sum}, which concatenates single occurrences to extended events.

[21] In (51), a strange reading is available where *sakte*, 'slowly' modifies each single kick, which is possible in a context of a slow motion film, for instance. However, this reading is irrelevant for the present purposes.

However, before moving on to the specifics of the analysis, I will first discuss the alternation between a DP and PP object here, which is essentially two different ways in which these predicates can choose to express their arguments. At first, this seems to conflict with our normal conceptions about Theta roles and arguments, but this is only superficially so.

4.6.2 DP vs. PP and properties of event participants

In classical generative grammar, the canonical position for direct objects was the complement position of the verb. However, with gradually more detailed syntactic structures, this assumption has been challenged, e.g. by Larson (1988), who proposed an analysis according to which the verb phrase splits into two segments. On this analysis, which has come to be known as the *VP-shell analysis*, the arguments of the verb are introduced in specifier positions in this layered VP.

A split VP analysis has been argued for extensively in the literature, e.g. by Hale and Keyser (1993), Travis (1992), Ritter and Rosen (1998), to mention just a few. However, it is well known that not all direct objects behave syntactically the same. For instance, with incremental theme verbs, the telicity of the verb phrase is directly dependent upon the quantized vs. non-quantized nature of the direct object, as in (52); with a mass object, the verb phrase is atelic ((52a)), with a quantized object, it is telic ((52b)). However, with other verbs, like e.g. *push*, a quantized direct object never gives rise to telicity ((53)).

(52) a. John drank wine for an hour/*in an hour.
b. John drank a glass of wine *for an hour/in an hour.

(53) a. John pushed carts for an hour/*in an hour.
b. John pushed the cart for an hour.

Since the first class of direct objects affect interpretation by giving rise to telicity, while the other class of objects do not, we expect them to appear in different structural positions, or at least, to be interpreted in different structural positions.[22]

Following Ramchand (2005), I make a distinction between Paths, which are subsets of a more general category Rheme, and Undergoers.

[22]This is a consequence of the tight-knit relation between structure and interpretation assumed, where the interpretation of participants is largely a matter of their positions in the structure which is built up.

Path is a collective label for a class of event participants which give rise to a Path or scale along which is monotonic with respect to the run time of the event, and where the properties of the scale associated with the Path determines the telicity of the event. Typical examples of Path arguments include incremental themes with verbs of creation/consumption, but also some types of directional PPs contribute to interpretation in essentially identical ways. Undergoers, on the other hand, are participants which are interpreted as undergoing some kind of change identified by the verbal predicate, but which do not themselves give rise to telicity.[23]

But if Undergoers and Paths affect the event in different ways, and appear in different structural positions, it should be possible to test this. The degree adverbial *litt*, 'a little', can be used as a diagnostic; *litt* can generally appear with Undergoer objects, where it measures the degree of affectedness of the object. In (54) and (55) I apply this test to examples with transitive semelfactives with a DP object and with a *til*-PP, respectively:

(54) a. Bonden slo eselet litt.
farmer.the hit donkey.the a.little
'The farmer hit the donkey a little.'

b. Per sparket jerndøra litt.
Per kicked iron.door.the a.little
'Per kicked the iron door a little.'

c. Hans puffet heksa litt.
Hans pushed witch.the a.little
'Hans pushed the witch a little.'

(55) a. #Bonden slo til eselet litt.
farmer.the hit to donkey.the a.little
'The farmer hit the donkey a little.'

b. #Per sparket til jerndøra litt.
Per kicked to iron.door.the a.little
'Per kicked the iron door a little.'

c. #Hans puffet til heksa litt.
Hans pushed to witch.the a.little
'Hans pushed the witch a little.'

The sentences in (54) are perfectly fine; *litt* can either measure the degree of impact (e.g. hard vs. gentle), or it can measure the number of single occurrences. Thus, I conclude that the objects here are Undergoers.

[23]The term *Undergoer* originally stems from work witin Role and Referance Grammar by Van Valin 1990, but used here in the sense introduced by Ramchand 2005.

However, the sentences in (55) are odd; due to the presence of *til*, they can only be interpreted as punctual events which took place only once, which makes it is hard to even imagine a situation where it is possible to measure the degree of impact on the participant. Thus, since *litt* seems to require a process of a certain duration, we get a failure of presupposition, which explains the oddness of the examples in (55). In the following, I will assume that the direct objects with verbs of contact-by-impact like *hit, kick*, etc. are instances of Undergoer objects and appear in the specifier position of ProcP.

