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A Descriptive Comparison of the *Swarm* Alternation in English and Norwegian

Master's thesis in Language Studies with Teacher Education

Supervisor: Christopher Wilder

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NTNU

Kunnskap for en bedre verden

Preface

My interest in languages, though especially the English language, is something I discovered when I was fairly young, and my eagerness to learn more and more never stopped. Though, it was after I went to Australia as an exchange student when I was still in high school that I was absolutely certain; I wanted to study English at the university and become an English teacher. At that point, however, I was only imagining that further down the road I will be writing a master's thesis focused on one of the topics that interest me most.

The thesis was written largely within the time frame September 2019 to May 2020. I have not carried out any surveys or questionnaires, though the data largely comprise three types of sources: data presented in the relevant academic literature; attested natural data, found e.g. via Google search; and native speaker judgements on attested and constructed examples. As my thesis supervisor is a native speaker of English, he has provided judgements on the English data, whereas judgements on the Norwegian data have mostly been done by me, in addition to occasionally asking friends and family. Furthermore, since no work, to my knowledge, has previously been done on the *swarm* alternation in Norwegian, the research and theories of other linguistic scholars (e.g. Salkoff (1983); Levin (1993); Dowty (2000); Rowlands (2002)), are central as a point of departure for the investigation of similar aspects of the alternation in Norwegian.

Based on previous research on the *swarm* alternation in English, the main focus of the thesis has been to write a descriptive comparison aiming at investigating the nature of the phenomenon in Norwegian as well as discover possible English-Norwegian similarities and differences in this domain. Although the deeper questions that may arise are not easily answered within the scope of this thesis, I hope that I have been able to provide some substantial groundwork for further studies and research.

Some days have of course been easier than others when it comes to the process of writing this thesis, however, I am very grateful that I have had the opportunity to carry out a project which has been very meaningful to me, which in turn has provided me with even more knowledge about a topic I am very interested in.

Acknowledgement

Throughout the process of writing this master's thesis I have spent numerous hours alone discovering some interesting aspects and making sense of my own thoughts in front of my computer, however, there are a few specific people who have been very important along the way.

The first person I would like to give special thanks to is my master's thesis supervisor, professor Christopher Wilder, who is the person responsible for sparking my interest for studying the *swam* alternation by enlightening me about the world of linguistics, though especially Generative Grammar and Argument Structure alternations, through courses such as ENG2155 *Theoretical Approaches to English Language* and ENG3110 *Special Subject in English Language*. He has truly been invaluable to the entire process, giving me high quality guidance and supervision along the way, and his knowledge about relevant literature, theories and the world of linguistics in general has been a remarkable resource.

A project like this also requires access to the relevant literature, which is why I secondly would like to thank Dragvoll Library for providing a large amount of the literature needed.

Last, but not least, I would like to thank my family and friends, though perhaps especially one of my best friends and roommate, for being very supportive along the way, as well as providing me with some native speaker judgements on the Norwegian data.

Thank you.

Kine Barli Mjøsund
Trondheim, spring 2020.

Table of Contents

Preface	v
Acknowledgement	vii
Table of Contents	ix
List of Tables	x
1. Introduction	1
1.1 Topic and Approach	1
1.2 Main Points	1
1.3 Structure	2
2. Background	3
2.1 Argument Alternations	3
2.2 Introduction of Basic Structure: The Syntactic Pattern(s) in Question	4
2.3 The Lexicalist Approach and the Role of Verb Meaning in Understanding AS-alternations	4
2.4 Argument Classification: Thematic / Semantic Roles	5
2.5 External/Internal Argument Distinction, Unaccusativity and the Unaccusative Hypothesis	6
2.6 Impersonal Constructions: Expletives, Passives and SwarmAlt	7
2.7 Aspectual Distinctions: Telic / Atelic	13
2.7.1 Testing for Situation Types: Telicity	13
3. The <i>Swarm</i> Alternation in English	15
3.1 The <i>Swarm</i> Alternation in English	15
3.1.1 Optional / Obligatory Arguments	16
3.2 SwarmAlt Verbs, Telicity and Holistic Effect	16
3.2.1 The Relation of the <i>Swarm</i> Alternation to <i>Spray/Load</i>	16
3.2.2 SwarmAlt Verbs are Atelic	17
3.2.3 The 'Holistic Effect' in L-subject sentences	18
3.3 Some Observations: Semantic Properties of the L-subject variant	19
3.3.1 Dowty's (2000) L-subject Observations: "Five Characteristics"	19
3.3.2 Dowty's (2000) Five Meaning Classes	20
3.3.3 Restrictions on the <i>With</i> -phrase in the Marked Variant	21
3.3.4 The Literal / Metaphorical meaning distinction and A-subject vs L-subject	22
3.4 Interim Summary	24
4. The <i>Swarm</i> Alternation in Norwegian, and Comparison with English	25
4.1 The <i>Det</i> -subject Pattern	25
4.2 The Norwegian <i>Swarm</i> Alternation: three patterns rather than just two?	27
4.3 Telicity and 'Holistic Effect' in Norwegian SwarmAlt	28
4.3.1 The 'Holistic Effect'	29

4.3.2 Telicity	29
4.4 Optionality	30
4.5 Norwegian SwarmAlt, Verbs and Verb Classes	33
4.6 The Literal / Metaphorical meaning distinction in Norwegian SwarmAlt	36
4.7 Restrictions on the <i>av/med</i> (by/with) PP in the Marked Variant	37
4.8 SwarmAlt with Verb Phrases denoting Directed Motion	37
4.8.1 Directed Motion Verbs in Norwegian SwarmAlt: does Norwegian SwarmAlt involve Locational as well as Directional PPs?	38
4.8.2 An English Version of the Norwegian <i>Det</i> -variant?	40
4.9 SwarmAlt as an Unergative/Unaccusative Alternation?	42
4.10 Interim Summary	45
5. Concluding Remarks	47
5.1 Main Points and Tentative Conclusions	47
5.2 Issues for Future Research	47
List of References	49
Abstract	51
Appendix A	52
Appendix B	53

List of Tables

Table 1 Outline of Thematic Roles	6
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1. Introduction

1.1 Topic and Approach

The main focus of this thesis is to do a comparative analysis of a specific argument alternation - the *swarm* alternation - in English and Norwegian. This is first of all interesting in its own right, as to my knowledge no previous work has been done on this particular alternation in Norwegian. The English *swarm* construction, however, has been studied more thoroughly (E.g. Salkoff (1983); Levin (1993); Dowty (2000); Rowlands (2002)). In light of key properties discovered in the English SwarmAlt, I intend to primarily investigate what appear to be Norwegian equivalents, in order to shed light on two things: (i) the nature of the phenomenon in Norwegian and (ii) English-Norwegian similarities and differences in this domain. This may furthermore lead to greater understanding of the phenomenon in Norwegian, but also a greater understanding of the relationship between English and Norwegian, and English-Norwegian similarities and differences in this domain.

For the main part my study will be conducted within the generative grammar framework, and my main focus is to answer descriptive questions such as 'are the (non)alternating verbs the same in the two languages' and 'what are the Norwegian SwarmAlt (syntactic/structural) patterns'. Since Dowty (2000) has discovered several aspects regarding the *swarm* alternation in English (especially regarding the L-subject form), there are also several focus areas which are related to his observations. These include examining the verb classes associated with SwarmAlt; the English *with*-phrase restrictions in the corresponding Norwegian *av/med*-PP, and the distinct syntactical patterns associated with literal vs. metaphoric interpretations. Most space will however be devoted for the structural pattern in the marked variant as well as the question of whether Norwegian SwarmAlt involves locational as well as directional PPs, as it appears that it is in this regard that the differences are most notable. Last but not least, I am also posing the question of whether the *swarm* alternation is an unergative/unaccusative alternation, contrary to previous research which has analysed it as either unaccusative (e.g. Levin (1993)) or unergative (e.g. Rowlands (2002)).

As I am mostly focusing on establishing basic aspects of the hitherto not investigated alternation in Norwegian based on what has already been done in English, the more complex explanations and/or questions that arise may not be easily answered within the scope of a master's thesis. However, I am aiming for providing a thorough description, which might lay a foundation for more comprehensive subsequent study and research.

1.2 Main Points

Through analysing the data examined in this thesis, it has been established that the *swarm* alternation in English and Norwegian is in many respects highly similar. Thus, much of the previous research on the *swarm* alternation in English has been substantiated when exploring similar aspects in Norwegian. The similarities are to a great extent related to the structure of the (unmarked) A-subject pattern, (non)alternating verbs, and the semantic verb classes appearing in the alternation, but the data also illustrate some apparent differences between the alternation in the two languages. The first notable difference, which also is one of the main points in the thesis, is that the Norwegian *swarm* alternation involves two marked patterns, sometimes giving rise to a three-way alternation: an impersonal (*det*-subject) pattern, which is specific to

Norwegian, and L-subject, which is equivalent to the marked pattern in English SwarmAlt. Norwegian SwarmAlt thus involves a slightly more complex alternation pattern than what has been noted for English. This is also connected to one of the biggest differences between English and Norwegian; the use of an impersonal sentence pattern for one of the special variants in Norwegian.

Furthermore, I will argue that the *swarm* alternation contains a signature property, which is found in the alternation in both languages; 'agent' realised in a *with-* / *av/med*-PP with special restrictions (this observation is due to C. Wilder (p.c.)). This is moreover of special importance regarding a second major difference, which relates to how Norwegian SwarmAlt involves a type with directional PPs (directed motion verbs), and although English SwarmAlt also has motion verb type, it is much more restricted (Wilder, 2019).

1.3 Structure

Including the introduction chapter 1, the thesis is divided into five main sections. The next section, 2 (*Background*), is where I introduce the theoretical frame for the thesis, the basic patterns of the *swarm* alternation in both English and Norwegian, as well as explain relevant terms and phenomena. Chapter 3 (*The swarm alternation in English*) focuses on presenting and explaining some of the main results of previous research regarding the *swarm* alternation in English, which will include elaborating on the SwarmAlt patterns in English, as well as discussing specific characteristics of the alternation such as the holistic effect in the L-subject variant, that the *swarm* alternation is atelic, as well as the semantic properties of the L-subject variant observed by Dowty (2000). In chapter 4 (*The swarm alternation in Norwegian and comparison with English*) I will use the main results of previous research on the *swarm* alternation in English as a starting point for exploring and discussing equivalent aspects of the *swarm* alternation in Norwegian. I will start by establishing the basic pattern of the alternation, and although the structure is generally largely similar to chapter 3, there are a few differences as a result of important observations regarding the *swarm* alternation in Norwegian. The first part of the chapter focuses mostly on comparing, explaining and discussing aspects that are already observed in English SwarmAlt, followed by presentation and discussion of new data. In chapter 5 (*Concluding remarks*), some tentative conclusions will be drawn and there will be given some suggestions for future research.

2. Background

In the sections below I will outline and explain central aspects related to the theoretical framework of this thesis, in addition to a first introduction to the basic form of the *swarm* alternation in English and Norwegian. I will moreover explain terminology that are relevant and/or useful when discussing argument alternations in general, though especially regarding the main aims of this thesis and what will be discussed in the subsequent chapters.

2.1 Argument Alternations

The overarching topic and background for the master's thesis is a phenomenon referred to as *argument structure alternations*, which according to Dowty (2000:111) has been a highly debated topic among linguists since the very beginning of generative grammar. Levin and Rappaport state that the term refers to how some verbs show "alternate expressions of their arguments" (Levin & Rappaport, 2005:5) and furthermore represents one of several instances of "the larger phenomenon of multiple argument realization" (Levin & Rappaport, 2005:188-9). This refers to the way most verbs allow their arguments to be expressed in more than one way (Levin & Rappaport, 2005:5), and as in the *swarm* alternation illustrated in (1), the arguments of the verb can be realized either in a NP1 V PP_{loc} (*in/on*) NP2 structure or a NP2 V PP_{with} NP1 structure.

- | | | |
|-----|-----------------------------------|-------------------------------------|
| (1) | a. Bees swarmed in the kitchen. | b. The kitchen swarmed with bees. |
| (2) | a. He gave the flowers to her. | b. He gave her the flowers. |
| (3) | a. She sprayed water on the wall. | b. She sprayed the wall with water. |
| (4) | a. She hit the door. | b. She hit at the door. |

In addition to SwarmAlt (1), which will be the main focus of this thesis, several different types of alternations have been realized in the literature, e.g. the dative alternation (2), locative / *spray/load* alternation (3) and the conative alternation (4). Levin & Rappaport state that verbs that are similar in meaning do not always show the same alternations, yet despite this apparent idiosyncrasy argument alternations can be extended to new verbs (Levin & Rappaport, 2005:5). They furthermore claim that "a verb's root has a major part to play in determining which forms of multiple argument realization it might show" (Levin & Rappaport, 2005:5).

What should additionally be noted is that in many argument structure alternation patterns, one of the two alternants can be identified as being more "special" or "marked". As stated by Rowlands (2002:6), one of the variants often involves an additional sense, and this variant is often more restricted, not as common as or even more complex than the other variant, which is more basic. Certain properties can distinguish which of the two alternants is more special, and this can be connected to i) morphological marking on the verb, ii) argument linking and iii) use of special (grammatical) preposition to mark an argument. These properties may differ with respect to which alternation is in question, however, with regard to the *swarm* alternation in English one can especially detect which of the variants is more special or marked due to ii) and iii), e.g. that the AGENT appears as the subject in the unmarked variant whereas LOCATION is the subject in the other, which is a more special argument realization. As will be presented in the next section, the unmarked variant furthermore involves a (locative) *in/on*-PP, whereas the marked variant has a *with*-PP, where *with* seems to be purely grammatical as opposed to for instance *with*-instrument.

2.2 Introduction of Basic Structure: The Syntactic Pattern(s) in Question

The alternation in question, especially in English, has been investigated by a number of linguistic scholars (e.g. Salkoff (1983); Levin (1993); Dowty (2000); Rowlands (2002); Hoeksema (2009)). The Norwegian counterpart, on the other hand, has to my knowledge not been the subject of previous investigation. However, based on the discussion in the subsequent chapters, the syntactic patterns of the *swarm* alternation and its variants in English and Norwegian will be assumed to be as presented below.

English pattern:

- (5) a. NP1 V PP_{LOC} (in/on) NP2 (A-subject variant)
b. NP2 V PP_{with} NP1 (L-subject variant)

Norwegian pattern:

- (6) a. NP1 V PP_{LOC} (i/på) NP2 (A-subject variant)
b. NP2 V PP_{av/med} NP1 (L-subject variant)
c. *Det* V PP_{av/med} NP1 PP_{LOC} NP2 (*Det*-subject variant)

The *swarm* alternation is an alternation found with (atelic) intransitive verbs (Dowty, 2000:114), and as the patterns outlined above illustrate, the NP1 V PP_{LOC} NP2 structure in both English and Norwegian involves a locative PP which is headed by the prepositions *in/i* or *on/på*. However, whereas the NP2 V PP_{with} NP1 structure consistently involves a *with*-PP in English, Norwegian sometimes allow the use of *av* (of/by) in addition to *med* (with). As will be discussed and argued in chapter 4, Norwegian *SwarmAlt* involves two marked patterns; a special *det*-subject (impersonal) pattern in addition to the (somewhat more restricted) NP2 V PP_{av/med} NP1 structure. Example sentences of the *swarm* alternation are given for both English and Norwegian in (7) below.

