ENGLISH DEPARTMENT

ENGLISH LEXICAL NOMINALIZATIONS IN A NORWEGIAN-SWEDISH CONTRASTIVE PERSPECTIVE

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1. INTRODUCTION

1.1 Background

This study deals with lexical nominalizations in English and their translations into Norwegian and Swedish. 'Lexical nominalization' refers to a noun phrase that, apart from a head noun that is morphologically related to a verb, also contains one or more reflexes of the subject or the object of a corresponding clause (cf. Comrie and Thompson 1985:359). This is illustrated in (1):

(1) The answer is never found in a simple solution such as **the introduction of a new crop**.

Example (1) contains one lexical nominalization: *the introduction of a new crop* (indicated in bold). This type of lexical nominalization is typically compared to a corresponding clause, as illustrated in example (2):

(2)

a. X introduced **a new crop.**

b. the introduction **of a new crop**

The *of*-construction in (2b) corresponds to the object in (2a).

However, lexical nominalizations can be realized in many other ways. Some of these ways are illustrated in (3):

(3)

a. **its presentation**

b. **the attempt to eradicate them**

c. **the accusation that the Gaia thesis is teleological**

d. **John's building**

e. **their final destruction by the wind**

f. **the beliefs of their neighbors**

The lexical nominalizations in (3a-f) differ with regard to how the elements in the corresponding clause are realized. Both the subject and the object have different realizations. In (3a) the object takes the shape of an *s*-genitive[1], in (3b) it is realized as a *to*-infinitive, and in (3c) as a *that*-clause. Noun phrase components corresponding to a subject are found in (3d-f). In (3d) we have an *s*-genitive, in (3e) a *by*-phrase and in (3f) an *of*-construction. Furthermore, (3a-f) show how lexical nominalizations differ regarding how many elements in the corresponding clause are realized overtly. Some lexical nominalizations include both the subject and the object of a corresponding verb, such as in (3e), whereas others keep only the object, as in (3a), (3b) and (3c), or the subject, as in (3d) and (3f). It is also possible to omit both the object and the subject of a corresponding verb, as in e.g. *the accusation is teleological*, but as there is no reflex of the corresponding clause in such a construction, we have a bare deverbal noun rather than a lexical nominalization.

Omission of arguments in lexical nominalizations has been given a lot of attention in linguistic theory, and there are conflicting views on whether or not deverbal nouns take grammatical arguments (see e.g. Grimshaw 1990, Dik 1997:164-168, Mackenzie 1985, 1996, 1997, 2007). An important observation in this respect is that some lexical nominalizations have a clear relation to a clause, whereas others do not. In example (4), for instance, we have a lexical nominalization that is difficult to paraphrase with a clause, although the structure seems to have a reflex of the object in the form of an *of*-construction:

(4) As Awakenings was the study of "an organised chaos" produced by a single if multiform disease, so what now follows is a series of **similar studies of the organised chaoses produced by a great variety of diseases.**

The important question in relation to (4) is whether the *of*-construction (*of the organised* (…)) is an argument or not. If it is an argument, the lexical nominalization should be related to a clause, and a paraphrase such as *what now follows is a series of studying the organized chaoses* (…) would be

[1] As the terminology surrounding 'possessives' and 'genitives' is confusing (cf. e.g.Partee and Borschev (2000:173ff all possessive/genitive premodifiers are described as 'the *s*-genitive' in this thesis, even in the case of possessive pronouns such as in (3b).

natural. However, such a parahrase seems unlikely, if at all possible. A more likely analysis is therefore to regard the *of*-construction as a postmodifier specifying the content of *studies*.

The relation between clauses and nominalizations has interested linguists of many linguistic schools, and the relation between an NP like *John's singing of the Marseillaise* and a clause such as *that John sang the Marseillaise*[2] has played a central role in linguistic theory.[3]

In early work, generative theories of nominalization dominated. In the pioneering work of Lees (1960) and Vendler (1967,1968) lexical nominalizations were regarded as transformations of deep structures (cf. also Chomsky 1957). The transformational view was however rejected in the important article 'Remarks on nominalizations' (Chomsky 1970), in which Chomsky proposed that rather than being the result of syntactic transformations, deverbal nouns have their own entries in the lexicon (see further 2.2). Whether deverbal nouns originate in the syntax or in the lexicon is still a matter of controversy within the generative paradigm.