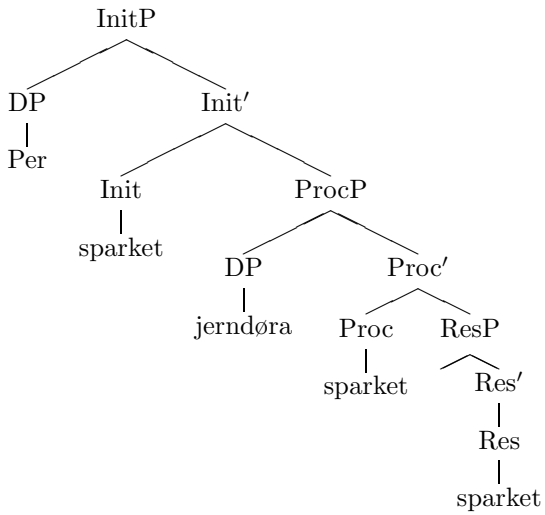
According to Ramchand (2005), the category Path is a subset of a more general class Rheme, the difference between Rhemes and Paths lies in the different ways in which they relate to the event. While Paths have internal structure, and can give rise to a scale which is homomorphic with respect to the process denoted by the event, this is not so for Rhemes, which are static, and just give a final point. This is also reflected in the ways in which Paths and Rhemes combine with the event; Paths have internal part-whole structure, and appear in the complement to the process head, (static) Rhemes denote points or locations, and can hence only combine with the result state, which is itself static.

Remember from §4.1, where I argued that the *til* which combines with semelfactives and degree achievements is different from the Path-denoting spatial preposition *til* in that it (i) does not introduce an external argument, and (ii) it does not denote a Path, but simply a location. This is also so for the *til* which combines with transitive semelfactives; the PP (which lacks an external argument) serves to modify the final point of the event, and this is exactly the analysis which arises if the PP is embedded as a complement to the Res head.

4.6.3 Analysis and structures: transitive semelfactives

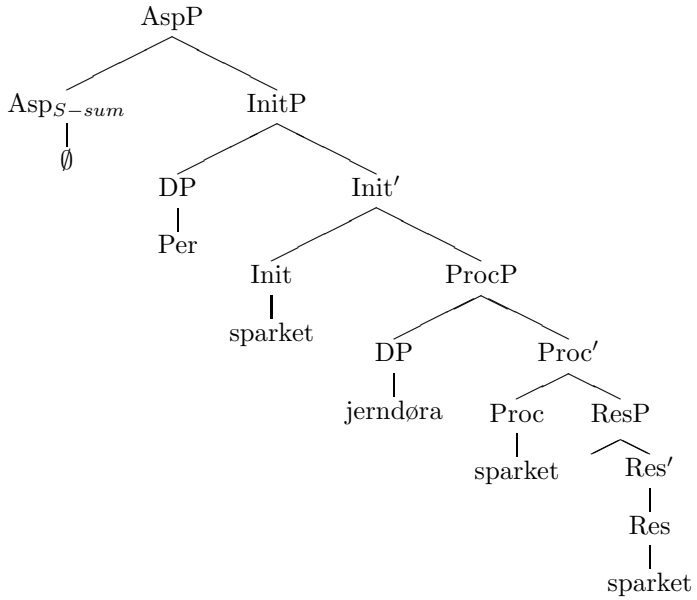
A sentence such as (44b) above is ambiguous between referring to a single occurrence (here: one single kick), and to an activity consisting of a series of kicks. The structure for the single-occurrence reading would look something like the one in (56):

(56)



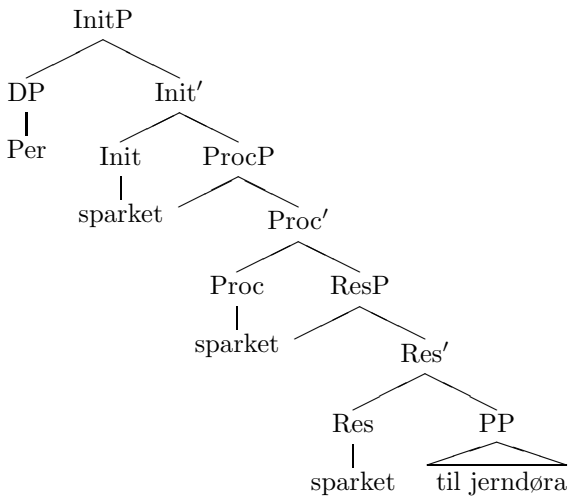
(56) is interpreted as a telic event consisting of one single kick, where *jerndøra*, 'the iron door' is interpreted as the participant undergoing the kicking. The Res head is present, and identifies an underspecified endpoint, as with the intransitive semelfactives. Again, since the initiation and the final point for the kick are identical, S-summing can apply to derive an activity. The structure for the activity reading is as follows:

(57)



Next, consider the structure when a *til*-PP is present (58). As before, the *til*-PP (which now has an overt Ground argument) appears in the complement position to the Res head, where it serves to further specify the endpoint:

(58)



The structure in (58) suggests that *Per sparket til jerndøra litt* (=(55b)) should be bad, assuming that *jerndøra* can't leave the PP and move up to specifier of Proc, where it would be interpreted as an Undergoer.

As it stands, this is a stipulation, at best. But more importantly, this kind of movement would give rise to the wrong entailments for *jerndøra*. In (58), *jerndøra* appears in the complement position to the preposition *til*, where it defines the endpoint of the event, but if it moved into the specifier of ProcP, where it would be interpreted as an Undergoer, in addition to the final point interpretation it would get in its base position. Still, I can't see any *principled* reason which rules out this type of movement, but yet, it seems to be ruled out. However, a more likely explanation is related to case; the ground argument of the preposition gets case from the preposition, so there is no reason such a movement should take place in the first place.

Thus, another natural question to ask here is whether it is possible to insert an Undergoer in the structure in (58). After all, the relevant positions seem to be available. Upon first inspection, this might seem absurd, but it is actually possible, as the sentences in (60) show. When an Undergoer/Resultee is added to the structure in (58), the now familiar interpretations arise; the DP complement of the preposition is interpreted as defining the final point of the event. Hence, (60b) gets interpreted as

a kicking event in which the bucket ends up at the door, which defines the final point of the Path defined by the PP.[24] Conversely, when no Undergoer is present, it is the event which is abstractly conceived of as having the door as its final point.

(59) a. Bonden slo til eselet.
farmer.the hit to donkey.the
'The farmer hit the donkey (once).'
b. Jens sparket til veggen.
Jens kicked to wall.the
'Jens kicked the wall (once).'
c. Hans puffet til døra.
Hans pushed to door.the
'Hans pushed the door (once).'

(60) a. Bonden slo ballen til eselet.
farmer.the hit ball.the to donkey.the
'The farmer hit the ball to the donkey.'
b. Jens sparket bøtta til veggen.
Jens kicked bucket.the to wall.the
'Jens kicked the bucket to the wall.'
c. Hans puffet heksa til døra.
Hans pushed witch.the to door.the
'Hans pushed the witch to the door.'

Compare the sentences in (59) and (60); in (60a), *eselet*, 'the donkey', is interpreted as the final point of the event, as the ground of the preposition *til*. In (59a), where an additional Undergoer (*ballen*, the 'ball') has been inserted interpreted as an Undergoer, *eselet* is *still* interpreted as a final point.

Hence, although the Theta roles "assigned" to *eselet*, 'the donkey', in sentences like (61a) and (61b) (repeated from (44a) and (45a)) might at first glance seem identical on the V+DP and V+PP alternants, this is only apparently so. When the verb appears with a DP object, that object is interpreted an Undergoer of the process denoted by the verbal predicate, while when it appears inside a PP it is interpreted as a final point or location. Hence, it is not a concidence that this alternation is only possible with verbs of impact, where a *til*-PP can modify the result state of the event. In addition, remember from the discussion in the introduction that I assumed that *til* here never introduces a Figure

[24] In Norwegian, *til* is also used to mark possession, so that (60a) can get an irrelevant reading where the ball is possessed by the donkey.

argument/specifier position; "aspectual" *til* is static, and can only be embedded under Res to modify the endpoint already present, which is exactly the type of interpretation that we get.

(61) a. Den ondskapsfulle bonden slo eselet.
the evil farmer.the hit donkey.the
'The evil farmer hit the donkey.'
b. Den ondskapsfulle bonden slo til eselet.
the evil farmer.the hit to donkey.the
'The evil farmer hit the donkey.'