- (7) a. Stars glittered on the sky.
b. The sky glittered with stars.
c. Stjerner glitret på himmelen.
Stars glittered on sky.the
'Stars glittered in the sky'
d. Det glitret av stjerner på himmelen.
It glittered by stars on sky.the
'The sky glittered with stars'
e. Himmelen glitret av stjerner.
Sky.the glittered by stars
'The sky glittered with stars'

2.3 The Lexicalist Approach and the Role of Verb Meaning in Understanding AS-alternations

Over the years of studies regarding argument alternations, several scholars have pursued the attempt to pin down what factors govern which verbs alternate and which do not. Several theories of argument realization have been developed and a central tenet among a number of linguistic scholars (e.g. Levin (1993); Levin & Rappaport (1995, 2005)) is that the verb and verb meaning is significant to argument linking (Levin & Rappaport, 2005:2-3). As further stated by Levin and Rappaport, it has been known for a

long time that verbs group together in classes with similar meanings that are semantically identifiable, and the fact that these classes show characteristic patterns of argument realization suggests that there might be a connection between these patterns and the semantic properties of each class (Levin & Rappaport, 2005:1-2).

Such a view of argument realization and argument alternations is connected to the lexicalist approach, which is a theoretical perspective/standpoint within modern generative linguistics. Within the lexicalist approach, argument structure and realization of a verb's argument is assumed to be driven by "information registered in a structured lexical entry for that verb" (Levin & Rappaport, 2005:186). Other scholars take a different stand however, arguing that most of the determinants of argument realization are not strictly lexical, rather, they suggest that certain syntactic configurations are themselves the bearers and determiners of certain meaning components (Levin and Rappaport, 2005:6). According to Levin (1993:5), however, a more in-depth investigation of the nature of lexical knowledge confirms that different aspects regarding syntactic behaviour are tied to verb meaning; verbs behaving in similar ways are expected to reflect and share meaning components.

For instance, investigations of the verbs *break*, *cut*, *hit* and *touch* (e.g. Fillmore (1967), Guerssel, Hale, Laughren, B. Levin and White Eagle (1985), Hale and Keyser (1986, 1987), and Laughren (1988)) show that although they are all transitive two-argument verbs, they do not have much else in common (Levin, 1993:5-6). They furthermore differ with regard to whether or not they participate in a number of argument structure alternations, such as the middle construction, the conative construction and the body-part possessor ascension alternation. According to Levin (1993:7-10), their behavioural pattern is connected to the specific meaning components "contact", "change" and "motion", which are the aspects of meaning that "serve minimally to distinguish the verbs participating in the different alternations" (Levin, 1993:10).

That verb meaning is essential to syntactic behaviour is however a somewhat controversial hypothesis which has several challenges, such as for instance answering the questions of to what extent does the meaning of verbs determine their syntactic behaviour and how does one determine which meaning components that are relevant (Levin, 1993:12-13). There are furthermore several researchers who have argued for the rejection of this hypothesis (Levin, 1993:12). Nevertheless, as Levin further states, "[...] the examples above and examples cited in other works illustrate, suggests that the ties between a verb's meaning and syntactic behaviour cannot simply be ignored" (Levin, 1993:12).

2.4 Argument Classification: Thematic / Semantic Roles

When it comes to argument realization, the argument structure of verbs and the different arguments involved in a verb's syntactic representation, these can be assigned specific roles. This is a widely adopted form of lexical semantic representation (Levin & Rappaport, 2005:35) and as stated by Saeed (2016:149), such roles are referred to with a number of different labels in semantics, including thematic roles (e.g. Dowty 1986, 1989, 1991), thematic relations (Jackendoff 1972), deep semantic cases (Fillmore 1968), participant roles (Allan 1986) and semantic roles (Givón 1990). For instance, the verbs *break* and *put* might be associated with the semantic roles "Agent, Patient" and "Agent, Theme, Location" (Levin & Rappaport, 2005:35), as illustrated in the examples below.

The table below briefly outlines central thematic roles largely based on Saeed (2016:150). Thematic roles should however not be mixed up with subject, object etc. (i.e. grammatical roles of arguments) (Haegeman & Guéron, 1999:25-26).

- (8) a. She broke the chair.
 AG PAT
 b. I put the book in the bedroom.
 AG TH LOC

Table 1 Outline of Thematic Roles

AGENT:	Initiator of action, often with intention.
PATIENT:	Entity affected by some action, often change of state.
THEME:	Entity moved by the action or whose location is described.
EXPERIENCER	Entity has awareness of the action/state but is not in control of it.
BENEFICIARY:	Entity benefitting from the action.
INSTRUMENT:	The means by which an action is performed.
LOCATION:	The place wherein something takes place or is situated.
GOAL:	The entity toward which something moves, literally or metaphorically.
SOURCE:	The entity from which something moves, literally or metaphorically.

Despite being involved in a wide range of linguistic contexts, the thematic role approach is subject to much disagreement, and involves several challenges and/or issues raised by a number of scholars. As stated by Dowty (1991:548-9) even the most familiar roles are not agreed upon, and new role labels have also emerged along the way. Some issues have to do with how finely each role should be divided and/or defined, as well as the potential for dual role assignment (Dowty (1991:553-556); Levin & Rappaport (2005:38-42)). Last but not least, it has also been noted that the thematic role approach does not give a sufficient account of argument alternations, e.g. with regard to semantic differences between the two variants (Levin & Rappaport (2005:154); Arad (2006)), such as in *spray/load* and *swarm*. As stated by Rambøl (2010:26) however, thematic roles are nevertheless useful terms for discussing argument alternations.

2.5 External/Internal Argument Distinction, Unaccusativity and the Unaccusative Hypothesis

The Unaccusative Hypothesis was first posed by Perlmutter (1978), and later adopted by Burzio (1986), and the proposal is that there are two subclasses of intransitive verbs, unergative verbs and unaccusative verbs, each associated with a distinct (underlying) syntactic pattern (Levin & Rappaport, 1995:2). The unaccusative intransitives act as if they have an underlying object/theme which surfaces as the subject in the sentence (i.e. have an internal but no external argument) (Butt, 2006:39). In P&P, regarding “structural Case”, it is assumed that the argument NP moves to the structural subject position in order to receive nominative Case (Butt, 2006:60). The single argument of unergative verbs on the other hand, is an underlying subject (i.e. have an external argument but no internal argument) (Levin, 1993:13).

Moreover, whether the verbs participating in the *swarm* alternation are unergative or unaccusative is a question posed by several scholars (e.g. Levin (1993); Rowlands

(2002)). Levin (1993:50) treats *swarm* as involving unaccusative verbs, which is connected to her proposal of the (transitive) *spray/load* alternation and the (intransitive) *swarm* alternation as both being subtypes of the locative alternation. In her analysis, Levin (1993:50) states that the forms of the alternation manifested by *spray/load* and *swarm* can be viewed as a single alternation if the intransitive *swarm* verbs are analysed as unaccusative.

Rowlands (2002:22-23) on the other hand, largely basing her claims on the 'causativisation test', argues that *swarm* verbs are to be analysed as unergative. It has been claimed that unergatives resist causativisation, and based on sentences like in (9) below illustrating that *swarm* cannot be causativised, Rowlands (2002:23) concludes that *swarm* verbs are unergative.

- (9)
- a. ?John swarmed the garden with bees.
 - b. *John swarmed the bees in the garden.
 - c. *Paula buzzed the jar with flies.
 - d. *Paula buzzed the flies in the jar.

The formation of pseudopassives (prepositional passives) can also be applied as an unaccusativity diagnostic, as it has been argued by e.g. Perlmutter and Postal (1984) and Levin and Rappaport (1995) that only unergative verbs, based on sentences as in (10) below, are possible in this construction in English (cited in Kuno & Takami, 2004:137). Although the results from various diagnostics for unaccusativity generally should be considered with care since there appears to be counterexamples to most diagnostics, including the pseudopassive construction (cf. Kuno & Takami, 2004:145-147), acceptable formation of pseudopassives with e.g. verbs related to the *swarm* alternation, might point in the direction that they are unergative.

- (10)
- a. *Boston was arrived in late at night.
 - b. The bed was slept in by Napoleon.

Furthermore, which will be further elaborated in the following section discussing impersonal constructions, having an expletive in the subject position has also been proposed as a way to distinguish unaccusatives from unergatives in both English and Norwegian. The *there*-construction came to be seen as an 'unaccusativity diagnostic' in English in the 1980-90s, and as stated by Sveen, Åfarli (1992) takes the possibility of having an expletive in subject position to be a defining characteristic of unaccusativity (cited in Sveen, 1996:134).

2.6 Impersonal Constructions: Expletives, Passives and SwarmAlt

Both English and Norwegian have (active) sentences which contains an expletive, a non-referential element, in the subject position – *it/there* in English and *det* in Norwegian – which appears to merely function as a placeholder for the 'real' subject and does not contribute anything to the semantics of the sentence (Haegeman & Guéron, 1999:42). In Norwegian there additionally exists options to form passives with impersonal *det*. However, the range of possibilities for both expletive and passive sentences is much wider in Norwegian compared to English (Sveen (1996:97); Åfarli (1992:78)), and the resemblance to one of the marked variants of SwarmAlt, namely the *det*-variant, and these sentences, is striking. The different types of impersonal constructions in

Norwegian, several of which are identified by Sveen (1996), are discussed and exemplified below.

Type 1: Clausal extraposition sentences: [SU-clause] V ... / Det V ... [SU-clause]

- (11)
- a. At Rosenberg tapte overrasket alle.
That Rosenberg lost surprised everyone
'That Rosenberg lost surprised everyone'
 - b. Det overrasket alle at Rosenberg tapte.
It surprised everyone that Rosenberg lost
'It surprised everyone that Rosenberg lost'
 - c. That Manchester United lost surprised everyone.
 - d. It surprised everyone that Manchester United lost.

Clausal extraposition sentences with an expletive/placeholder subject is found in Norwegian as well as English. Although SwarmAlt does not involve verbs that take clausal complements, clausal extraposition sentences should also be mentioned, since they represent yet another case where an argument of the main verb/predicate alternates between realisation as preverbal subject in the neutral pattern (11a+c) and realisation in postverbal position with expletive *det* (it) in the preverbal subject position in the special pattern (11b+d) (Wilder, 2018a:43).

Type 2: *det* + V + (postverbal) subject

- (12)
- | | |
|---|---|
| <ul style="list-style-type: none"> a. Noen barn lekte på plenen.
<i>some kids played on lawn.the</i>
'Some kids were playing on the lawn' c. Noen kommer / Noen banker på døra.
<i>someone is coming / someone knocks on door.the</i>
'Someone is coming / Someone is knocking on the door' | <ul style="list-style-type: none"> b. Det lekte noen barn på plenen.
<i>there played some kids on lawn.the</i>
'Some kids were playing on the lawn' d. Det kommer noen / Det banker noen på døra.
<i>there comes someone / there knocks on door.the</i>
'Someone is coming / Someone is knocking on the door' |
|---|---|

The first type of impersonal actives discussed by Sveen (1996) is one where the subject NP either is in the subject position (12a) or the subject NP is postponed and the expletive *det* is in subject position (12b). In this structure the agent argument, which is usually accounted for as an "external" argument, is realized postverbally in the (internal) direct object position (Sveen, 1996:157-158). This impersonal construction also exists in English, and the English expletive for type 2 is *there*. However, type 2 impersonal constructions is notably much less frequent in English than in Norwegian. Apart from with the verb *be* (existential sentences), very few verbs (verbs of existence and appearance) are thought to be possible in this construction in English (Wilder, 2018a:41-42).

Related to this is furthermore how the *there*-construction came to be seen as an 'unaccusativity diagnostic' in English in the 1980-90s. Although it was first claimed that only *be* is possible in this construction, several scholars (e.g. Burzio (1986); Levin & Rappaport (1995)) observed that there was a distinction between the copular verb *be* as well as certain (main) verbs of existence and appearance (e.g. *exist*, *appear*) on the one

hand, and other main verbs like *play*, *dance* and *sing* on the other (Kuno & Takami, 2004:31-2). Following this observation and based on sentences like in (13)-(14) below, it was claimed that only (unaccusative) verbs of existence and appearance are possible in the *there*-construction (e.g. Burzio (1986); Levin & Rappaport (1995)), whereas no unergatives (or transitives) are (Kuno & Takami, 2004:32). The *there*-sentences containing unaccusative verbs, e.g. *a policeman appeared*, were analysed as having a surface subject which in D-structure was an underlying direct object. Whereas the underlying object normally raises to SpecIP to become the surface subject (13a), the underlying object in *there*-sentences stays in its D-structure position, and an expletive is inserted in SpecIP (13b).

- (13) a. The policeman appeared.
 b. There appeared a policeman.
 c. There arose a storm
- (14) a. ??There knocked someone (at the door)
 b. ??There played some children (in the field)

Kuno and Takami (2004) however, provide several counterexamples to the unaccusatives-only claim for the English *there*-construction, illustrating that the *there*-construction as an unaccusative diagnostic is flawed. Sentences like those in (15) below are presented by Kuno and Takami (2004:40-41) in order to illustrate and discuss their points about the appearance of unergatives (15a) and transitives (15b) in the *there*-construction, despite previously claimed otherwise.

- (15) a. There once ruled a king who had no ears.
 b. Then, all of a sudden, there reached her ear the sound of angel voices.

The same basic claims as for the *there*-construction were furthermore made concerning Norwegian *det*-sentences of type 2 (e.g. Åfarli, 1992:89-90), suggesting that only unaccusatives occur in this construction. However, it was discovered that there are several Type 2 examples with verbs that are not unaccusative but which comes out as unergative by other diagnostics, that can occur in this construction, e.g. *leke* (play) as in (12b) above, *banke* (knock) (12d) and *arbeide* (work). Though Sveen (1996:133-4), who challenges this analysis, states that it appears that all the writers dealing with (Scandinavian) impersonal actives (e.g. Åfarli (1992)) share the same underlying premise:

[...] that (seemingly) unergative verbs occurring in impersonal actives cannot be what they seem, they must have somehow taken on unaccusative characteristics and have an internal argument, they cannot be straightforward unergatives with an external argument.

In the framework of the classic syntactic analysis of unaccusativity there is no straightforward account for these phenomena, as is also pointed out by Sveen (1996), and the fact that verbs of both (unacc+unerg) types can occur in the construction thus suggests that just as the *there*-construction cannot be said to necessarily diagnose unaccusativity in English, neither can Åfarli's "expletive test" in Norwegian (Sveen, 1996:136). According to Sveen, Åfarli's (1992) claims partly stem from neglecting the crucial fact that in Norwegian "intransitive verbs in general can occur in impersonal active

sentences, regardless of whether the verb is unaccusative or unergative" (Sveen, 1996:140).

Type 3: weather-verb pattern: det + V

- (16) a. Det blåser/regner/snør.
It is blowing/raining/snowing
 'It is windy/raining/snowing'
 b. *Himmelen snør.
Sky.the is snowing
 c. Det hosta hele tiden.
It coughed all time.the
 'Someone was coughing all the time'
 d. Pasientene hosta hele tiden.
Patients.the coughed all time.the
 'The patients were coughing all the time'

As stated by Sveen (1996:215), the verbs associated with the weather-verb pattern belong to what he refers to as "the perceptive class". However, unlike the perceptive class more generally, the type 3 weather-verb pattern most often seem to have no argument at all (16a-b) (Sveen, 1996:215). This also serves to distinguish weather-verbs from "weather expressions" more generally. Compared to type 2 then, type 3 involves a verb which lacks an argument. The Det+V pattern does not alternate with another pattern, unlike Type 2, where the structure NP V alternates with Det V NP.