More recently, lexical nominalizations have been studied by language typologists (e.g. Comrie 1976, Comrie and Thompson 1985, Koptjevskaja-Tamm 1993). In a language-typological perspective it is obvious that lexical nominalizations form a continuum of more or less clausal or nominal structures, which means that there is no clear distinction between VPs and NPs. This continuum can be seen as opposed to the generative approaches, which argue in favor of a clear distinction between verb phrases and noun phrases.

Lexical nominalizations have also been considered from a functional rather than a formal perspective. Two main schools can be distinguished: Dik's functional grammar (cf. e.g. Dik 1997 and Mackenzie 1996), and Halliday's systemic functional linguistics (cf. e.g. Halliday and Martin 1993, Halliday and Matthiessen 1999, 2004, Downing 2000, Banks 2003). Dik's functional grammar is the result of cross-linguistic work and aims to provide a "schematic representation of the kinds of adjustments which can be involved in nominalization" (cf. Butler 2003:271), whereas Halliday's systemic functional linguistics (henceforth SFL) aims at describing the

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2 The examples are taken from Vendler (1968:34).

3 For more discussion on previous work see chapter 2.

functions of lexical nominalization in real discourse, taking particular interest in variation across text-types or genres.

This thesis discusses lexical nominalizations primarily from the perspective of SFL theory. In chapter 2 some concepts from SFL are introduced and some reasons for choosing SFL theory are discussed. Unlike studies in SFL, however, where the focus typically is on lexical nominalizations in one language, this study is contrastive, looking at the use and form of lexical nominalizations in three languages. To adequately account for differences in form between lexical nominalizations in the three languages the study addresses questions related to the argument structure of deverbal nouns, which is an area not developed in SFL accounts.

1.2 Aims

This work is a contrastive study of lexical nominalizations in English, Norwegian and Swedish. English lexical nominalizations in the orginal language are compared with their Norwegian and Swedish translations. The study aims to consider English lexical nominalizations both in their own right, in terms of their syntax and semantics, and constrastively, in terms of their translations into Norwegian and Swedish. The translations are used in three ways. First, as a mirror throwing light on the meaning of English lexical nominalizations, and second, to gain insight into which factors influence when a lexical nominalization is chosen and when it is not in the two target languages. Third, when a lexical nominalization is chosen as translation, the translations are used to make contrastive observations about lexical nominalizations in English, Norwegian and Swedish.

The fact that English lexical nominalizations are compared with two translations has the advantage that differences can be detected both between the source and target languages and between the two target languages. A disadvantage is that those contexts where a lexical nominalization might have been used in Norwegian and Swedish, but not in English, fall outside the scope of the study. It follows that focus is on lexical nominalizations in English.

Lexical nominalizations are analysed in terms of their argument structure. The focus is on the number of arguments, their grammatical functions and their meanings. Furthermore, differences between transitive, intransitive and ergative lexical nominalizations are addressed. The

categories determined by argument structure are used to gain more information about relationships of meaning between different types of lexical nominalizations and other structures, investigated through translation correspondences. The concepts *grammatical metaphor* and *network of agnation* from systemic functional linguistics are important for describing the types of relationships found (cf. chapter 2).

When a lexical nominalization is translated by another structure a variety of factors can explain the change. Some changes may be related to the grammatical function of the lexical nominalization or its syntactic structure, whereas others are of a more pragmatic nature, related for instance to different genre-conventions in the three language communities. Furthermore, differences may be attributed to the translation process, such as the lack of a corresponding term in the target language. Lastly, semantic factors may play a role: the translation may for instance depend on whether the lexical nominalization refers to a process or a product.