4.7 Summary

I have looked at cases from Norwegian where a predicate can combine with a PP with *til*, and where the PP specifies the endpoint entailed by the predicate. The predicates allowing this fall into three main categories. First, we have instances of intransitive semelfactives like e.g. *hoppe*, 'jump', which are ambiguous between single occurrence readings and activity readings. However, when a (Figure-less) PP with *til* is present, only the single-occurrence reading is available. The second class of predicates which combine with *til* are the degree achievements, whose base readings are ambiguous between single transitions and extended activities. Again, when *til* is present, only the single transition reading can appear. The same type of alternation was observed for transitive semelfactive verbs like *sparke*, 'kick', which alternate between taking a DP and a PP complement.

Although semelfactives and degree achievements look very different on the surface, they are similar in that their base readings are telic, but the predicate only introduces an endpoint and no result state, so it can in principle also constitute the starting point for the next event. Following Rothstein (2004), I proposed an analysis where the extended readings for both types of predicates arise under a concatenation operation of S-summing, which forms extended events from singular events. I related this to the presence of an S-summing operator in the form of a functional head dominating the verb phrase. When a *til*-PP is present, it appears in the complement position to the Res head, where it modifies the endpoint, making it distinct from the starting point. As a consequence, S-summing could no longer apply.

Chapter 5

Closing the curtain: Summary and conclusions

The main topics of this dissertation have been prepositional phrases, argument structure, and how the argument structure of prepositional phrases is integrated into the argument structure of the verbal predicate to give rise to different types of interpretations. The category P is known to be chameleon-like in its behaviour, and in this thesis, I hope to have shown that the flexible nature of prepositional phrases can be properly handled within a Constructionist model of the relationship between argument structure and syntactic structure. In this model, the interpretation of event participants is a consequence of the structural configuration which they appear in, and not a static property of individual lexical items.

The dissertation is divided into four chapters. The first chapter motivates the choice of topic, and provides an introduction to the theoretical framework. I adopt a slightly modified version of the model developed by Ramchand (2005), where the verb phrase decomposes into maximally three subevents, InitP, ProcP and ResP, which each introduces and licenses different types of event participants. I also assume that prepositional phrases can be decomposed in a similar fashion.

Analogous to the way in which it has been argued that the external argument of the verb is introduced by a functional head v (cf. e.g. Kratzer 1996), it has been argued that PPs can also be split up in the same way, with the external argument being introduced by a p functional head dominating P (cf. e.g. van Riemsdijk 1990, Rooryck 1996, Svenonius 2003). While I do not actively employ this distinction throughout the whole thesis, it is used in chapters 3 and 4. In chapter 3, in my treatment of (benefactive) double object constructions, I assume that the Theme

argument is introduced by a functional head p which dominates the null preposition introducing the Goal argument. In chapter 4, I argue that the Norwegian preposition *til*, 'to' when it combines with semelfactives and degree achievements does not introduce an external argument, i.e. the p layer is missing from the structure altogether.

Prepositional phrases may contain more functional material than meet the eye, and much recent work has been dedicated to the topic of determining the finegrained internal structure of spatial adpositional phrases (e.g. Koopman 2000, den Dikken 2003, Svenonius 2004c). While chapter 2 treats the topic of spatial prepositional phrases, I only assume the basic distinction between location and direction, represented by the functional projections Place and Path, and how these fuse with the functional structure of verbs referring to motion, to give rise to different types of interpretations. The topic of the internal structure of spatial adpositional phrases is a big and interesting one, and deserves more attention than I could have given it within the limited space provided by this dissertation. The three next chapters show how the framework presented in chapter 1 can be applied to three different types of verb-PP relations.

The topic of chapter 2 is spatial prepositional phrases in Norwegian, and how they combine with different types of predicates referring to motion events to give rise to readings of located and directed motion. As already mentioned, I assume a distinction between Place and Path, where locative prepositional phrases are PlacePs while directional prepositional phrases are PathPs. Some verbs like e.g. *fall* are able to license a directional reading with locative prepositional phrases, which I argue is possible if the verbal predicate licenses an endpoint, in the form of a ResP in the decompositional structure of the verb phrase. Hence, a sentence like *John fell in the water* is most saliently interpreted as an event of falling whose final point is in the water. Locative PPs are invariably instances of the category Place, and can only get a directional reading if they appear in the complement to ResP.

In some instances, a locative PP can be ambiguous between referring to a location or a final point of motion, as in a sentence like *Jens syklet i grøfta*, 'Jens biked in the ditch'. I argued that the same mechanisms are at play here as with predicates like *fall*, i.e. that these PPs are always PlacePs which get a directional reading in the complement to ResP. This raises the question of whether it is possible to come up with a valid generalization over which class of predicates permit directional interpretations for locative prepositional phrases, which is a tough one to provide a good answer to, and which is definitely a possible topic for

further research.