English also has a similar impersonal construction with e.g. weather expressions. However, it is crucial to note that verbs like e.g. *pour* as in (17) describe weather phenomena, and unlike the weather-verbs of Norwegian type 3 impersonal actives these verbs do take an argument NP. They show a special alternation pattern wherein the neutral pattern involves the structure NP V (PP_{dir}) (17c) and the marked pattern involves the structure *it* V (PP_{dir}) PP_{with} (17b). It is furthermore interesting to note that the marked pattern only seems possible with weather expressions in English, just as type 3 sentences seem limited to weather-verbs in Norwegian.

- (17) a. It is raining.
 b. It is pouring down with rain (in Trondheim).
 c. Rain is pouring down (in Trondheim).

Type 4: 'perceptive construction': SU V / Det V

- | | | |
|------|----------|---------|
| (18) | a. NP V | neutral |
| | b. det V | marked |

In what Sveen (1996:210) refers to as the "perceptive construction" the verbs either appear without an argument, as in (18), or the argument appears inside a PP ("oblique realization"). In the neutral pattern in (18a) the verb appears in the structure NP+V, whereas in the marked pattern the structure is det + V, wherein it seems as if the verb "loses" its subject argument. Comparing the sentences with the verbs *banke* (knock) and *brenne* (burn) in (19a-b) and (19c-d) below, the impersonal sentence pattern has the expletive in the subject position rather than the NP *someone* or *house*.

expression of the 'Agent' in an *av/med*-PP, whereas as illustrated in (21) below, type 3 and 4 do not.

- (21)
- a. Det banker (*av/med noen) på døra.
It knocks (by/with someone) on door.the
'Someone is knocking on the door'
 - b. Det går (*av/med noen) i trappa.
It walks (by/with someone) in stairs.the
'Someone is walking on the stairs'
 - c. Det regner (*av/med regn).
It rains (by/with rain)
'It is raining'

In addition to the various types of impersonal actives presented above, the placeholder pronoun *det* is also quite frequently used to form passives in Norwegian (Wilder, 2018a:48), though it is especially the possibility to form impersonal passives which is of importance. As stated by Sveen (1996:52), if a verb can be passivized in Norwegian, an impersonal passive can also be formed. With transitive verbs the passive verb can occur in two patterns, one where the subject of the sentence is a derived subject (similar to English) and one impersonal pattern with an expletive subject, i.e. the expletive subject is an option (Sveen, 1996:53). However, in passives formed from intransitives, the impersonal pattern is the only pattern, i.e. the expletive subject is a "syntactic necessity" (Sveen, 1996:53). The result is that in Norwegian the subject position of a passive contains either an expletive or an NP (as a result of NP-movement), in order to meet the demand for a subject by the Extended Projection Principle, whereas English almost altogether lacks impersonal passives (and passives from intransitive verbs) (Åfarli, 1992:80).

The sentences in (22b-d) have no direct counterpart in English, though by comparing the impersonal passives with SwarmAlt, one can also see that SwarmAlt looks a lot like passivisation in Norwegian (This observation is due to C. Wilder (p.c.)). Whereas the agent in passives in English can be expressed in a *by*-phrase, *av* is the special preposition which marks the agent in Norwegian (Wilder, 2018a:53-54). This preposition is also used to mark the 'Agent'-phrase in Norwegian SwarmAlt. Although the *av*-phrase is sometimes possible to express in impersonal passive constructions (22b+d), it usually sounds odd, especially with impersonal passives of intransitive verbs (Sveen, 1996:55).

- (22)
- a. Slike feil blir oppdaget av våre arbeidere hver dag.
Such mistakes becomes discovered by our workers every day
'Errors of this kind are discovered by our workers every day'
 - b. Det blir oppdaget slike feil av våre arbeidere hver dag.
It becomes discovered such mistakes by our workers every day
'Errors of this kind are discovered by our workers every day'
 - c. Det ble arbeidet i går.
It became worked yesterday
'People were working yesterday'
 - d. Det blir jobbet kontinuerlig (av våre ansatte).
It becomes worked continuously (by our employees)
'Our employers were continuously working'

3. The *Swarm* Alternation in English

In this chapter the main focus is to present and explain some of the main results of previous research regarding the *swarm* alternation in English (e.g. Levin (1993); Dowty (2000); Rowlands (2002); Hoeksema (2009)). This will furthermore be part of setting the context for exploration of Norwegian SwarmAlt in the next chapter (ch. 4).

3.1 The *Swarm* Alternation in English

In this section the English SwarmAlt pattern will be presented, which includes the syntactic patterns of the two variants associated with the alternation as well as the semantic arguments of the verb. Furthermore, among the central aspects in this section is also to identify and explain why the *with*-variant is the "special" pattern, as well as describe the optional / obligatory status of the PPs involved in the alternation patterns.

Based on sentences such as those in (27)-(28), the structure of English SwarmAlt can be illustrated as in (29) below.

- (27) a. NP1 V PPLoc NP2
Insects are crawling on the terrace. (A-subject)
b. NP2 V PPwith NP1
The terrace is crawling with insects. (L-subject)
- (28) a. Birds are swarming in the garden.
b. The garden is swarming with birds.

Syntactic pattern:

- (29) a. NP1 V PPLoc (in/on...) NP2 (A-subject variant)
b. NP2 V PPwith NP1 (L-subject variant)

Dowty (2000) refers to the unmarked variant as the A(gent)-subject form and the marked variant as the L(ocation)-subject form, though, in many cases the term 'Agent' is not appropriate. For instance, with many verbs, the "agent" argument referent does not "act with volition" in the situation denoted, and with a number of verbs, the referent can or must be inanimate. I will nevertheless follow the same notation as Dowty (2000), for the sake of having a label. The two different ways of expressing the arguments of the verb in the English *swarm* alternation are illustrated in (27)-(28) above.

The *swarm* alternation is moreover an alternation found with intransitive verbs (Levin, 1993:54), which are "almost all atelic" (Dowty, 2000:114). It furthermore constitutes alternation of arguments in subject and complement positions, and verbs such as *swarm* may be realized in the syntactic pattern NP1 V PPLoc NP2 or NP2 V PPwith NP1. The structure in (29a) illustrates the unmarked variant, the A-subject form, where the AGENT is the subject and the LOCATION argument appears in a PPLoc, whereas the structure in (29b) illustrates the marked variant, the L-subject form, where the LOCATION is the subject and the AGENT appears in a *with*-PP (Dowty, 2000:112).

Of the two SwarmAlt patterns, the L-subject/*with*-variant is argued to be the more "special" pattern (Dowty (2000:120); Rowlands (2002:31)). Reasons why the L-subject form containing the *with*-PP is special is related to the fact that although verbs that appear in the L-subject variant generally have a matching A-subject variant, there are many (atelic activity) verbs which appear in the A-subject pattern though have no L-

subject counterpart (Rowlands, 2002:31), e.g. *Bees flew in the garden* / **The garden flew with bees*. The fact that there are several verbs which are acceptable in the A-subject variant but not the *with*-variant illustrates a “marked difference” between the two variants according to Rowlands (2002:31). This asymmetry between the two variants is part of the reason for arguing that the L-subject/*with*-variant is the more special frame, and the asymmetry is especially underpinning Rowlands (2002:31) argument that more attention should be devoted to the *with*-variant.

A related pattern is moreover found with adjectives (as opposed to verbs). As part of his fairly detailed investigation of the *swarm* alternation, Salkoff (1983) introduces two adjectival frames involving adjectives derived from verbs as well as underived adjectives in addition to the two SwarmAlt frames (Salkoff (1983) cited in Rowlands (2002:16). These are illustrated in (30) below, though, most of these instances have no acceptable A-subject variant (Salkoff (1983) cited in Rowlands (2002:17). These related adjectival patterns will however not be considered in this thesis.

- (30) a. The sky is ablaze with stars.
b. The shirt is red with blood.

3.1.1 Optional / Obligatory Arguments

Another characteristic of the *swarm* alternation in English regards the obligatory/optional arguments of the verb in the two different frames. According to Rowlands (2002:18), using the examples in (31)-(32) below, the optionality test shows that only the subject is obligatory in the A-subject form. The locative PP in the A-subject variant is often habitually included, though it is not obligatory (Rowlands, 2002:18). When it comes to the L-subject form, both arguments are usually obligatory. This furthermore means that the AGENT and LOCATION in the L-subject version are arguments, whereas the LOCATION in A-subject seems to not be an argument but a modifier.

- (31) a. Bees swarmed (in the garden).
b. Fleas hopped (on the carpet).
(32) a. The garden swarmed *(with bees).
b. The carpet hopped *(with fleas).

3.2 SwarmAlt Verbs, Telicity and Holistic Effect

As some authors e.g. Levin (1993) have suggested that the *swarm* alternation is in a systematic relationship with *spray/load*, largely based on the ‘holistic effect’, I will in this section clarify the relation of SwarmAlt to *spray/load*. The second aim of this section is to identify two basic properties of SwarmAlt sentences, namely their atelic nature and the ‘holistic effect’. In section (3.2.2) I will establish that SwarmAlt sentences are atelic and in section (3.2.3) I will explain and discuss the ‘holistic effect’ in more depth.

3.2.1 The Relation of the *Swarm* Alternation to *Spray/Load*

The *spray/load* and *swarm* alternation, exemplified in (33)-(34), are often discussed in the same context. Levin (1993) for instance, based on certain aspects and/or shared features which I will present below, has suggested that SwarmAlt is in a systematic relationship with (transitive) *spray/load*. The first main reason is connected to the sentence patterns. Both alternations have a Locative and a *with*-variant which display similar patterns with the PPs. Where *swarm* has a location PP in the unmarked variant,

referent of the NP contained within the predicate is such that it cannot be conceived of as distributed throughout the location" (Rowlands, 2002:35). Aspects regarding metaphorical expressions of SwarmAlt will however be further elaborated in section (3.3.4) below.

- (39) a. The sky twinkled with stars.
b. Her eyes twinkled with good humour.

3.3 Some Observations: Semantic Properties of the L-subject variant

In this section I will explain three significant features of L-subject sentences as characterised by Dowty (2000), and these are connected to i) the semantic classes of verbs occurring in L-subject form, ii) restrictions on the *with*-phrase in the L-subject variant and iii) the literal vs. metaphorical meaning distinction in the A- and L-subject variant. Furthermore, I will explain how these properties contribute to understanding SwarmAlt, focusing especially on how the L-subject sentences have a different meaning/function from A-subject sentences (Dowty (2000), the semantic properties of the L-subject pattern and why some verbs alternate and others do not. The following subsection briefly outlines the L-subject characteristics observed by Dowty (2000), before discussing them more thoroughly.

3.3.1 Dowty's (2000) L-subject Observations: "Five Characteristics"

Dowty's (2000) analysis constitutes five characteristics or "general observations" regarding certain semantic restrictions on the L-subject variant, which he claims represent "factors that distinguish acceptable from unacceptable cases" of the *swarm* alternation (Dowty, 2000:114). From Dowty's perspective, these general observations are important characteristics of the *swarm* alternation in English, and in order to investigate similar aspects in the Norwegian counterpart, the following sections will focus on and outline the relevant characteristics.

What distinguishes the L-subject form from the A-subject form according to Dowty (2000:120) is that:

- (i) it occurs with a semantically well-defined class of atelic verbs which denote perceptually simple activities usually recognizable from temporally and spatially limited input
- (ii) the denotation of its *with*-phrase object must be plural and indefinite (in understood interpretation if not in syntactic form)
- (iii) at least for sound verbs, the *with*-phrase object must refer to perceptions (sound) themselves, not agents that produce them (just the opposite of the A-subject form)
- (iv-v) the L-subject form is more suited to metaphorical use than the A-subject form. To this the familiar traditional observation about the L-subject form can be added: (v) it entails that the activity *fills* the space denoted by the Location subject, whereas the A-subject form does not.

These observations illustrate that there are some very specific semantic restrictions on the L-subject variant, which, according to Dowty (2000:120) implies "beyond reasonable doubt [...] that the L-subject form somehow has a different semantic function from the A-subject form".

3.3.2 Dowty's (2000) Five Meaning Classes

According to Rowlands (2002:27), although the substantial research on the *swarm* alternation is not very extensive, there is much consensus when it comes to the verb classes associated with the alternation. Verbs associated with the *swarm* alternation are listed in Salkoff (1983), Levin (1993) and Dowty (2000), however as Dowty's (2000) classification of verb classes associated with SwarmAlt in English is derived from both Levin and Salkoff (Rowlands, 2002:28), I will here mostly focus on the semantic classes outlined by Dowty (2000).

Whereas Levin (1993) lists seven semantic classes of verbs associated with the *swarm* alternation, Dowty (2000) has reduced to five semantic classes. These classes include (i) 'small scale', usually repetitive, visually recognizable physical movements; (ii) animal and other perceptually simple sounds; (iii) conceptually simple visual perception of some kind of light emission; (iv) smells and (v) predicates indicating degree of occupancy or abundance (Dowty, 2000:115).

Dowty (2000) goes on to further elaborate on each semantic class, however, what is clear from his elaborations as well as the list above in more general terms is that for at least four of the semantic classes listed, they all share the common characteristic that they denote "perceptually simple activities usually recognizable from temporally and spatially limited input" (Dowty, 2000:116). In other words, they denote (literal as well as metaphorical) activities/events that are easily and/or immediately perceptible to our senses, they are either seen (i, iii), heard (ii) or smelt (iv). For instance, noticing whether a fountain is foaming (40) is something that happens in an instant, as opposed to the slightly more extended time and cognitive analysis it normally takes to determine that e.g. a cow is grazing (Dowty, 2000: 115). A verb from each class is illustrated in (40)-(44) below.

- (40) a. Soap is foaming in the fountain. b. The fountain is foaming with soap.
- (41) a. Flies are buzzing in the window. b. The window is buzzing with flies.
- (42) a. Diamonds are glittering on her dress. b. Her dress is glittering with diamonds.
- (43) a. Alcohol reeked on his breath. b. His breath reeked with alcohol.
- (44) a. Fish are teeming in the pond. b. The pond is teeming with fish.

Dowty (2000:116) furthermore illustrates that verbs that are similar to those included in the list of perceptually simple activities but denote more 'complex' actions, e.g. such as *resound* vs. *harmonize* in (45), often sound odd, bizarre or are not acceptable in the L-subject form. In addition to almost exclusively falling into these five semantic classes, the verbs appearing in the L-subject form are all one-place (atelic) process/activity verbs (Dowty, 2000:116).

- (45) a. The voices of the choristers resounded in the church.
b. The church resounded with the voices of the choristers.
c. The voices of the choristers harmonized in the church.
d. *The church harmonized with the voices of the choristers.

According to Rowlands, as well as Dowty, there are however some peculiarities associated with some of the verbs within the identified classes (Rowlands (2002:32); Dowty (2000:118)). One of these peculiarities is connected to sound verbs and their

with-phrase NP. Some of the sound verbs requires and are more acceptable with a simple NP denoting the sound itself rather than the producer of the sound (46), whereas others are more acceptable when the *with*-phrase NP denotes the producer rather than the sound (47) (Rowlands, 2002:32).