1.3 Material and Method

In this section the material and method of the study is described. Section 1.3.1 presents the corpora and introduces what I mean by *parallel translations*. Section 1.3.2 accounts for how the data was retrieved. Section 1.3.3 discusses the use of parallel translations in contrastive research and section 1.3.4, finally, describes how the translation correspondences are discussed in terms of *congruent* and *non-congruent translations*.

1.3.1 The ENPC and the ESPC

The present study is corpus-based. The empirical data in the study is taken from the *English-Norwegian Parallel Corpus* (henceforth ENPC) and the *English-Swedish Parallel Corpus* (henceforth ESPC).

The ENPC and the ESPC are *bidirectional translation corpora*, i.e. they include original English texts and translations into Norwegian and Swedish, as well as Norwegian and Swedish original texts and translations into English.[4] The corpora have the advantage that many of the original

[4] The ENPC was built in the 1990s by Stig Johansson and his associates (cf. Johansson 2007:10ff) and the ESPC was developed around the same time, in a project directed by

English texts are shared, which makes it possible to compare translations in two languages. In addition, the original texts are matched so that they can be used as *comparable texts*, i.e. "texts matched with respect to genre, time of publication, degree of formality etc" (Johansson 2007:10f). Both corpora are divided into one fiction part and one non-fiction part. The details of the corpora are given in tables 1.3.1a and 1.3.1b.

Table 1.3.1a Size and composition of the ENPC

	Original texts		Translated texts	
	English	Norwegian	English	Norwegian
Fiction	30	30	30	30
Non-fiction	20	20	20	20
Total texts	50	50	50	50
Total number of words	671,700	629,900	699,400	661,500

Table 1.3.1b Size and composition of the ESPC

	Original texts		Translated texts	
	English	Swedish	English	Swedish
Fiction	25	25	25	25
Non-fiction	39	47	47	39
Total texts	64	72	72	64
Total number of words	705,393	661,463	746,875	690,780

In this study I primarily use English originals and their Norwegian and Swedish translations, and not the comparable texts. The texts are taken from the non-fiction part of the corpora. The reason for using non-fiction texts is that I expected there to be more examples of lexical nominalizations in non-fiction rather than fiction, basing myself on Biber et al.'s (1999:578) finding that complex NPs are 'notably' more common in the registers *news* and *academic prose* than in *fiction*, and rare in *conversation*. Studies by SFL linguists point in the same direction. Halliday and Matthiessen (2004:657)

Karin Aijmer and Bengt Altenberg (cf. Altenberg and Aijmer 2000). For detailed information about above all the ENPC, see Johansson (2007:10ff).

e.g. argue that (lexical) nominalizations are particularly frequent in scientific and technical English where they also evolved first, but that they have spread to other typs of 'adult discourse'.

The non-fiction part of the corpora consists of a number of texts belonging to different genres or registers. I use only those texts that can be regarded as popular science texts. These texts are texts from different science disciplines but are aimed at the general public. The reason for choosing popular science texts was twofold: first, they represent a 'genre' where lexical nominalizations can be expected to be relatively frequent and, secondly, keeping to one general type of text facilitates comparison between the three languages.

The following seven popular science texts and their translations into Norwegian and Swedish were chosen as material for the thesis. The codes in parenthesis are the codes used in the corpora.[5]

1. Morris, Desmond:

   Animalwatching - Field Guide to Animal Behaviour. (DM1)

2. Lovelock, James:

   The Ages of Gaia - A Biography of Our Living Earth. (JL1)

3. Sacks, Oliver:

   The Man who Mistook his Wife for a Hat. (OS1)

4. Sanger, Clyde:

   Safe and Sound: Disarmament and Development in the Eighties. (CS1)

5. Armstrong, K. A:

   A History of God from Abraham to the Present: The 4000-year Quest of God. (KA1)

6. Hastings, M:

   Victory in Europe. (MH1)

7. Walker, Martin:

   The Waking Giant. The Soviet Union under Gorbachev. (MAW1)

[5] More information about the texts and their Norwegian and Swedish translations can be found at the ENPC website http://www.hf.uio.no /ilos/forskning/forskningsprosjekter/enpc/

Table 1.3.1c gives the number of lexical nominalizations retrieved from each text as well as the total number of words for the texts.