In the chapter, I stipulate that in cases where a PP is ambiguous between the two given readings, a null Res head is responsible for the directional reading, where the Res head is licensed by a feature [direction] on the verbal root. Based on differences in their respective syntactic behaviour, I argued that PlacePs which are interpreted as locating the motion event appear higher up in the structure than PlacePs which get directional readings. I assumed that on the locative readings, the PlaceP is adjoined to the highest projection of the verb phrase, although nothing in my proposal bears specifically on the assumption that locations are adjuncts.

I then moved on to examine the properties of prepositional phrases which are clearly directional, which I assumed to be instances of the category Path. PathPs are independently directional, and not dependent on the presence of ResP in the decompositional structure of the verb phrase, which explained their relative freedom of distribution, as compared to the limited availability of directional readings for locative prepositional phrases. While PathPs can be separated from the verb without losing their directional interpretation, PlacePs can only get a directional reading in a specific structural configuration. When PathPs combine with atelic motion verbs, they appear in the complement position to ProcP in a Ramchandian decompositional structure. Here, the PathP denotes a Path which is homomorphic with respect to the progress of the event. Hence, it is not the properties of the verb which determines whether the event is telic or not, but instead, telicity can stem from the semantics of a bounded prepositional phrase, as shown by Zwarts (2005). Conversely, if the Path denoted by the prepositional phrase is unbounded, the event is atelic.

Again, I haven't considered the internal structure of Path-denoting prepositional phrases in any great detail; for instance, it might turn out that bounded and unbounded PathPs differ in their respective internal structures, but that is also a question which deserves more attention, and the same concerns the proper semantics for spatial V-PP combinations. While the semantics and syntax of spatial PPs have been investigated in great detail, little work has been done to try and arrive at a model which can account for *both* the semantic *and* the syntactic side of the picture.

Chapter 3 looks at instances from Norwegian and German in which an extra event participant could be added, which the two languages permit to various extents. Starting with Norwegian, I examine so-called *benefactive double object constructions*, like e.g. *Jens bakte Marit ei kake*, 'Jens

baked Marit a cake', where the added participant *Marit* is interpreted as a participant benefitting from the event, and simultaneously also as the intended recipient of the direct object. In Norwegian, the addition of an extra participant in this way is limited to predicates which are compatible with a creation interpretation, although pragmatic and contextual factors were also seen to play a role in their licensing. Hence, cases like these seem to add support to a purely Constructionist approach where nothing in the grammar rules out impossible examples; that burden is instead taken over by pragmatics and world knowledge.

On the surface, examples such as these look suspiciously like double object constructions with verbs of transfer of possession like *give* or *send*, and on the basis of similarities in their respective syntactic behaviour, I conclude that they should be given identical structural representations. Specifically, I give an analysis where the possession relation which I argue holds between the Recipient and the Theme decomposes into an abstract verbal predicate which I represented as BE, plus a prepositional component $\emptyset_P$ (cf. work by Freeze 1992, Kayne 1993 or den Dikken 1995). I adopt a slightly modified implementation of the analysis presented in den Dikken (1995), where the empty preposition is licensed through incorporation into the verbal predicate.

I proposed that the Recipient/Beneficiary is introduced as the internal argument of the empty preposition, and that a functional head p (cf. the discussion above) is responsible for introducing the Theme argument. $\emptyset_P$ must be licensed, and I follow den Dikken in arguing that licensing takes place when the empty-headed PP fronts to a position from which $\emptyset_P$ can incorporate into the empty BE predicate, in an operation similar to predicate inversion. Subsequently, the remnant PP moves up into the specifier of ResP, where it gets a Resultee/Holder of Result state interpretation.

Although German permits extra (dative-marked) arguments with a much wider range of verbs, the construction is still not totally unrestricted. The verbs participating in this type of 'alternation' have that in common that they are dynamic predicates which entail the attainment of a result state. In addition, the predicate must introduce an internal argument which is interpreted as undergoing the change associated with the predicate. Hence, in addition to recipients with verb that refer to creation events, a dative-marked nominal can appear with two types of predicates, i.e. telic transitive predicates, and telic unaccusatives. The creation verb cases were given an analysis in terms of predicate inversion, identical to the one proposed for Norwegian.