- (46) a. ?The hall twanged with guitars.
 b. The hall twanged with the sound of guitars.
- (47) a. The eaves twitted with sparrows.
 b. ?The eaves twitted with the chirping of sparrows.

Other peculiarities are associated with verbs of entity-specific modes of being, which are verbs such as *blossom*, *flower* and *bloom* (Rowlands, 2002:33). With a simple NP in the *with*-phrase, especially one which is unrelated to the verb, these sentences sound odd (48), however, they are acceptable if the NP is modified (49) (Rowlands, 2002:33). These verbs are moreover, according to Rowlands (2002:33), the only group of verbs among the semantic classes identified which systematically allows the *with*-phrase to be omitted (50).

- (48) a. ?The bush bloomed with blooms.
 b. ?The garden flowered with flowers.
- (49) a. The bush bloomed with thousands of fluffy white blooms.
 b. The garden flowered with all kinds of colourful flowers.
- (50) a. The bush bloomed.
 b. The cherry tree blossomed.

3.3.3 Restrictions on the *With*-phrase in the Marked Variant

In focus in this subsection is Dowty's (2000) observation regarding specific restrictions on the *with*-phrase in the L-subject variant. Dowty notes the requirement, which the unmarked variant does not have, that the object of *with* in acceptable L-subject sentences must be a bare plural or mass term (Dowty, 2000:117). A definite or quantified NP, including quantified indefinite, is thus not possible. A quantified indefinite is one which specifies a particular quantity or amount, including a singular countable noun with an indefinite article (*a bee*) or a numeral (*two bees*, *a thousand bees*) or other more vague quantifiers like *many* and *several*. The *with*-phrase restrictions are illustrated in (51)-(52).

- (51) a. Roaches crawled on the wall. Unmarked variant
 b. A roach crawled on the wall.
 c. The wall crawled with roaches. Marked variant
 d. *The wall crawled with (a roach/a thousand roaches/the roaches/those roaches).
- (52) a. Soap was foaming in the bathtub.
 b. The bathtub was foaming with soap.
 c. *The bathtub was foaming with (the soap/a lot of soap).

However, Dowty (2000:117) also illustrates that there are acceptable instances where the object of the *with*-phrase is a singular NP, such as in (53) below. The reason why such cases are acceptable according to Dowty (2000:117) is that the sentence involves

an implicit reference to, and is thus interpreted as, multiple events of recounting the rumour.

- (53) a. The whole school buzzed with the rumour about the principal and the librarian.

The specific restrictions on the 'agent'-PP moreover seem to be analytically important, and there are reasons to argue that Dowty's (2000) restriction on the NP in the *with*-PP is unique to the SwarmAlt *with*-phrase, and followingly, that the *with*-phrase acts as a kind of unique 'signature' for (the various guises of) the marked variant of SwarmAlt. The main reason for the uniqueness of the SwarmAlt *with*-PP is the fact that the same restrictions do not characterise any other types of *with*-phrases (This observation is due to C. Wilder (p.c.)). Take a look at the following examples:

- (54) a. Joe hit the nail with a hammer.
b. Sue went to London with a friend.
c. Jack loaded the car with a crate / with a thousand books.
d. The boy was stung by a bee / was surrounded by one thousand bees.

The examples above illustrate sentences containing *with*-instrument (54a), *with*-accompaniment (54b) and spray/load *with*-THEME (54c), as well as other types of "agent"-PPs such as the passive *by*-phrase (54d), neither of which seems to portray the *with*-phrase restrictions as observed in SwarmAlt. These observations strengthen the idea that the *with*-phrase meaning restriction is a special signature of SwarmAlt. This *with*-phrase signature will furthermore be important for parts of the next chapter (ch. 4), wherein I will use this signature to confirm the same SwarmAlt pattern in Norwegian when looking at the Norwegian data.

3.3.4 The Literal / Metaphorical meaning distinction and A-subject vs L-subject

A striking fact about the *swarm* alternation according to Dowty (2000:119) is that many of the SwarmAlt examples are more or less metaphorical. Dowty furthermore makes a rough distinction between "three 'levels' of concreteness of meaning" (Dowty, 2000:119). These are referred to as literal, hyperbole and metaphor, and to illustrate Dowty (2002:119) uses the sentences exemplified in (55) below. However, what is important in this respect, is that there exists a range from 'more literal' to 'more metaphorical' cases (Dowty, 2000:119).

- (55) a. Graceful couples danced on the floor. *Literal*
*The floor danced with graceful couples.
b. Fireflies danced in the garden. *Hyperbole*
The garden danced with fireflies.
c. Visions of success danced in his head. *Metaphor*
His head danced with visions of success.

In observation four Dowty (2000:119) claims that sentences with more literal meanings, such as example (55a) above, often tend to be more acceptable in the unmarked (A-subject) variant than the marked (L-subject) variant, whereas with more abstract meanings the situation is reversed; they tend to be more acceptable in the L-subject

variant than the A-subject variant. Whereas the literal sentence in (55a) above only is grammatical in the A-subject variant, (55b-c) are grammatical in both variants. Having examined Salkoff's (1983) corpus of verbs that can only appear in the marked variant, Dowty (2000:120) further states that verbs with hyperbolic or metaphorical interpretations far outnumber verbs with literal meaning appearing in the marked variant. More examples include the following, where (56a-c) show a three-way contrast of acceptability (Dowty, 2000:119-120):

- | | | |
|------|--|------------------|
| (56) | a. Water dripped from the roof.
?The roof dripped with water. | <i>Literal</i> |
| | b. Sweat dripped from his face.
His face dripped with sweat. | <i>Hyperbole</i> |
| | c. ?Sarcasm dripped from his voice.
His voice dripped with sarcasm. | <i>Metaphor</i> |
| | d. ?Crazy ideas reeled in his head.
His head reeled with crazy ideas. | |
| | e. ?Emotion burned on his face.
His face burned with emotion. | |

One may question, however, whether these data only have to do with the literal/metaphorical distinction. Hoeksema (2009:9-10) argues that it is not sufficient to say that (57b) below has a metaphorical interpretation when it comes to why some verbs tend to be acceptable in both variants with some (locative) subjects but not others (true locatives vs. other subjects). Hoeksema (2009:9-10) uses the examples below and further states that if we say that his voice is some metaphorical location in (57a), it is not entirely clear why (57b) does not support the same metaphor. Thus, one might argue that it is "too simple" merely stating that one of the variants in an example of the alternation is not acceptable or sounds odd because it is a sentence with more literal or metaphorical meaning. It should be noted, however, that Dowty (2000) does not use literal vs. metaphorical as an explanation per se, as it merely is an observation he has made.

- | | |
|------|---|
| (57) | a. His voice was dripping with sarcasm.
b. *Sarcasm was dripping from his voice.
c. Blood was dripping from his face. |
|------|---|

An alternative to understand what is going on here is connected to how verbs, in their literal meanings, may impose semantic restrictions (selection restrictions) on their "Agent" argument (This observation is due to C. Wilder (p.c.)). It may be the case that the metaphoric meanings contain some kind of transfer of properties from the literal verb meaning (incl. selection restrictions) to the "Agent" (and maybe the "Location" argument). Again referring to example (57) above, in its literal sense (57c), *drip* denotes a particular manner of (physical) motion of a LIQUID to/from a (physical) LOCATION. Metaphoric *drip* imposes 'liquidness' to *sarcasm* and the property of being a physical location to *his voice*. Obviously, sarcasm is abstract, not [+concrete, +liquid]; and a voice is not a physical location. The L-subject version of (57b) is much better, as exemplified in (57a).

With regard to the effects of the L-subject frame in terms of literal vs metaphorical sentences, one might hypothesise that the L-subject sentence frame in some way affects

or alters the verb's selection restrictions. Perhaps *drip* does not force a 'liquid' meaning if its AGENT is in a *with*-phrase? And perhaps *drip* does not force a physical location meaning on its LOCATION argument if it is realised as subject? Although it is difficult to reach a definite conclusion, this is one way of considering the effects of the L-subject frame.

3.4 Interim Summary

The *swarm* alternation is, as illustrated in the preceding discussion, an alternation between the A-subject frame NP1 V PP_{Loc} *in/on* NP2 and the L-subject frame NP2 V PP_{with} NP1. The verbs involved in the alternation are largely atelic intransitive verbs of five semantic classes denoting perceptually simple activities recognizable from temporally and spatially limited input, i.e. they denote (literal as well as metaphorical) activities/events that are easily and/or immediately perceptible to our senses. The L-subject variant, which is the more "special" frame, is generally associated with a 'holistic' interpretation/effect, though, a holistic effect of a different nature than that of the *spray/load* alternation. It has also been established that the L-subject variant is more suited for metaphors than the A-subject variant, and furthermore that there are some specific restrictions associated with the *with*-phrase NP in the L-subject variant, i.e. it must be a bare plural or a mass term. Based on the fact that this restriction does not seem to characterise any other types of *with*-phrases, there are compelling grounds for arguing that this restriction is unique to the SwarmAlt *with*-phrase, and followingly, that the *with*-phrase acts as a kind of unique 'signature' for (the various guises of) the marked variant of SwarmAlt. All the observations briefly summarised above, though especially the *with*-phrase as a SwarmAlt signature, will be central to the discussion in the next chapter discussing the *swarm* alternation in Norwegian.

4. The *Swarm* Alternation in Norwegian, and Comparison with English

The main focus in this chapter is to explore the Norwegian *swarm* alternation with regard to some of the main results of previous research on English SwarmAlt presented in the preceding chapter (e.g. Levin (1993); Dowty (2000); Rowlands (2002)). To my knowledge, the *swarm* alternation has not been formally investigated in depth in Norwegian. First of all, this means that the basic syntactic structure of the alternation is not yet established, and establishing the basic syntactic pattern is in focus in the first part of the chapter. I will first present and argue that Norwegian has a special *det*-subject sentence pattern for the marked SwarmAlt variant (Wilder, 2018b), which is not found in English (section 4.1). However, I will also show that some verbs also allow a second marked pattern, which is similar to the L-subject pattern in English SwarmAlt (section 4.2). I will also show that similar verbs and/or verb classes as in English SwarmAlt are found in Norwegian SwarmAlt (section 4.5). Other SwarmAlt characteristics will also be presented and discussed, such as the holistic effect and atelic nature of the verbs (section 4.3); the optional/obligatory status of the arguments (section 4.4); the literal vs. metaphorical meaning distinction (section 4.6), as well as how the Norwegian marked variants express the "Agent" in a PP with a special preposition, like English, and that the PP in the marked variant(s) show a similar restriction on its NP (section 4.7).

In addition to exploring Norwegian SwarmAlt with regard to some of the main results of previous research on the *swarm* alternation in English, I will present some new data in section (4.8), regarding VPs expressing directed motion which seem to be SwarmAlt cases involving directional PPs in Norwegian (Wilder, 2018b). English and Norwegian SwarmAlt generally involve locative PPs. and although there are some differences between these directed motion VPs and other SwarmAlt cases, there are reasons to argue that they belong to SwarmAlt. As the discussion in section (4.8) will show, the SwarmAlt instances of directed motion are however only found in the *det*-subject pattern and not in the L-subject pattern, and they are moreover not found in English, except with 'weather expressions' (Wilder, 2019). Finally, in the last subsection (4.9), I will discuss whether SwarmAlt is an unergative/unaccusative alternation.

4.1 The *Det*-subject Pattern

In this section I will introduce the impersonal *det*-subject pattern as well as propose the idea that this pattern is a Norwegian marked variant of SwarmAlt. Based on the widespread occurrence of sentences such as in (58) below, there is reason to question whether the structure of Norwegian SwarmAlt is as illustrated in (59), and especially whether the *det*-subject pattern is a special marked pattern specific to SwarmAlt in Norwegian, which should be added as a new, separate type to the list of previously recognised *det*-sentence types presented in (2.6).

- (58) a. Kakerlakker kravlet rundt overalt på kjøkkenet. (A-subject)
Cockroaches crawled around everywhere in kitchen.the
'Cockroaches crawled everywhere in the kitchen'
- b. Det kravlet av kakerlakker overalt på kjøkkenet. (Det-subject)
It crawled of cockroaches everywhere in kitchen.the
'The kitchen was crawling with cockroaches'
- c. Det blomstrer av/med blåklokker i enga.
It blooms by/with bluebells in field.the

- 'The field is blooming with bluebells'
 d. ??Kjøkkenet kravlet av kakerlakker. (L-subject)
Kitchen.the crawled by cockroaches
 'The kitchen crawled with cockroaches'
 e. *It crawled with cockroaches in the kitchen.

- (59) a. NP1 V PP_{Loc} (i/på...) NP2 (A-subject variant)
 b. det V PP_{av/med} NP1 PP_{Loc} NP2 (Det-subject variant)

The syntactic pattern of the unmarked A-subject variant (58a) in Norwegian is similar to that of English, involving mostly the locative prepositions *i* (in) and *på* (on). However, it appears that in the corresponding Norwegian alternation, the marked variant illustrates an impersonal sentence pattern (58b) rather than an L-subject pattern, in which the subject is the expletive *det* and the agent occurs most often in a PP headed by *av* (of/by) (Wilder, 2018b). The *av*-phrase corresponds to the subject in the A-subject sentence (i.e. 'Agent'), though in some cases, the PP can be headed by *med* (with) (58c) instead of *av* (of/by). In the L-subject variant in English SwarmAlt on the other hand, the preposition *with* is consistently used.

Sveen (1996) also includes the impersonal sentence pattern illustrated above in his characterisation of impersonal sentences in Norwegian, within "the perceptive construction". Sveen (1996) moreover notes some special characteristics regarding this type of impersonal sentence, however, I would argue that this pattern should be distinguished from all the impersonal sentence patterns introduced in (2.6), even type 3 (weather verbs) and type 4 (the perceptive construction). There is no extraposed subject clause (type 1) or postverbal subject NP (type 2), however there is a (mostly obligatory) *av*-PP expressing the external argument of the verb (This observation is due to C. Wilder (p.c.)). The latter fact contrasts with type 3 (weather verbs) as well as type 4 (the perceptive construction). Although it belongs to the perceptive construction/class, it should be recognised as a separate impersonal (sub)pattern, giving rise to a type 5 impersonal construction termed e.g. "the SwarmAlt pattern". The contrast between "the SwarmAlt pattern" with the *av/med*-PP and other impersonal constructions, especially those of type 3 and 4, will however be discussed more thoroughly in the section "Optionality" (4.4).

The *av*-PP in the *det*-subject (SwarmAlt) pattern furthermore bears a lot of resemblance to *det*-passives formed from intransitive verbs in Norwegian, which also has a *det*-subject and (sometimes) expresses the external argument in a PP headed by *av* (by) (This observation is due to C. Wilder (p.c.)). Even though both have a *det*-subject and the external argument in an *av*-phrase, the verb in the *det*-subject pattern is notably active in its form (i.e. no passive morphology), which in turn suffices to distinguish them. Furthermore, the verbs in the Norwegian pattern belong to the same meaning classes as English SwarmAlt (see section (4.5) "Norwegian SwarmAlt, verbs and verb classes" for further discussion) and the *av*-PP displays the same "signature" restriction as the English *with*-phrase, i.e. bare mass NP/bare plural NP (see section (4.7) "Restrictions on the *av/med*-PP").