Table 1.3.1c Number of lexical nominalizations in the English originals

Text	Lexical nominalizations	Words in text
MAW1	101	10,000
KAR1	89	11,000
OS1	112	14,000
JL1	186	13,000
DM1	37	13,000
CS1	32	11,000
MH1[6]	32	4,000
Total	589	76,000

As is evident from the table, the distribution of lexical nominalizations in the popular science texts was uneven, which could be expected from the topic of the texts. For example, the text *The Ages of Gaia – A biography of Our Living Earth*, a popular natural-science publication included 186 lexical nominalizations in 13,000 words, whereas *The Man Who Mistook His Wife for A Hat*, a popular neuroscience publication with many instances of narrative-like text, included 112 lexical nominalizations in 14,000 words.

Each of these texts has one Norwegian translation and one Swedish translation, allowing us to study the lexical nominalizations retrieved from the English source material through two parallel translations.[7] The general methodology of the study can thus be called parallel translations. The 'method' is illustrated by the bold arrow going in the direction from English original to Norwegian/Swedish translation in Fig. 1.3.1 below. The other arrows indicate the various other research possibilities offered by the corpora:

[6] Only the beginning of this text is part of the study, hence the lower number of total words.

[7] There has been some confusion of terminology regarding the types of subcorpora included in the ENPC/ESPC model. The term *parallel corpus* or *parallel texts* have been used to refer to originals and their translations and comparable texts in two languages. In line with Johansson (2007), I have chosen the more specific term (*parallel*) *translation corpus* (cf. Johansson 2007:1) to refer to my sample of the ENPC and ESPC. For a description of various types of parallel corpora see Olohan (2004:24f) and Johansson (2007:5ff).

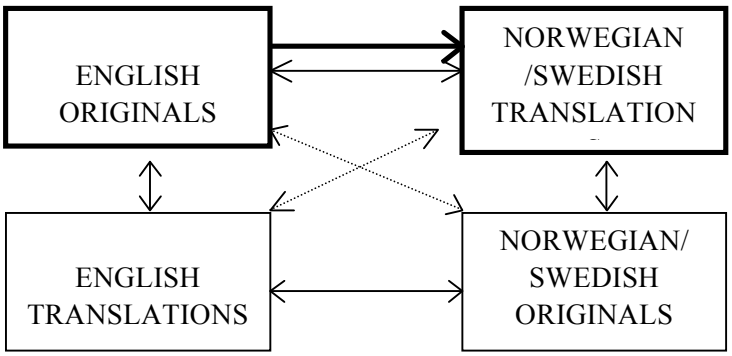


Figure 1.3.1 The model of the ENPC and ESPC

Because lexical nominalizations come in so many shapes and forms (cf. 1.1), they had to be retrieved manually. I chose to use Wikberg's (2003:113) 'textual approach', collecting the examples "from the actual text, and not from a list of ready-made items […]". The textual approach can be summarized as follows (cf. Wikberg 2003:113):

1. Identify lexical nominalizations by reading the texts and then find their translations using the alignment programme;
2. transfer the examples to a database;
3. add information about examples;
4. sort the examples according the information added in step 3;
5. compare the source texts with the target language translations;
6. use the translations to throw light on the source lexical nominalization.

To begin with a total of 586 examples were collected. Using Filemaker Pro database software, the English lexical nominalizations were coded according to a wide selection of variables (cf. step 3). Information was added about the suffix of the deverbal noun, the form of the subject or the object (e.g. an *s*-genitive or an *of*-construction), the function of the lexical nominalization in the clause (e.g. subject or object) as well as about whether the deverbal noun was related to an ergative, intransitive or transitive verb (for a discussion of ergativity and transitivity see 3.4.3, 7.1). The translations with lexical nominalizations were coded in the same manner, and if another structure was

used as translation (e.g. finite clause, non-finite clause, paraphrase), this structure was classified.

Reading through the texts is time-consuming and the number of examples that can be retrieved is limited. A larger number of examples would of course have been desirable when frequencies are discussed. Consequently, observations concerning frequency should be viewed as tendencies to be tested on further material rather than as statistically significant evidence.