However, if den Dikken's assumptions about the licensing of the empty preposition are right, licensing can take place *either* by incorporation of the preposition into a predicate (Norwegian) *or* by dative case morphology on the complement of P, and since German has the latter, he assumes that no inversion takes place here. Instead, he proposes that the order where the dative nominal precedes the accusative theme is derived via A′-scrambling of the indirect object to a position preceding the Theme. However, I assume movement also for German, but at the present stage, I have chosen not to go into further detail with respect to the driving forces behind the movement (cf. also the discussion in Müller 1995, which assumes that the order DAT>ACC is derived via case-driven A′-movement).

For dative participants with non-creational transitive verbs and unaccusatives, I argued that they are not possessors in the relevant sense, but instead, I argued that these datives stand in an Experiencer relation to the event, where they are interpreted as either positively or negatively affected, largely dependent on pragmatic factors. These Experiencer datives were also given an analysis in terms of a null preposition, but instead of assuming predicate inversion, I argued that Experiencer datives are merged directly in the specifier of ResP, where they get the relevant interpretation.

On the analysis presented here, all 'dative' participants (counting in also the recipients in Norwegian) are associated with the specifier of ResP, either via movement, or by basegeneration. If this generalization is correct, the failure of unergative verbs to permit Experiencer datives follows as a consequence of the fact that typical unergative verbs refer to pure processes which do not in isolation entail the attainment of an endpoint or result state. However, this would predict that Experiencers should be able to combine with telic unergative predicates like *heiraten*, 'marry', but as far as I know, this is not possible. This indicates that the presence of a result state is a necessary, but not sufficient condition for the addition of an Experiencer. Also, I have not been able to provide an explanation for the fact that an internal argument (Undergoer) is necessary to license a dative participant. The solution to this puzzle will hopefully be seen to follow from the system assumed without further stipulation.

The topic of chapter 4 is instances where a predicate combines with the preposition *til*, 'to', and where I argue that the PP modifies the endpoint which is entailed by the predicate. Hence, we have instances where the endpoint introduced by P is not spatial, but rather of a more

abstract type.

The predicates which can appear with *til*, fall into three classes. First, I looked at the properties of the class of intransitive semelfactives like e.g. *hoppe*, 'jump', (cf. e.g. Comrie 1976, Smith 1997), which on their base readings are ambiguous with respect to whether they refer to (instantaneous) single occurrences (one single jump) or activities consisting of a series of single occurrences. However, when *til* is present, only a single-occurrence reading is available. Then, I moved on to look at instances where *til* combine with predicates that are characterizable as degree achievements (cf. Dowty 1979, Hay et al. 1999). In isolation, degree achievements are ambiguous between single transitions or extended activity readings. Again, adding *til* has the effect that only the single change reading is available. Something similar was also seen to be at play with transitive semelfactive predicates like *slå*, 'hit', where *til* again makes only a single-occurrence reading available.

Semelfactives and degree achievements on the surface look like very unlikely candidates for forming a natural class. Still, this is exactly what I argue. What these predicates have in common, is that their base readings are telic, but the predicate introduces only an endpoint, no result state. In principle, then, their endpoints can form the starting point for a new change of the same type.

I proposed an analysis of these cases where the extended readings for all of these predicates follow from the application of an operation termed S-summing (cf. Kamp 1979, or Rothstein 2004), which takes single changes of a special type as its input. I stipulated that this was done in terms of a dedicated S-summing operator, represented by a functional head dominating the verb phrase. However, this issue needs to be looked into in greater detail. Other remaining puzzles concern, for instance, the exact role of the preposition *til*, 'to' as it combines with semelfactives and degree achievements, which I argue is different from other instances of *til* in that it does not introduce an external argument. Also of interest is the question of whether there exist similar instances where a preposition contributes to the aspectual interpretation in a similar way. A possible candidate for this is *på*, 'on', which in combination with certain predicates has the effect of rendering the event atelic.

In this dissertation, I hope to have shown that the general flexibility of adpositional phrases as they interact with the verbal predicational structure, can be properly handled within a Constructionist approach to the interaction between structure and interpretation. According to such a model, the properties of event participants is not determined by

inherent properties of lexical items themselves, but instead it is the direct consequence of the different structural positions these lexical items are merged into in the finegrained decompositional structure.

Basing my work mainly on data from Norwegian I have shown that adpositional phrases combine with verbal predicates in different ways, and the interpretations that arise are a result of the combined properties the argument structures of the verbal predicates and the adpositional phrases, but also a matter of the ways in which they combine.

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