All this taken together, make strong support for treating the *det*-subject pattern as (i) a special syntactic pattern in the Norwegian equivalent of SwarmAlt and (ii) a separate impersonal *det*-sentence type. Investigation of more sentences furthermore indicates

that the impersonal sentence pattern is repeatedly found in the marked variant in Norwegian. One may however question whether the same basic pattern as in the English marked variant (58d), where the location argument is realized as the subject, i.e. without the impersonal *det* subject, is possible in Norwegian as well. This will be investigated and discussed in the following section.

4.2 The Norwegian *Swarm* Alternation: three patterns rather than just two?

In this section I will start by introducing Norwegian L-subject sentences as it seems that some verbs allow for an L-subject variant similar to that of English. I will also discuss some apparent generalisations (e.g. some *SwarmAlt* cases allow only *det*-subject variant, others allow L-subject variant in addition to the *det*-subject variant, though no cases seem to allow only the L-subject variant). In the end, Hoeksema's (2009) observations on similar facts in other languages (e.g. Dutch and German) will be discussed.

The sentences below illustrate that Norwegian *SwarmAlt* allows an L-subject pattern equivalent to English where the location argument is realised as the subject, i.e. without the impersonal *det* subject. A Google string search indicates that the verb *glitre* (glitter) in (60b) is acceptable in the L-subject pattern.

- | | | |
|------|--|------------------------|
| (60) | a. Stjerner glitret på himmelen.
<i>Stars glittered on sky.the</i>
'Stars glittered in the sky' | (A-subject) |
| | b. Himmelen glitret av stjerner.
<i>Sky.the glittered by stars</i>
'The sky glittered with stars' | (L-subject) |
| | c. Det glitret av stjerner på himmelen.
<i>It glittered by stars on sky.the</i>
'The sky glittered with stars' | (<i>Det</i> -subject) |

However, as illustrated in (60c) the impersonal sentence pattern is still possible. Consequently, it seems that Norwegian *SwarmAlt* sometimes has a slightly more complex pattern involving three constructions, thereby allowing a three-way alternation with some verbs. The sentences in (60)-(62) illustrate that the verbs *glitre* (glitter), *gløde* (glow) and *blomstre* (bloom) in Norwegian are functional in a three-way alternation.

- | | | |
|------|--|--|
| (61) | a. Ildfluer glødet i enga.
<i>Fireflies glowed in field.the</i>
'Fireflies glowed in the field' | |
| | b. Enga glødet av ildfluer.
<i>Field.the glowed by fireflies</i>
'The field glowed with fireflies' | |
| | c. Det glødet av ildfluer i enga.
<i>It glowed of fireflies in field.the</i>
'The field glowed with fireflies' | |
| (62) | a. Blåklokker blomstrer i enga.
<i>Bluebells are blooming in field.the</i>
'Bluebells are blooming in the field' | |
| | b. Enga blomstrer av/med blåklokker. | |

- Field.the is blooming by/with bluebells*
 'The field is blooming with bluebells'
 c. Det blomstrer av/med blåklokker i enga.
It is blooming by/with bluebells in field.the
 'The field is blooming with bluebells'

A three-way alternation does not, however, seem to be productive with most of the Norwegian verbs, since in a majority of instances where the verb alternates it is the impersonal sentence pattern which is (most) acceptable. It thus seems like Norwegian sometimes allows for an alternation between the A-subject variant and only the *det*-variant, whereas other times a three-way alternation including the L-subject variant is possible.

Although a three-way alternation pattern has not been noted for English SwarmAlt, similar observations have been made in other languages. The Norwegian data seems more compatible with what Hoeksema (2009) notes about languages such as Dutch and German. In Dutch, verbs appearing in a marked variant similar to that of English is also possible (63b), however, the impersonal sentence pattern (63c) is more common/productive (Hoeksema, 2009:4-5). As stated by Hoeksema (2009:4), Salkoff (1983) lists hundreds of verbs appearing in the L-subject variant in English, whereas Dutch is nowhere near that amount of verbs appearing in the L-subject variant. According to Hoeksema (2009:5), this is not however because there is a lack of verbs in relevant classes in Dutch, but rather that the L-subject-construction is simply not as productive in Dutch as in English.

- | | | |
|------|--|------------|
| (63) | a. Mieren kroelen in de keuken.
<i>Ants crawl in kitchen</i>
'Ants are crawling (in large numbers) in the kitchen' | A-subject |
| | b. De keuken krioelt van de mieren.
<i>Kitchen crawls with ants</i>
'The kitchen is crawling with ants' | L-subject |
| | c. Het krioelt van de mieren in de keuken.
<i>It crawls with ants in kitchen</i>
'The kitchen is crawling with ants' | Impersonal |

It thus seems that whenever the verb alternates, the *det*-variant is always acceptable, except with a few slightly unnatural sounding metaphorical *det*-sentences (see section (4.6)), whereas the L-subject pattern is only acceptable in some instances. In turn this serves to further suggest that although Norwegian has two marked SwarmAlt patterns, the *det*-variant is the most productive one. In the next section I will turn to the discussion of telicity and holistic effect in Norwegian SwarmAlt.

4.3 Telicity and 'Holistic Effect' in Norwegian SwarmAlt

Although the holistic effect in the L-subject pattern in English SwarmAlt is already fortified, this should not be taken for granted when investigating the phenomenon crosslinguistically. Since it also seems as if Norwegian SwarmAlt involves two marked patterns, the holistic effect should be investigated in both. This section followingly focuses on illustrating and arguing that the holistic effect is only found in (most) L-

subject sentences, as in English, and not in the *det*-subject sentences, as well as illustrating and arguing that Norwegian SwarmAlt verbs, like English, are atelic.

4.3.1 The 'Holistic Effect'

Looking at the Norwegian data more closely, there is one observation which seems absolute certain in my opinion; that the holistic interpretation/effect is more present in the instances where Norwegian allows for a marked variant similar to English than in the impersonal sentence pattern. In the L-subject sentences exemplified in (64) below there is no doubt about the holistic effect. Whereas the A-subject variant in (64a) denotes that there are a few diamonds that are glittering on the ring and (64b) some fireflies are glowing in the field, their L-subject variants entail that the ring is covered with glittering diamonds and the field is full of (glowing) fireflies.

- | | | |
|------|---|---|
| (64) | <p>a. Diamanter glitret på ringen.
<i>Diamonds glittered on ring.the</i>
'Diamonds glittered on the ring'</p> <p>b. Ildfluer glødet i enga.
<i>Fireflies glowed in field.the</i>
'Fireflies glowed in the field'</p> <p>c. Såpe skummet i badekaret.
<i>Soap foamed in bathtub.the</i>
'Soap foamed in the bathtub'</p> | <p>Ringen glitret av diamanter.
<i>Ring.the glittered by diamonds</i>
'The ring glittered with diamonds'</p> <p>Enga glødet av ildfluer.
<i>Field.the glowed by fireflies</i>
'The field glowed with fireflies'</p> <p>Badekaret skummet av/med såpe.
<i>Bathtub.the foamed by/with soap</i>
'The bathtub foamed with soap'</p> |
|------|---|---|

The *det*-variant sentences in (65) with the same verbs on the other hand, do not seem to illustrate the holistic effect. The *det*-subject sentences do not "force" the reading that the entire location is affected as in L-subject sentences. Since there is no such restriction in the A-subject sentences, this furthermore means that the *det*-subject sentences behave more like A-subject sentences in this respect. It might be the case that this is connected to these verbs only, however, looking at other verbs in the *det*-variant (e.g. *summe* (buzz), *frese* (sizzle)), it becomes clear that this seems to be the case with most of the *det*-variant sentences. It appears very clear that all of the *det*-variant sentences denote distribution to some of (the sub-portions of) the surface (following Dowty's (2000) characterization), whereas arriving the conclusion that e.g. *the ring* in (65a) has diamonds glittering in most or all parts of it, is less clear.

- | | |
|------|--|
| (65) | <p>a. Det glitret av diamanter på ringen.
<i>It glittered by diamonds on ring.the</i>
'The ring glittered with diamonds'</p> <p>b. Det glødet av ildfluer i enga.
<i>It glowed by fireflies in field.the</i>
'The field glowed with fireflies'</p> <p>c. Det skummet av såpe i badekaret.
<i>It foamed by soap in bathtub.the</i>
'The bathtub foamed with soap'</p> |
|------|--|

4.3.2 Telicity

Testing whether VPs are (a)telic in Norwegian can be done with the temporal PPs *i* (in) x time e.g. *i en time* (for an hour) for atelic events and *på* (on) x time e.g. *på en time* (in

an hour) for telic events (Tungseth, 2005:150). Just as English SwarmAlt involves atelic verbs/VPs, the application of the “*in-for* test” in the sentences in (66) below shows that Norwegian SwarmAlt also involves atelic VPs.

- | | | |
|------|---|--------|
| (66) | a. Bier svermet i hagen (*på en time.)
<i>Bees swarmed in garden.the on an hour</i> | telic |
| | b. Det svermet av bier i hagen (*på en time).
<i>It swarmed by bees in garden.the on an hour</i> | |
| | c. Bier svermet i hagen (i en time).
<i>Bees swarmed in garden.the in an hour</i>
'Bees swarmed in the garden (for an hour)' | atelic |
| | d. Det svermet av bier i hagen (i en time).
<i>It swarmed by bees in garden.the in an hour</i>
'The garden swarmed with bees (for an hour)' | |

Although Dowty states that verbs associated with swarm alternation are atelic, there are instances in Norwegian, which seems to be SwarmAlt cases, where the verbs are potentially telic based on involving a directional PP instead of a PPLoc (Wilder (2018b); Wilder (2019)). Whether these VPs function as telic VPs, and whether these data should be regarded as part of the same phenomenon more generally, will be further investigated and discussed in section (4.8) “SwarmAlt with verb phrases denoting directed motion”.

4.4 Optionality

In this section I will discuss the relation between other *det*-sentence types, though especially type 4 (Sveen’s (1996) ‘perceptive construction’ e.g. *det banker på døra*) and the SwarmAlt type, focusing mostly on the fact that even though the *av*-PP often is optional, it is always possible in SwarmAlt, unlike type 4. A reason for discussing the *av/med*-PP more thoroughly is also that it seems to be quite analytically important in that it can be argued to be a “signature” for (Norwegian) SwarmAlt. Comparing instances which bear a lot of resemblance to SwarmAlt in Norwegian points in the direction that Norwegian SwarmAlt and the *av/med*-PP belong together. One of the main arguments for this is connected to the observation that the *av/med*-PP does not seem to occur in the same manner anywhere else in the grammar (This observation is due to C. Wilder (p.c.)). The fact that the *av/med*-PP usually does not appear in/work in the following cases makes it look very important in the context of SwarmAlt.

Passivisation in Norwegian (especially impersonal passives):

- | | |
|------|--|
| (67) | a. Det ble danset (*av folk).
<i>It was danced by people</i>
'People were dancing' |
|------|--|

Other impersonal constructions connected to SwarmAlt by Sveen’s (1996) characterization, (cf. “the perceptibility construction”):

- | | |
|------|---|
| (68) | a. Det banker (*av/med folk) på døra.
<i>It knocks by/with people on door.the</i>
'Someone is knocking on the door' |
|------|---|

- b. Det går (*av/med folk) i trappa.
It walks by/with people in stairs.the
 `People are walking on the stairs’
- c. Det regner (*av/med regn).
It rains by/with rain
 `It is raining’

Though it is possible to omit the *av/med*-PP in a number of Norwegian SwarmAlt cases, it is nearly always present and its presence is nevertheless never unacceptable. Thus, whereas the *av/med*-PP is nearly always present in SwarmAlt in Norwegian (similar to the *with*-PP in English), the seemingly related constructions above most often prefer to not include it, or it is not acceptable.

Rowlands (2002) notes that the *with*-PP in the English L-subject variant is usually always obligatory. The Norwegian SwarmAlt data also illustrate a similar pattern. However, considering the fact that Norwegian seems to have two marked patterns, the data also look slightly different. As in English, the (locative) *i/på*-PP in the A-subject variant is not obligatory, though often habitually included (69a-b). Where the *av/med*-PP seems most resistant to omission is with some verbs that figure in the L-subject construction (70a-b), yet L-subject constructions with other verbs seem to be perfectly fine without it. Consider (70a-b) vs. (70c):

- | | | |
|------|---|-----------|
| (69) | a. Stjerner blinket (på himmelen).
<i>Stars twinkled on sky.the</i>
`Stars were twinkling (in the sky)’
b. Såpe skummet (i badekaret).
<i>Soap foamed in bathtub.th</i>
`Soap was foaming (in the bathtub)’ | A-subject |
| (70) | a. Himmelen blinket ?(av...).
<i>Sky.the twinkled by...</i>
`The sky was twinkling ?(with...)’
b. Badekaret skummet ?(av/med...).
<i>Bathtub.the foamed by/with...</i>
`The bathtub was foaming ?(with...)’
c. Enga gløder (av...).
<i>Field.the glows by...</i>
`The field is glowing (with...)’ | L-subject |

When it comes to the *det*-variant on the other hand, it seems to be the case that the *av/med*-PP can be omitted in almost all sentences:

- (71) a. Det glitret (av stjerner) på himmelen.
It glittered by stars on sky.the
 `The sky was glittering (with stars)’
 b. Det skummer (av/med såpe) i badekaret.
It foams by/with soap in bathtub.the
 `The bathtub is foaming (with soap)’

The instances where omission of the *av/med*-PP in the *det*-variant sounds slightly odd are with the verbs *kravle* (crawl), *kry* (crawl/teem), *sverme* (swarm):

- (72) a. Det kryr/kravler/svermer ?(av...) i hagen.
It crawls/teems/swarms by... in garden.the
 'The garden crawls ?(with...)'

With regard to the directed motion verbs, however, which will be presented and discussed in section (4.8.1) though illustrated in (73) below, it is completely unacceptable to omit the *av/med*-PP in all the *det*-variant examples.

- (73) a. Det renner inn *(av våpen og soldater) til landet.
It pours in by weapons and soldiers to country.the
 'Weapons and soldiers are pouring into the country'
 b. Det strømmer inn *(med medlemmer) til treningscenteret.
It floods in with members to gym.the
 'Members are flooding into the gym'
 c. Det har flommet inn *(av/med forslag) til redaksjonen.
It has flooded in by/with suggestions to editorial office.the
 'Suggestions have flooded into the editorial office'
 d. Det laver ned *(med snø).
It pours down with snow
 'It has poured down *(with snow)'

One way of thinking about the instances wherein the *av/med*-PP is optional has to do with how verbs generally have variable behaviour, and thus fall into different classes. This is seen in many instances, e.g. the different verbs associated with the different types of impersonal actives/constructions as noted by Sveen (1996). For instance, type 4 and what I have proposed as a new type 5 (SwarmAlt) impersonal actives are both part of 'the perceptive construction' in Sveen (1996), but they also portray characteristics which distinguish them. Type 4 involves alternation between NP + V and *det* + V and does not include the signature PP, and type 5 is the SwarmAlt pattern which most often, though optional with certain verbs, includes the signature *av/med*-PP. Certain verbs can enter each type, but whereas some *swarm* verbs can enter type 4, the verbs associated with type 4 cannot necessarily enter *swarm*. This can moreover be affecting the optionality of the *av/med*-PP with some *swarm* verbs, in the way that the *swarm* verbs wherein the *av/med*-PP is optional, optionality may be affected by (possibly) being able to enter type 4.