1.3.2 Parallel translations

In this thesis I use translations into Norwegian and Swedish as source material for a contrastive analysis. This is not entirely uncontroversial; there are both advantages and disadvantages. This section addresses some of these pros and cons.

As stated by Anna Mauranen (2002) one important advantage of using translations in contrastive research is that they compose "real, attested instances of equivalents used by bilinguals who are engaged in the process of producing culturally acceptable entire TL [target language] texts, thus observing context in both its meanings: as co-text and as context of situation" (Mauranen 2002:185). In a study of language in use, translations are therefore superior to the linguist's own intuition, which is always to some extent biased towards his or her knowledge or hypothesis about 'how things should be' rather than 'how they are'. The use of translation corpora in contrastive studies has been applied successfully in studies based on two languages (cf. e.g. Mauranen 2002, Johansson 2007), but so far studies on parallel translations do not abound.[8]

By means of parallel translations we can find out which resources are available in the two target languages as paraphrases for lexical nominalizations as well as when and why the paraphrases are preferred. The obvious advantage of having two target languages is that we can make more observations. Using parallel translations, we do not limit ourselves to observing differences in the use of lexical nominalizations between the

[8] However, the methodology has been used in a series of studies of information structure in the languages English, German and Norwegian. For a list of publications see http://www.hf.uio.no/forskningsprosjekter/sprik/ (date of access: August 14, 2007).

source and target languages, but can also look at differences in use between the target languages. Another advantage with parallel translations is that they extend the database of 'real attested instances of equivalents' (Mauranen 2002:185), providing a richer spectrum of possibilities. To have two translation choices of one source structure available means that observations regarding relationships of meaning between different structures will stand on a firmer empirical footing than if we compare only two languages. Finally, parallel translations can help unveil obvious translator idiosyncrasies.

However, the reliability of the translations is an important issue to consider. Translations have been criticized because they are affected by the translation process and therefore cannot be contrasted with 'real', 'authentic' language. There are several reasons why translations are problematic. The phenomenon that source language can influence linguistic choices in the target language has been referred to as *translationese* by Gellerstam (1986, 1996), and as the source language 'shining through' by Teich (2003ab). Moreover, Baker (1992, 1995) argues that translations may be affected at a more general level by so-called 'universal features of translations'. Translations tend to be more explicit than their source texts (*explicitation*), their content is somewhat simplified (*simplification*) and the language in translations is more conventionalized than original language, i.e. it tends to conform to the norms and conventions of a specific text type or register (*normalization*).

All of Baker's universal features can have an impact on the translations of lexical nominalizations. For example, the universal translation principle explicitation may explain why both the Norwegian and the Swedish translator have used a clause instead of a lexical nominalization in (5):

(5)

a. His rise through the party ranks had groomed him for the succession, and his degree meant that *there could be* **little objection to his taking over the first secretaryship of such a key farming region.** (ENPC/ESPC MAW1)

b. Med sitt avansement gjennom partigradene stod han klar til å hoppe inn i en sjefsstilling. Med de nye eksamenspapirene i lommen **kunne knapt noen protestere på at han nå overtok førstesekretærstillingen i et slikt viktig jordbruksdistrikt.** (ENPC MAW1T)

c. Hans karriär genom partigraderna hade skolat honom för

arvsföljden, och hans examen innebar **att man inte kunde ha mycket att invända mot att han övertog posten som förstesekreterare i en så viktig jordbruksregion.** (ESPC MAW1T)

Instead of a presentative construction (in italics) and a lexical nominalization (in bold) (5a), both translators have chosen a translation with a clause (5b,c). As the clause includes a subject that is not present in the lexical nominalization (Norw. *noen* (anyone) and Sw. *man* (one)), it can be argued that the translations with a clause are more explicit than the original.

Because of translation concerns such as those described above, Johansson (2007:10) argues that: "[i]n using translation corpora for contrastive studies, it is […] important to be able to control for translation effects" and this can be done if we compare the results in the translation corpora with original texts in the same language (cf. also Teubert 1996). In the present study translation tendencies were checked against original language only in a few cases.

1.3.3 Congruent and non-congruent translations

The translations are divided into the broad categories *congruent* or *non-congruent* (cf. e.g. Johansson 2007:24f). Congruent translations are translations that preserve the structure of the original lexical nominalization, whereas non-congruent translations involve some type of restructuring.[9] Example (6) illustrates a congruent translation in Norwegian and Swedish:

(6) Congruent translation: lexical nominalization → lexical nominalization

a. Harvests stagnated, peasants trickled steadily away from the land, and **Moscow's spasmodic interference in the farming process** continued to cause chaos. (ENPC/ESPC MAW1)

b. Avlingene stagnerte, bøndene forsvant fra landdistriktene i en jevn strøm, og **Moskvas spasmodiske innblanding i jordbruket** forårsaket kaos. (ENPC MAW1T)

c. Skördarna krympte, jordbruksarbetare lämnade i en oavbruten ström

[9] Note that to describe translations as congruent and non-congruent is a different use of the term *congruent* from its use in contrast to *grammatical metaphor* (cf. 2.3.1).

landsbygden och **Moskvas nyckfulla inblandning i arbetet** fortsatte att vålla kaos. (ESPC MAW1T)

In (6), both the Norwegian and Swedish translators have used a deverbal noun *innblanding/inblandning* corresponding to the English deverbal noun *interference* and all modifiers are translated congruently, preserving the structure of the English original.

A translation may deviate slightly from the original but still be regarded as congruent if the structure of the English lexical nominalization is preserved. A congruent translation involving lexical change is exemplified in (7):

(7) Lexical nominalization → Ordinary N

a. In begetting the child, the god's energy had been depleted, so to replenish this and to ensure **the circulation of all the available mana**, the first-born was returned to its divine parent. (ENPC/ESPC KA1)

b. Ved denne unnfangelsen var gudens energi blitt uttømt, så for å lade den opp igjen og for å sikre **kretsløpet av all tilgjengelig mana** ble den førstefødte gitt tilbake til sitt guddommelige opphav. (ENPC KA1T)

c. När guden avlade barnet förbrukades hans energi, och för att förnya den och trygga **kretsloppet för all tillgänglig mana** skulle den förstfödde återbördas till sin gudomlige far. (ESPC KA1T)

In (7b,c), the translators have chosen a noun (Norw. *kretsløp/* Sw. *kretslopp*) that is not morphologically related to a verb, or where this relation is no longer productive (i.e. an ordinary N).[10] The reason for choosing the ordinary N in (7b,c) could be that the correspondence of *circulation* in Norwegian and Swedish (Norw. *sirkulasjon*/Sw. *circulation*) cannot function as a scientific term in the sense used in (7). The main point to observe, however, is that *the structures* of the lexical nominalization in (7a) and the NPs in (7b) and (7c) are identical.

Example (8b,c), in contrast, illustrates the two main ways in which a lexical nominalization can be changed:

[10] See discussion of transcategorization (2.3.2).

(8)

a. I am indebted to Jerome Rothstein, a physicist, for **his enlightenment on this**, and other things. (ENPC/ESPC JL1T)

b. Jeg står i gjeld til fysikeren Jerome Rothstein for **at han har informert meg om dette og andre ting.** (ENPC JL1T)

c. Jag står i tacksamhetsskuld till fysikern Jerome Rothstein för **den förklarande jämförelse han gav** om detta och annat i en genomtänkt artikel om begreppet den levande Jorden. (ESPC JL1T)

Both (8b) and (8c) are non-congruent translations, but they are of different types: (8b) involves a shift from an NP to a clause (lexical nominalization → *at*-clause (*that*-clause)), whereas in (8c), the NP status of the original lexical nominalization is retained (lexical nominalization → N + relative clause). I refer to the two sub-groups of non-congruent translations as *translations with a clause* and *nominal paraphrases*. All paraphrases entail some reorganization of the structure of the lexical nominalization. For example, in (8) an '*s*-genitive + deverbal N + *prep* +NP' structure (*his enlightment on this*) is turned into a head deverbal noun followed by a relative clause (8c) (*den forklarande jämförelse som han gav* (lit. the explaining comparison that he gave)).