This might especially be part of explaining why the *av/med*-PP is possible to omit in most of the *det*-instances of SwarmAlt. If the *av/med*-PP is omitted in SwarmAlt examples of the *det*-variant, they look a lot like type 4. Compare type 4 (74a-b) and type 5 (SwarmAlt) where the *av/med*-PP (74c-d) is omitted:

- | | | |
|------|---|--------|
| (74) | a. Det går i trappa.
<i>It walks in stairs.the</i>
'Someone is walking in the stairs' | Type 4 |
| | b. Det banker på døra.
<i>It knocks on door.the</i>
'Someone is knocking on the door' | Type 4 |
| | c. Det skummer i badekaret.
<i>It foams in bathtub.the</i> | Type 5 |

'The bathtub is foaming'
d. Det bobler i kjelen.
It bubbles in pot.the
'The pot is bubbling'

Type 5

4.5 Norwegian SwarmAlt, Verbs and Verb Classes

The following section focuses specifically on verbs and verb classes, wherein the intent is to investigate whether the (non)alternating verbs are the same in English and Norwegian and whether the classes in the English L-subject construction identified by Dowty (2000) also figure in the Norwegian construction(s). Below I will illustrate that the verb classes that figure in English SwarmAlt also figure in Norwegian, and that verbs allowing A-subject only and L-subject only also appear to be the same in the two languages.

As already stated, Dowty (2000:115-116) has identified five semantic classes associated with the English L-subject construction, which are almost all exclusively of one-place process/activity verbs describing activities that are perceptually simple and usually recognizable from limited input, temporally and spatially. Since Dowty (2000) focuses on alternating verbs in his list of verb classes, I will focus on Dowty's (2000) classes for the alternating verbs and Levin's (1993:53) groups of non-alternating verbs (*bulge* verbs and *herd* verbs).

Examining the five classes of verbs identified by Dowty (2000) in English, the sentences below illustrate that the same classes of alternating verbs are also found in Norwegian, thereby suggesting that despite some apparent structural differences, English and Norwegian SwarmAlt have several similarities, including the classes of alternating verbs. In addition it is interesting to note that (i) the sentences further illustrate that Norwegian SwarmAlt is functional in a three-way alternation and (ii) they all appear to involve literal meanings of the verb, rather than hyperbole/metaphor.

Verbs of perceptually simple light emission:

- (75) a. Ildfluer glødet i enga.
Fireflies glowed in field.the
'Fireflies glowed in the field'
b. Enga glødet av ildfluer.
Field.the glowed by fireflies
'The field glowed with fireflies'
c. Det glødet av ildfluer i enga.
It glowed by fireflies in field.the
'The field glowed with fireflies'

Verbs of perceptually simple sounds:

- (76) a. Vann bobler i kjelen.
Water is bubbling in pot.the
'Water is bubbling in the pot'
b. Kjelen bobler av/med vann.
Pot.the is bubbling by/with water
'The pot is bubbling with water'

- c. Det bobler av/med vann i kjelen.
It bubbles by/with water in pot.the
 'The pot is bubbling with water'

'Small scale' visually recognizable physical movements:

- (77) a. Vann drypper fra taket.
Water is dripping from roof.the
 'Water is dripping from the roof'
 b. Taket drypper av vann.
Roof.the is dripping by water
 'The roof is dripping with water'
 c. Det drypper av vann fra taket.
It is dripping by water from roof.the
 'The roof is dripping with water'

Smells:

- (78) a. (Lukten av) hvitløk oste av ånden hans.
Smell.the of garlic reeked of his breath
 '(The smell of) garlic reeked on his breath'
 b. Ånden hans oste av hvitløk.
His breath reeked by garlic
 'His breath reeked with garlic'
 c. Det oste av hvitløk fra ånden hans.
It reeked by garlic from his breath
 'His breath reeked with garlic'

Degree of occupancy/abundance:

- (79) a. Fisk florerer i elva.
Fish abound in river.the
 'Fish abound in the river'
 b. ?Elva florerer av fisk.
River.the abounds by fish
 'The river abounds with fish'
 c. Det florerer av fisk i elva.
It abounds by fish in river.the
 'The river abounds with fish'

The examples in (80)-(81) are Norwegian equivalents of English non-alternating *swarm* verbs, illustrating that it also seems that the non-alternating verbs are the same in English and Norwegian.

A-subject variant only:

- (80) a. People are gathering in the hall.
 b. *The hall is gathering with people.
 c. Mennesker samles i hallen.
People gathers in hall.the

- 'People are gathering in the hall'
- d. *Hallen samles med mennesker.
Hall.the gathers with people
- e. *Det samles av mennesker i hallen.
It gathers with people in hall.the

L-subject variant only:

- (81) a. *People are seething in the square/street.
b. The square/street is seething with people.
c. *Liv syder på torget/i gata.
Life seethes on square.the/in street.the
d. Torget/gatene syder av liv.
Square.the/streets.the seethe by life.
'The square/street is seething with life'
e. Det syder av liv på torget/i gatene.
It seethes by life on square.the/in streets.the
'The square/street is seething with life'

With the verb *crawl* however, there might be something interesting going on. As with the verb *swarm*, the verb *crawl* is often used in examples of the English *swarm* alternation. When it comes to its meaning in Norwegian, there seems to be at least two possible translations in Norwegian, *kravle* and *kry*, which in English is captured within the same word, and the sentences in (83)-(84) below illustrate that they furthermore show different patterning. Hoeksema (2009:5) states that the verb *crawl* in English can be viewed both as a verb of motion and as a verb of abundance and that it is reasonable to suppose that the abundance interpretation is associated with the total affectedness (holistic) interpretation. This makes sense when looking at equivalent Norwegian sentences. Whereas the A-subject sentence with *crawl* in English seems to translate best to *kravle* in Norwegian, which seems to be more of a pure motion verb, the L-subject sentence translates best to the verb *kry*, which is more a verb of abundance. I will however leave open for further research whether this is connected to why the L-subject variant of *kravle* and the A-subject variant of *kry* sounds slightly odd, as illustrated in (83)-(84) below.

- (82) a. Cockroaches are crawling in the garden.
b. The garden is crawling with cockroaches.
- (83) a. Kakerlakker kravler i hagen.
Cockroaches crawl in garden.the
'Cockroaches are crawling in the garden'
b. ??Hagen kravler av kakerlakker.
Garden.the crawls by cockroaches
- (84) a. ?Kakerlakker kryr i hagen.
Cockroaches teem in garden.the
b. Hagen kryr av kakerlakker.
Garden.the crawls by cockroaches
'The garden is crawling with cockroaches'

4.6 The Literal / Metaphorical meaning distinction in Norwegian SwarmAlt

One of the characteristics of the *swarm* alternation according to Dowty (2000:119) is that the L-subject variant in English is more suited for metaphorical expressions than the A-subject variant. When it comes to the Norwegian data, which I will suggest in this section, the L-subject variant seems more suited for metaphorical expression in Norwegian as well, whereas the *det*-variant is less so.

What the examples in (86)-(87) illustrate is that, as in English (85), the L-subject variant in Norwegian *swarm*-type sentences also seems to be more suitable for metaphors than the A-subject variant. Regarding metaphorical sentences in the *det*-subject variant on the other hand, they sometimes come across as slightly unnatural (87c), though other times they seem completely acceptable (86c).

- (85) a. ?/*Fury blazed in his eyes (Rowlands, 2002:19).
b. His eyes blazed with fury.
c. ?/*Joy danced in her eyes (Rowlands, 2002:19).
d. Her eyes danced with joy.
- (86) a. ?Glede glitret i øynene hennes.
Joy glittered in eyes.the hers
b. Øynene hennes glitret av glede. (web example)
Eyes.the hers glittered by joy
'Her eyes glittered with joy'
c. Det glitret av glede i øynene hennes.
It glittered by joy in eyes.the hers
'Her eyes glittered with joy'
- (87) a. ?Glede danset i øynene hennes.
Joy danced in eyes.the hers
b. Øynene hennes danset av glede. (web example)
Eyes.the hers danced by joy
'Her eyes danced with joy'
c. ?Det danset av glede i øynene hennes.
It danced by joy in eyes.the hers

Some instances however, such as with the verb *syde* (seethe), show very clearly that the L-subject variant is more suited for metaphorical expressions than the A-subject variant in Norwegian as well. A more metaphorical L-subject sentence with *syde* (seethe) is acceptable (88c), whereas an L-subject sentence with *syde* (seethe) in a more literal sense (88b) sounds somewhat unnatural.

- (88) a. *Liv syder på torget/i gata.
Life seethes on square.the/in street.the
b. ??Torget/gata syder av mennesker.
Square.the/street.the seethes by people.
'The square/street is seething with people'
c. Gatene syder av liv.
Streets.the seethe by life
'The streets are seething with life'

In addition to confirming that a pattern similar to that of the English L-subject variant is repeatedly found in Norwegian, the tendency of the L-subject variant in Norwegian SwarmAlt to be more suited for metaphorical expressions represents yet another English-Norwegian similarity.

4.7 Restrictions on the *av/med* (by/with) PP in the Marked Variant

The aspect in focus in this section is connected to limitations observed for the English *with*-phrase in the L-subject variant as observed by Dowty (2000). Below I will moreover illustrate and argue that both the L-subject and *det*-subject sentences in Norwegian show the same ('signature') restriction on the NP in their *av*-PP.

Restrictions on the *with*-phrase in the L-subject variant is connected to how the NP in the *with*-PP must be a bare plural or mass term (Dowty, 2000:117), and by looking at sentences like those exemplified in (89)-(91) below, one can see that the object of *with* must be a bare plural or a mass term in Norwegian as well.

- (89) a. Det kravlet av kakerlakker/*en kakerlakk/*kakerlakkene på veggen.
It crawled by roaches/a roach/roaches.the on wall.the
 b. Veggen kravlet av kakerlakker/*en kakerlakk/*kakerlakkene.
Wall.the crawled by roaches/a roach/a thousand roaches/roaches.the
 Both: 'The wall crawled with cockroaches/*a cockroach/*the cockroaches'
- (90) a. Himmelen glitret av stjerner/*en stjerne/*et tusen stjerner/*stjernene
Sky.the glittered by stars/a star/a thousand stars/stars.the
 b. Det glitret av stjerner/*en stjerne/*et tusen stjerner/*stjernene på himmelen.
It glittered by stars/a star/stars.the on sky.the
 Both: 'The sky glittered with stars/*a star/*a thousand stars/*the stars'
- (91) a. Badekaret skummet av såpe/*mye såpe/*såpen
Bathtub.the foamed by soap/a lot of soap/soap.the
 b. Det skummet av såpe/*mye såpe/*såpen i badekaret.
It foamed by soap/a lot of soap/soap.the in bathtub.the
 Both: 'The bathtub was foaming with soap/*a lot of soap/*the soap'

On the other hand, since there are two marked patterns of SwarmAlt in Norwegian, it is also necessary to check whether there are any differences concerning this restriction in both L-subject and *det*-subject sentences. The *det*-subject sentences above illustrate that the same requirement as for the NP in the *av/med*-PP in the L-subject variant also applies to the *det*-subject variant. Thus, the *av/med*-PP in Norwegian SwarmAlt too contains the *with*-PP 'signature' property associated with English SwarmAlt. This signature property is moreover central to what will be discussed in the following section, regarding SwarmAlt with verb phrases denoting directed motion.

4.8 SwarmAlt with Verb Phrases denoting Directed Motion

In this section I will introduce the (directed motion) pattern 'it + V + directional PP + *with*-Agent' in both Norwegian (4.8.1) and English (4.8.2), although it is notably far more restricted in English than in Norwegian. I will furthermore illustrate that in both languages, it alternates with the A-subject pattern, as well as illustrate that the *av/med* / *with*-PP has the 'signature' property associated with SwarmAlt.

4.8.1 Directed Motion Verbs in Norwegian SwarmAlt: does Norwegian SwarmAlt involve Locational as well as Directional PPs?

It has already been noted that Norwegian SwarmAlt, as well as English, involve manner of motion verbs describing individual AGENTS which change location (non-directed motion) in a certain manner within a larger LOCATION, and the AGENT argument is in the bare plural (e.g. a collection of individuals). The verbs *kravle* (crawl), *kry* (crawl/teem) and *sverme* (swarm) are relevant examples in both English and Norwegian, where both the unmarked and marked variant involve denotation of non-directed motion. However, in the unmarked variant the verb can also be used in a directed motion frame (92b) (Wilder, 2019).

- (92) a. Det kravlet av kakerlakker overalt (på kjøkkenet). *Det*-variant
It crawled by cockroaches everywhere (in kitchen.the)
'The kitchen crawled with cockroaches'
- b. Kakerlakker kravlet inn i kjøleskapet. A-subject variant
Cockroaches crawled in in fridge.the
'Cockroaches crawled into the fridge'

In the example sentences in (92) above a directed motion frame is only possible in the A-subject variant. There are, however, instances with directed motion verbs in both the A-subject and *det*-subject variant in Norwegian, which look like SwarmAlt sentences (Wilder (2018b); Wilder (2019)). These instances make it possible to furthermore pose the question whether Norwegian SwarmAlt also (can) involve directional PPs expressing directed motion, i.e. (telic) V + PP_{DIR} instead of (atelic) V + PP_{LOC}. Consider the following sentences from Wilder (2018b) with *renne inn* (pour in), *flomme inn* (flood in), *strømme inn* (stream in) and *lave ned* (pour down):

- (93) a. Våpen og soldater renner inn til/i landet.
Weapons and soldiers pours in to/in country.the
'Weapons and soldiers are pouring into the country'
- b. Det renner inn av våpen og soldater til landet.
It pours in by weapons and soldiers to country.the
'Weapons and soldiers are pouring into the country'
- (94) a. Nye medlemmer har strømmet inn til treningssenteret.
New members are flooding in to gym.the
'New members have been flooding into the gym'
- b. Det har strømmet inn av/med nye medlemmer til treningssenteret.
It has flooded in by/with new members to gym.the
'New members have been flooding into the gym'
- (95) a. Forslag har flommet inn til redaksjonen.
Suggestions have flooded in to editorial office.the
'Suggestions have flooded into the editorial office'
- b. Det har flommet inn med forslag til redaksjonen.
It has flooded in with suggestions to editorial office.the
'Suggestions have flooded into the editorial office'
- (96) a. Snø og sludd laver ned i gatene.
Snow and sleet pours down in streets.the
'Snow and sleet is pouring down in the streets'

- b. Det laver ned med snø og sludd i gatene.
It pours down with snow and sleet in streets.the
 'It is pouring down with snow and sleet in the streets'

The verbs in these sentences involve AGENTS (or mass/substance) which change their location in a directed motion manner and describe an event involving an "unquantified" AGENT, though often seem to lack a PP denoting a larger LOCATION (Wilder, 2019). Furthermore, in their basic use all these particular verbs are telic. They describe (directed) motion of an AGENT along a path to a specific GOAL, such as e.g. *medlemmer* (members) and *treningscenteret* (gym) in (94b) above. The path and goal are expressed in a complex directional PP which consists of two parts, a directional particle and a preposition (Tungseth, 2005:155), e.g. *ned i* (down in/to) + NP as in (96a) above. The GOAL can furthermore be left unexpressed, as shown in (97) below.

- (97) a. Snøen lavet ned (i gatene/til bakken).
Snow.the poured down in streets.the/to ground.the
 'Snow was pouring down (in the streets/to the ground)'
- b. Det lavet ned med snø (i gatene).
It poured down with snow in streets.the
 'It was pouring down with snow (in the streets)'
- c. Forslag har flommet inn (til redaksjonen).
Suggestions have flooded in to editorial office.the
 'Suggestions have flooded into the editorial office'
- d. Det har flommet inn med forslag (til redaksjonen).
It has flooded in with suggestions to editorial office.the
 'Suggestions have flooded into the editorial office'

On the other hand, it is not individual verbs but VPs/clauses that are (a)telic (Saeed, 2016:117). Thus, although these verbs are regarded as telic in their basic use, they can turn out to be atelic as a result of other elements in the sentence. In the relevant sentences the AGENT (the NP in the *av/med* PP), which denotes the individuals/substance undergoing the directed motion, is a 'bare plural' or 'bare singular mass noun', i.e. it is 'non-quantized'. Since a non-quantized argument may result in an atelic VP (98b), there is reason to assume that the relevant sentences will not be categorized as telic based on the *in/for*-test. The *in/for*-test in Norwegian shows that the relevant sentences do not pass the telicity test, i.e. they are atelic.

- (98) a. She wrote a poem (in 2 hours). telic
- b. She wrote poems (*in 2 hours / ok: for 2 hours). atelic
- c. Det lavet ned med snø (*på tre timer). telic
It poured down with snow on three hours
 'Snow was pouring down (*in three hours)'
- d. Det lavet ned med snø (i tre timer) atelic
It poured down with snow in three hours
 'Snow was pouring down (for three hours)'

As shown in (99) below, however, the L-subject variant which is acceptable with several SwarmAlt verbs in the non-directed motion frame, seems to be impossible with these (directed motion) verbs (Wilder, 2019). Although this could be taken as evidence to argue that these verbs do not necessarily alternate and are thus not part of SwarmAlt,

one could also argue that this is not a sufficient argument for disregarding them as part of the Norwegian SwarmAlt construction. First of all, they are all acceptable in the impersonal pattern, which is already established as a Norwegian SwarmAlt (marked) pattern, and they are all acceptable in the A-subject variant, i.e. they alternate in the same manner as most other Norwegian SwarmAlt verbs. Secondly, the verbs also seem to denote, though especially *lave ned* (pour down), “perceptually simple activities/events recognizable from temporally and spatially limited input” (Dowty, 2000:116). Furthermore, as illustrated in (100) below, they also contain the SwarmAlt (*av/med*-PP) signature. In addition, recall from section (4.4 ‘Optionality’) that it is completely unacceptable to omit the *av/med*-PP these cases. Combined with the fact that the *av/med*-PP seems to be a SwarmAlt signature, the fact that the *av/med*-PP is obligatory, is something that in my opinion, serves to strengthen the argument that these directed motion verbs cases should be considered part of SwarmAlt.

- (99) a. *Treningscenteret strømmer inn av/med nye medlemmer. L-subject
Gym.the streams in by/with new members
- (100) a. Det strømmer inn med medlemmer/*en medlem/*medlemmene
It floods in with members/a member/members.the
 b. Det lavet ned med snø/*snøen
It poured down with snow/snow.the
 ‘It was pouring down with snow/*the snow’

That the L-subject variant with the directed motion verbs does not work might be related to (i) the fact that the location in the A-subject and the *det*-variant sentences is a GOAL of a directional PP, and (ii) the observation that the sentences often seem to lack a PP denoting a larger LOCATION (Wilder, 2019). Although most of the sentences include a GOAL PP (complement inside the VP (cf. Tungseth (2005)) and often lack a PP denoting a larger LOCATION, it is possible to add a LOCATION PP (an adjunct adjoined to the VP), such as ‘Oslo’ in (101) below. It is now possible to create an L-subject ‘test sentence’ that is not the GOAL of the directional PP, however, as is shown in (101c) this sentence is not an acceptable sentence. The impossibility of the L-subject sentences with LOC as subject with directed motion verbs is of course an open question in need of an answer, however, that is something I will leave for future research.

- (101) a. Snø lavet ned (til bakken) i Oslo.
Snow poured down (to ground.the) in Oslo
 ‘Snow was pouring down (to the ground) in Oslo’
 b. Det lavet ned med snø i Oslo.
It poured down with snow in Oslo
 ‘It was pouring down with snow in Oslo’
 c. *Oslo lavet ned med snø.
Oslo poured down with snow

4.8.2 An English Version of the Norwegian *Det*-variant?

In Norwegian SwarmAlt, the most productive marked pattern seems to be the *det*-variant. English on the other hand, normally, has no possibility for sentences of the type ‘it VP PP_{with} NP_{AGENT} PP_{loc} NP_{LOCATION}’ (Wilder, 2019). The sentences in (102) illustrate that an impersonal *it*-variant in the located motion frame is not possible with what is regarded as typical *swarm* verbs in English. Some of the Norwegian sentences in the directed

motion frame presented above are exemplified for English in (103)-(104), illustrating that English does not seem to allow SwarmAlt with VPs denoting directed motion (Wilder, 2019). The sentences are acceptable in the A-subject pattern, but not in the L-subject variant (103b+104b) or an impersonal *it*-variant (103c+104c).

- (102) a. *It was swarming with bees in the garden.
b. *It was teeming with people in the streets.
- (103) a. Weapons and soldiers are pouring in / pouring into the country.
b. *The country is pouring (in) with weapons and soldiers.
c. *It is pouring (in) with weapons and soldiers in the country.
- (104) a. New members streamed in / into the gym.
b. *The gym streamed (in) with new members.
c. *It streamed (in) with new members into the gym.

There is one instance in English however, which looks like an argument alternation pattern, and the parallel with the Norwegian example with *lave ned* (pour down) above is striking (Wilder, 2019).

- (105) a. It poured down with rain (in London).
b. Rain poured down (in London)
- (106) a. It was pelting down with rain (in London).
b. Rain was pelting down (in London)
- (107) a. It was bucketing (down) with rain (in London).
b. Rain was bucketing down (in London)
- (108) a. It teemed (down) with rain (outside).
b. Rain was teeming down (in London)

The examples above portray English weather expressions, and whereas the (a)-sentences above illustrate the impersonal pattern similar to Norwegian *lave ned* (pour down) and Norwegian SwarmAlt more generally, the (b)-sentences illustrate that all of them are also possible as A-subject sentences. These also express directed motion, involving the structure '*it* V PP_{dir} PP_{with} NP' in the marked/expletive pattern. None of the weather expression instances has been referred to in the context of the *swarm* alternation before, yet it looks like an alternation pattern and moreover include the SwarmAlt (*with*-PP) signature (see below).

Though, as in the Norwegian example with *lave ned*, the L-subject variant of these sentences also seems to be impossible in English. This is illustrated in (109) below.

- (109) a. *London poured down with rain.
b. *London was pelting down with rain.

One may once again question if the absence of the L-subject construction with these verbs means that they should not be considered part of the SwarmAlt construction in English. I am proposing, however, that the directed motion verb cases should be regarded part of SwarmAlt. As with *lave ned* (pour down) in Norwegian all of the verbs figure in the A-subject form as well, and they contain the SwarmAlt (*with*-PP) signature, as illustrated in (110) below. I would also say that the verbs like e.g. *pour* in the examples above, like most *swarm* verbs in general, also denote "perceptually simple

activities/events recognizable from temporally and spatially limited input" (Dowty, 2000:116).

- (110) a. It poured down with rain/golf ball sized hailstones/*3 million litres of rain/*ten thousand hailstones

That they are acceptable in an impersonal pattern similar to Norwegian is however not an immediately apparent argument for considering them part of SwarmAlt in English, but it is important to take into account that Norwegian is not the only language which involves an impersonal SwarmAlt pattern. Several other languages other than Norwegian involve an impersonal SwarmAlt variant, e.g. German, Dutch and Czech (Hoeksema, 2009:2-3), in addition to an L-subject pattern. It might be the case that English too involves an hitherto not discovered and/or regarded impersonal SwarmAlt pattern, though in an extremely restricted manner. Such an argument especially makes sense considering the fact that expletives/impersonal constructions e.g. with expletive *it* in subject position is generally much more restricted in English, especially compared to Norwegian (and perhaps German and Dutch too). Hence, whereas Norwegian SwarmAlt involves a somewhat more restricted L-subject pattern, English SwarmAlt involves a very restricted *det*-subject pattern.

4.9 SwarmAlt as an Unergative/Unaccusative Alternation?

The focus in this section regards the question whether SwarmAlt is an unergative/unaccusative alternation (This observation is due to C. Wilder (p.c.)), and contrary to previous research which has proposed that SwarmAlt either is unergative (e.g. Rowlands (2002)) or unaccusative (e.g. Levin (1993)), I challenge both these positions in the discussion below. Based on key insight from Levin and Rappaport (1995) as well as the passivisation test as an unaccusativity diagnostic, I suggest that the A-subject variant is unergative and that the L-subject variant in both English and Norwegian, as well as the *det*-subject variant, are unaccusative. Thereby I am proposing the idea that SwarmAlt, rather, is an unergative/unaccusative alternation.

As stated by Butt (2006:39) a classification of (semantic) groups of unergatives and unaccusatives can be found in Postal and Pullum (1984). If one compares SwarmAlt verbs with this classification one can see that at a first glance, some *swarm* verbs could belong to the unergative class (sound emission verbs) whereas others more naturally fall into the unaccusative class (light emission/smells). This partly shows that establishing whether *swarm* is unergative or unaccusative is not necessarily a simple and/or straightforward task. There is furthermore generally little agreement among linguistic scholars as to whether *swarm* verbs are unaccusative or unergative. Whereas Rowlands (2002:23) claims that *swarm* verbs are unergative and not unaccusative, Levin (1993:50) treats *swarm* as involving unaccusative verbs when she unifies the *spray/load* alternation and *swarm* by giving the intransitive *swarm* verbs an unaccusative analysis. In Levin's (1993) terms *swarm* is an unaccusative version of *spray/load*, with internal arguments (but without the external argument). Under this view, *swarm* verbs in their normal use in both variants are basically unaccusative.

There are however several aspects which can point in the direction that Levin's (1993) analysis is not necessarily correct, and therefore serve to challenge the classification of both variants as unaccusative. For instance, there is reason to suggest that at least the

A-subject variant is unergative. Thus, looking at the A-subject variant as a starting point, which almost always involve atelic activity verbs. As has already been noted, the *with*-PP in the L-subject variant is usually obligatory, unlike the PPloc in the A-subject variant which most often is optional. These facts are moreover consistent with treating the PPloc in the A-subject variant as an adjunct. If so, then the alternation pattern involves ‘adding an argument’ in the L-subject variant, and under this view the two lexical entries could be like those illustrated below (swarm-1 = monadic, swarm-2 = dyadic) (This observation is due to C. Wilder (p.c.)). Such an analysis treats the LOC argument as external and the agent as a complement of the *with*-PP, and this would classify both variants as unergative intransitives and gives rise to the unergative lexical entry frames presented below.

A-subject:	swarm-1	[_]	- i.e. intrans. With no complement
	AGENT		
L-subject:	swarm-2	[_ PPwith]	
	LOCATION	AGENT	

Rowlands (2002:23), though not explicitly stated, treats the verbs as unergative both in their A-subject and L-subject versions. Using the illustrating examples (“causativisation test”) in (111)-(114) below, her main argument for claiming that *swarm* verbs are unergative is based on the fact that they cannot be causativised (Rowlands, 2002:23).

- (111) a. John froze the sorbet. (The sorbet froze).
- b. Maria melted the wax. (The wax melted).
- (112) a. ?John swarmed the garden with bees.
- b. *John swarmed the bees in the garden.
- (113) a. *Maria danced her eyes with mischief.
- b. *Maria danced mischief in her eyes.
- (114) a. *Paula buzzed the jar with flies.
- b. *Paula buzzed the flies in the jar.

However, upon closer inspection and especially in light of some key insight in Levin and Rappaport (1995), Rowlands’ (2002) argument is not necessarily convincing either. Levin and Rappaport (1995:81) have previously claimed that only unaccusative verbs can be causativised, though that is not the same as saying all unaccusative verbs allow causativisation. According to Levin and Rappaport (1995:81), who argue that although a causative lexical semantic analysis is valid for many unaccusative verbs, such an analysis cannot be applied to all of them. Levin and Rappaport (1995:119-133) moreover discuss “verbs of existence and appearance” and claim that these are unaccusatives with two arguments, THEME and LOCATION, however, as illustrated in (115)-(117) these verbs do not participate in the causative alternation. The SwarmAlt L-subject variant presumably also has two arguments, LOCATION and ‘AGENT’. Thus, concluding that *swarm* verbs are unergative based exclusively on the causativisation test might be a rushed conclusion, as their failure to causativise does not preclude the analysis of them as unaccusative. It might therefore be necessary to look at other unaccusative/unergative diagnostics e.g. passivisability, as they might provide evidence for a different conclusion.

- (115) a. A star appeared in the sky.
- b. *The darkness appeared a star in the sky.

- (116) a. An explosion occurred (in the house).
 b. *The gas leak occurred an explosion (in the house).
- (117) a. A solution exists.
 b. *The mathematician existed a solution.

Despite some apparent counterexamples (cf. Kuno & Takami, 2004:145-147), the formation of pseudopassives can be used as an unaccusativity diagnostic, since it has been claimed by e.g. Perlmutter and Postal (1984) and Levin and Rappaport (1995) that pseudopassivisation is only possible with unergative verbs (cited in Kuno & Takami, 2004:137). Consider the following examples, illustrating pseudopassives of the A-subject variant (118-120) and L-subject variant (121-123) in English and Norwegian.

- (118) a. Bacteria swarmed in those drinks.
 b. ??Those drinks were swarmed in by bacteria.
 c. drinks that have been swarmed in by thousands and thousands of horrible little bacteria (Wells (1909)).
- (119) a. Beetles had crawled on my bed.
 b. My bed had been crawled on (by beetles).
- (120) a. Lopper kravlet på senga.
Beetles crawled on bed.the
 'Beetles crawled on the bed'
 b. Senga ble kravlet på (av lopper).
Bed.the had been crawled on by beetles
 'The bed had been crawled on (by beetles)'
- (121) a. The drinks swarmed with bacteria.
 b. *Bacteria were swarmed with by those drinks.
- (122) a. My bed was crawling with beetles.
 b. *Beetles were being crawled with by my bed.
- (123) a. Himmelen svermet av fugler.
Sky.the swarmed by birds
 'The sky swarmed with birds'
 b. *Fugler ble svermet av av himmelen.
Birds were swarmed by by sky.the

What the above examples illustrate is that the verbs in the A-subject variant appear to allow formation of pseudopassives in English and Norwegian ((118c)+(119b)+(120b)), whereas pseudopassives formed from the L-subject variants appear to be systematically unacceptable ((121b)+(122b)+(123b)). These data seem to suggest a different conclusion to Rowlands (2002), as well as Levin (1993). The acceptable pseudopassives of the A-subject variants and the unacceptable pseudopassives of the L-subject variants, might suggest that SwarmAlt, rather, is an unergative/unaccusative alternation, i.e. that the A-subject variant is unergative and that the L-subject variant is unaccusative in both English and Norwegian. In Norwegian, there is additionally reason to consider the *det*-variant as unaccusative.