The examples discussed in the thesis always follow the order English original, Norwegian translation and Swedish translation, as illustrated in (9):[11]

(9)

a. The battle for Villers-Bocage had been **a startling demonstration of German speed, ruthlessness and professionalism**. (ENPC/ESPC MH1)

b. Slaget om Villers-Bocage hadde vært **en slående demonstrasjon av hvor hurtige, nådeløse og profesjonelle tyskerne var.** (ENPC MH1T)

c. Slaget om Villers-Bocage hade varit **en skakande uppvisning av tyskarnas snabbhet, hänsynslöshet och yrkesskicklighet.** (ESPC MH1T)

[11] On rare occasions one of the parallel translations is not included, in which case the 'omitted' translation is considered unimportant for the discussion.

All examples include a reference to the corpus and to the text from which the example was taken. Hence, the English original in (9a) is followed by the codes ENPC and ESPC to indicate that the example can be found in both these corpora, and then a code referring to the text, **M**ax **H**astings, *Victory in Europe,* text **1** (cf. 1.3.1). The same information is provided for the translations.

1.4 Outline of study

Chapter 2 addresses the relation between lexical nominalizations and the clause in previous work, discusses the function of English lexical nominalizations in text and introduces some important notions used to describe lexical nominalizations in this study.

Chapter 3 considers the relation between argument structure and meaning of lexical nominalizations.

Chapters 4-7 discuss the Norwegian and Swedish translations of English lexical nominalizations based on the form of the source lexical nominalization. Chapter 4 deals with the translations of lexical nominalizations with an overt subject and object, e.g. *Lysenko's perversion of genetics* and chapter 5 discusses lexical nominalizations with the object of a corresponding transitive verb (e.g. *the creation of the world*). Chapter 6 describes the translation of lexical nominalizations with an overt subject of a corresponding transitive verb but not the object (e.g. *the beliefs of their neighbors*), and chapter 7 discusses the translations of lexical nominalizations with a deverbal head morphologically related to an intransitive verb (e.g. *Stalin's death*), or an ergative verb (e.g. *the melting of snow*).

Chapter 8, finally, summarizes and discusses the results of the study and gives some suggestions for further research.

2. DEFINITION OF LEXICAL NOMINALIZATION

2.1 Introduction

This chapter discusses the relation between lexical nominalizations and clauses and the function of lexical nominalization in text. Furthermore, some notions important for the analysis of lexical nominalizations in this work are introduced.

In section 2.2, the type of lexical nominalizations investigated in this study is defined and some previous approaches to the relation between lexical nominalizations and clauses are described. In addition, section 2.2 introduces the concept *rank-shift,* which is crucial to describe different degrees of nouniness in the clausal translations of lexical nominalizations. In section 2.3, the question of why lexical nominalizations have been viewed as more difficult to understand than clauses is addressed. One reason why lexical nominalizations are hard to process is that they are grammatical metaphors characterized by an indirect relation between semantics and grammar. Not all lexical nominalizations are grammatical metaphors, however: some are transcategorizations with a more transparent relation between semantics and grammar.

The last part of the chapter (section 2.5) describes some of the uses of lexical nominalization in texts. For example, lexical nominalizations can be used to sum up given information as a point of departure for the next rhetorical move and to create new terms and concepts that can be further described by the modifiying resources in the NP.

2.2 Lexical and clausal nominalization

To begin with, we need to define what a lexical nominalization is, and distinguish between lexical and clausal nominalizations. According to Comrie and Thompson (1985:359) a lexical nominalization is a "(…) noun phrase which contains, in addition to a noun derived from a verb, one or more reflexes of a proposition or a predicate" (e.g. *James' production of a thesis*). This study only considers such lexical nominalizations that contain a reflex of *a subject* or *an object* (cf. 1.1), thus excluding lexical

nominalizations such as *the walk across the field*, where *across the field* is a reflex of an adverbial rather than an object.