One reason for considering the Norwegian *det*-variant as unaccusative is the apparent lack of argument in the subject position (suggesting there is no external argument). One can for instance suppose that the lexical entry for the Norwegian *det*-variant involves "internalization" of the external argument of the A-subject variant, i.e. the AGENT argument becomes an oblique internal argument in the *det*-variant.

A-subject:	swarm-1	[_]	- unerg. with no complement
	AGENT		
Det-subject:	swarm-2	[_ PPav/med)	- unacc with PP complement
	AGENT		

In such an analysis, the external argument has in some way been blocked or removed. There is no argument to raise to SpecTP, which instead results in the insertion of an expletive. The locative PP is still an adjunct. In addition to looking at the Norwegian data themselves, there are also theoretical grounds for hypothesizing that the *det*-variant is unaccusative. Since one of the marked variants involves an impersonal sentence pattern, the hypothesis that Norwegian SwarmAlt verbs are unaccusative can be posited (cf. Åfarli's "expletive test"). Åfarli takes the possibility of having an expletive in subject position to be a defining characteristic of unaccusativity (Sveen, 1996:135). It would be a fairly straightforward process if it was the case that impersonal constructions are possible with unaccusatives only, however, Sveen (1996) provides useful insight on this matter, illustrating that unergatives too appear in impersonal constructions in Norwegian. I.e. Swarm verbs in the *det*-variant might be unaccusative, but they need not be.

As is apparent from this discussion, however, both in light of the differing views of the unergative/unaccusative status of the *swarm* alternation in the literature and the counterarguments provided in this section, the proposal that the *swarm* alternation in English and Norwegian is an unergative/unaccusative alternation is a topic in need for further research. Such future research may include e.g. proper investigation of how L-subject verbs behave with respect to other unaccusativity diagnostics (resultatives, etc.), which space limitations prohibit me from doing in this thesis.

4.10 Interim Summary

The preceding discussion illustrates that the *swarm* alternation in Norwegian is in many respects similar to the English *swarm* alternation. It involves atelic (intransitive) verbs, the (structure of the) A-subject variant is the same, the preposition used in the variants are largely the same (except the fact that Norwegian sometimes allows for *av/med* (by/with) to be used interchangeably), the (non)alternating verbs and the semantic verb classes are also generally the same, as well as the signature property; 'agent' realised in an *av/med*-PP with special restrictions. Furthermore, metaphorical expressions seem to be more acceptable in the L-subject variant in Norwegian as well, and the L-subject variant is moreover associated with the holistic interpretation/effect. However, there is also a slight difference with regard to the holistic effect due to a substantial difference between Norwegian and English Swarmalt; Norwegian SwarmAlt sometimes involves three patterns rather than just two, i.e. has two marked variants, and the holistic effect is only found in the L-subject pattern and not the *det*-subject pattern, which is an impersonal pattern with the expletive *det* as a subject in the other marked variant. The impersonal *det*-subject pattern is moreover a pattern specific to SwarmAlt in Norwegian, which should be added as a new, separate type to the list of previously recognised *det*-sentence types identified by Sveen (1996).

Another substantial difference and/or new discovery is the instances of SwarmAlt with verbs denoting directed motion, which despite certain observation (e.g. not possible in L-subject) are argued to be considered part of SwarmAlt. The impersonal sentence pattern and SwarmAlt instances of directed motion are not found in English except with weather-expressions, i.e. English too has a directed motion verb type (in an impersonal sentence pattern), though in an extremely restricted manner. As the Norwegian instances of directed motion verbs, they involve the *with*-PP signature, which in turn is a strong incentive for suggesting that these should be regarded part of SwarmAlt in both English and Norwegian. And, last but not least, which also is a new addition to the previous research; proposing the idea of SwarmAlt as an unaccusative/unergative alternation in both English and Norwegian.

5. Concluding Remarks

5.1 Main Points and Tentative Conclusions

The preceding chapters contain a number of points about the *swarm* alternation in English and Norwegian and the data examined have revealed several English-Norwegian similarities, as well as some apparent differences related to the *swarm* alternation in the two languages. Regarding similarities, both English and Norwegian SwarmAlt involve atelic, intransitive verbs (generally) expressing directed motion. Both alternations also involve an A-subject and L-subject pattern which is structurally and semantically similar, although the L-subject pattern is slightly more restricted in Norwegian. It also appears fairly clear that there is a holistic effect in the L-subject variant in both languages and that the L-subject variant is better suited for metaphorical expressions. The (non)alternating verbs/semantic classes are also generally the same and both English and Norwegian contain what is argued to be a SwarmAlt signature; the 'agent' realized in a *with-* / *av/med*-PP with special restrictions. This thesis has thus illustrated that there is clear tendency of similar patterns and characteristics in the *swarm* alternation in English and Norwegian, however, it should also be noted that some of the data might involve mistranslations and/or misinterpretations which in turn might have resulted in certain inaccuracies.

One of the most apparent differences relates to how Norwegian SwarmAlt involves a second marked pattern, the *det*-subject variant with the expletive *det* in the subject position, which is specific to Norwegian SwarmAlt. Although the L-subject variant is more restricted than the *det*-subject variant, this sometimes gives rise to a three-way alternation pattern in Norwegian. The second major difference relates to how Norwegian SwarmAlt involves a type with (directed) motion verbs, i.e. Norwegian SwarmAlt involves directional as well as locational PPs, and although English SwarmAlt also has a directed motion verb type, it is much more restricted. Last but not least, though not entirely established, is the proposal that SwarmAlt is an unaccusative/unergative alternation in both English and Norwegian.

5.2 Issues for Future Research

As already noted, the deeper questions that arise from the discussion in the previous chapters are not easily answered within the scope of this master's thesis. However, since the *swarm* alternation has not, to my knowledge, been previously investigated in Norwegian, the focus has especially been on providing thorough descriptions of the basic structures, patterns and characteristics of Norwegian SwarmAlt based on what has already been done in English. As a result, my descriptive work has provided some new information, though, I am also hoping that the work I have done in my thesis will be helpful to future linguists conducting further investigation and/or research on the *swarm* alternation (in English and Norwegian) and English-Norwegian similarities and differences in this domain. Throughout the discussion I have pointed to a few aspects which, in my opinion, could be interesting topics and/or strands to follow up on in later studies, such as:

- Investigation of how to account for the instances with the Norwegian verbs *kravle* and *kry* vs. English *crawl* in order to gain a better understanding of what is happening there, e.g. their different patterning.
- Further research on the instances of SwarmAlt with verbs denoting directed motion (in both English and Norwegian), though perhaps especially the

impossibility of the L-subject sentences with LOC as subject with directed motion verbs.

- A study concerning the unergative/unaccusative status of the L-subject verb, which may include proper investigation of how L-subject verbs behave with respect to other unaccusativity diagnostics (resultatives, etc.).

List of References

- Arad, M. (2006). The Spray-Load Alternation. In M. Everaert, R. Goedemans, B. Hollebrandse & H. van Riemsdijk (eds.), *The Blackwell Companion to Syntax* (p. 466-478). Oxford: Blackwell Publishing.
- Butt, M. (2006). *Theories of case*. Cambridge: CUP.
- Dowty, D. (1991). Thematic Proto-Roles and Argument Selection. *Language* 67(3), 547-619.
- Dowty, D. (2000). 'The garden swarms with bees' and the fallacy of 'argument alternation'. In Y. Ravin & C. Leacock (eds.), *Polysemy: theoretical and computational approaches* (p. 111-128). Oxford: Oxford University Press.
- Haegeman, L. & Guerón, J. (1999). *English Grammar, a generative perspective*. Oxford: Blackwell Publishing.
- Hoeksema, J. (2009). The *swarm* alternation revisited. In E. Hinrichs & J. Nerbonne, (eds.), *Theory and Evidence in Semantics* (p. 1-28). Stanford CA: CSLI Publications. Retrieved from <http://www.let.rug.nl/~hoeksema/swarm.pdf>
- Kuno, S. & Takami, K.-I. (2004). *Functional Constraints on Grammar: The Unaccusative Unergative Distinction*. Philadelphia: John Benjamins.
- Levin, B. (1993). *English Verb Classes and Alternations: A Preliminary Investigation*. Chicago and London: The University of Chicago Press.
- Levin, B. & Rappaport, M. H. (1995). *Unaccusativity: At the Syntax-Lexical Semantics Interface*. London: The MIT Press.
- Levin, B. & Rappaport, M. H. (2005). *Argument Realization*. Cambridge: Cambridge University Press.
- Rambøl, K. H. (2010). *Argument Structure Alternations and Semantic Verb Classes*. (MA Thesis). NTNU, Trondheim.
- Rowlands, R. (2002). *Swarming with bees: property predication and the swarm alternation*. (MA Thesis, University of Canterbury). Retrieved from http://www.arts.canterbury.ac.nz/linguistics/documents/ma-thesis/Rowlands_Thesis.pdf
- Saeed, J. I. (2016). *Semantics*. UK: Wiley Blackwell.
- Salkoff, M. (1983). Bees are swarming in the garden. *Language*, 59(2), 288-346.
- Sveen, A. (1996). *Norwegian Impersonal Actives and the Unaccusative Hypothesis* (Dr.art. Thesis). University of Oslo, Oslo.

Tungseth, M. (2005). PP, FP and the telic/atelic distinction in Norwegian motions constructions. In P. Kempchinsky & R. Slabakova (eds.), *Aspectual Inquiries* (p. 147-168). Dordrecht: Springer.

Wells, H. G. (1909). *Ann Veronica*. Great Britain: T. Fisher Unwin. Retrieved from https://www.pagebypagebooks.com/H_G_Herbert_George_Wells/Ann_Veronica/Biology_Part_5_p2.html

Wilder, C. (2018a). *Norwegian-English differences and common error patterns*. Trondheim, NTNU.

Wilder, C. (2018b). SwarmAlt in Norwegian. Unpublished, NTNU Trondheim.

Wilder, C. (2019). Directed motion verbs. Unpublished, NTNU Trondheim.

Wilder, C. (2020). Notes on Sveen impersonal actives. Unpublished, NTNU Trondheim.

Åfarli, T. (1992). *The Syntax of Norwegian Passive Constructions*. Amsterdam: John Benjamins Publishing Company.

Abstract

In light of key properties discovered in the English *swarm* alternation, which over the years has been studied fairly thoroughly (e.g. Salkoff (1983); Levin (1993); Dowty (2000); Rowlands (2002)), this thesis primarily investigates what appear to be the hitherto not investigated Norwegian equivalents, in order to shed light on two things: (i) the nature of the phenomenon in Norwegian and (ii) English-Norwegian similarities and differences in this domain. The data largely comprise three types of sources: data presented in the relevant academic literature; attested natural data, found e.g. via Google search; and native speaker judgements on attested and constructed examples. Furthermore, since no work, to my knowledge, has previously been done on the *swarm* alternation in Norwegian, the research and theories of other linguistic scholars within the generative grammar approach, though especially Dowty (2000) and Levin (1993), are central as a point of departure for the investigation of similar aspect of the alternation in Norwegian.

The data examined shows that there are several English-Norwegian similarities as well as some notable difference regarding the *swarm* alternation. The alternation in both languages has a similar unmarked (A-subject) pattern with the 'AGENT' appearing in the subject position and the LOCATION appearing in a locative PP headed by *in/on* in English and *i (in)/på (on)* in Norwegian, and the (non-)alternating verbs/semantic classes of verbs also appear to be the same. Furthermore, what is argued to be a SwarmAlt signature property ('AGENT' realised in a *with- / av/med*-PP with special restrictions) is also established for both English and Norwegian SwarmAlt. There are, however, some notable English-Norwegian differences. Norwegian SwarmAlt contains a marked variant in an impersonal (*det*-subject) pattern in addition to a somewhat more restricted L-subject pattern which is similar to English, sometimes giving rise to a three-way alternation. A second major difference relates to how Norwegian SwarmAlt involves a type with directional PPs (directed motion verbs), and although English SwarmAlt also has motion verb type, it is much more restricted. However, the deeper questions that arise from the discussion are not easily answered within the scope of this master's thesis. I am therefore hoping that the work I have done in this thesis will be helpful to future linguists conducting further research on the *swarm* alternation (in English and Norwegian).

Appendix A

List of URLs for Examples included in the thesis which were found via Google Search

(60b) -

<https://books.google.no/books?id=B5ZtDQAAQBAJ&pg=PT369&lpg=PT369&dq=%22glitret+av+stjerner%22&source=bl&ots=p54sNgiFAV&sig=ACfU3U2Uawvx3gOWWu4-XYHRjYiD6cRLJA&hl=no&sa=X&ved=2ahUKEwj7oP3Cp6ziAhUQAxAIHT3uAwUQ6AEwAHoECAkQAQ#v=onepage&q=%22glitret%20av%20stjerner%22&f=false>

(86b) -

https://books.google.no/books?id=Z_DkDAAAQBAJ&pg=PT29&lpg=PT29&dq=%C3%B8ynene+hennes+danset+av+glede&source=bl&ots=4TTVoXXI_i&sig=ACfU3U23LvqABcUM7WyAeVUFsYIB8SegrA&hl=no&sa=X&ved=2ahUKEwiilo77dfIAhVotIsKHTzKDfcQ6AEwAHoECAIQAAQ#v=onepage&q=%C3%B8ynene%20hennes%20danset%20av%20glede&f=false

(87b) -

https://books.google.no/books?id=RK_pCgAAQBAJ&pg=PT270&lpg=PT270&dq=%C3%B8ynene+hennes+danset+av+glede&source=bl&ots=yO5jeCXZGb&sig=ACfU3U0P9WH8FuTk8TRVdigoHUIk7IqX0A&hl=no&sa=X&ved=2ahUKEwiilo77dfIAhVotIsKHTzKDfcQ6AEwAHoECAkQAQ#v=onepage&q=de%20nydelige%20%C3%B8ynene%20hennes%20danset%20av%20glede&f=false

Appendix B

The Master's Project's Relevance for Work as a Secondary Teacher with a Master's Degree

A widespread understanding in the field of pedagogy, didactics and teaching is that the role of the teacher includes several types of competences/proficiencies, e.g. subject competence, relation competence and pedagogical/didactical competence, which are all central to one's everyday work as a teacher. Writing a master's thesis has provided valuable experiences for several of these competences, and although there are several areas of relevance with regard to the master's project and my future work as a teacher, I have chosen to focus especially on the aspects subject knowledge more generally, as well as the specific aspect of teaching writing. My knowledge and experience in the areas mentioned below is likely to be very beneficial when it comes to aiding the pupils in their language and writing skills development.

The subjects I have completed prior this master's thesis, which have laid the foundation for being able to carry out such a project, as well as writing the thesis itself, has contributed to strengthening certain aspects of my subject knowledge. A deeper understanding of the English-Norwegian relationship will aid me in the process of teaching various language aspects, especially grammar. My experience from teaching practice is that many kids and young adults find learning English somewhat challenging, however, I am hoping that my knowledge and abilities with regard to detecting, illustrating and explaining English-Norwegian similarities and/or differences at various points will be helpful in this domain.

The second aspect I would like to emphasize is not necessarily connected to the content of the thesis, though rather the experience and knowledge which comes with the process of writing the thesis, and my role as a teacher regarding teaching writing. A central perspective within English didactics when it comes to teaching writing is connected to "writing as a process". Teaching awareness of the process of writing can be a useful tool as part of developing the writing skills/competence of my future learners, and my experiences from the process of writing this thesis is something that, I believe, has vastly strengthened my ability to do so.