Lexical nominalizations are recognized by a special suffix, or they have the same form as the verb to which they are related. The study includes both the former and the latter. Thus, both deverbal nouns that have a suffix that "combine[s] with verb bases to produce largely abstract nouns, nominalizations of the action expressed by the base", i.e. *-age*, *-al*, *-ation*, *-ing*, *-ion*, *-ment*, *-th* (cf. Quirk et al. 1985:1550) and *conversions* (Quirk et al. 1985:1558) such as *promise*, *fall*, *hit*, *answer* are part of the material.

Lexical nominalizations are distinguished from clausal nominalizations, which refer to all structures that can occupy a nominal position. Consider example (1):

(1)

a. **James produced a thesis**. This was expected.

b. **That James produced a thesis** was expected.

c. **James' production of a thesis** was expected.

In (1a), two separate clauses are used to render two propositions. Example (1b) and (1c), on the other hand, illustrate two ways in which the first sentence in (1a), *James produced a thesis*, can be fitted into a nominal slot in another sentence, thereby creating one sentence from the two sentences in (1a). These two ways are defined as *clausal* and *lexical nominalization*, respectively. The main difference between the two is that the clausal nominalization has a verbal head (1b), whereas the lexical nominalization has a nominal head (1c). In the words of Comrie and Thompson (1985:392):

> The characteristic feature of [clausal nominalizations] is that there is no evidence in favour of viewing its head as a lexical noun. That is, the verb in such a clause typically has no nominal characteristics and often has such verbal characteristics as person and number, though it may be lacking in tense-aspect marking.

Clausal nominalizations like (1b) are considered only when they appear as translations of lexical nominalizations. That is, depending on the communicative context, clausal and lexical nominalizations can be used

interchangeably in the same position, rendering approximately the same semantic content. For instance, the lexical nominalization in (2) is related to the clause in (3) (The examples are taken from Vendler 1968):

(2) **The collapse of the Germans** was a surprise.

(3) **That the Germans collapsed** was a surprise.

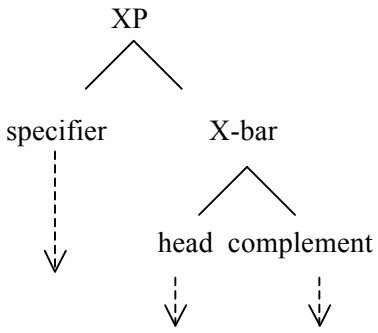
The semantic similarity between the two structures explains why lexical nominalizations were viewed as the result of transformations of clausal deep-structures in early generative work (Chomsky 1957, Lees 1960). According to this view, the true meaning of lexical nominalizations resided in the deep structure and lexical nominalizations were syntactic alterations, or transformations of this deep structure. This approach to nominalization is usually referred to as *the transformationalist hypothesis* (cf. Koptjevskaja-Tamm 1993:3).

In his article 'Remarks on Nominalization', however, Chomsky (1970) rejected the transformationalist hypothesis, arguing that derived nouns behave exactly like non-derived nouns and therefore should have their own entries in the mental lexicon. For example, both derived and non-derived nouns are inflected in the same manner:

Non-derived: *the glass* (sg)- *the glass**es*** (pl)

Derived: *the construction* (sg) – *the construction**s*** (pl)

To capture the similarity between lexical nominalizations and finite clauses, Chomsky argued that verb phrases (VPs) and noun phrases (NPs) are structured in the same manner. This observation paved the way for the 'X-bar system' in formal grammars (cf. Platzack 1998:24). In this system 'X' stands for a word-class category such as noun or verb. The tree-structure in Figure 1 illustrates the systematic similarity between lexical nominalizations and finite clauses:



a) X=N *Columbus' discovery* (*of) America* Lexical nominalization

b) X=V *Columbus discovered America.* Finite clause

Figure 2.2 Lexical nominalizations and finite clauses, illustrated by the x-bar system

Figure 2.2 illustrates both the structure of an NP (or Determiner Phrase, as is the term used in recent generative work) and an IP (i.e. an assertive clause). When the structure illustrates an NP, X stands for the head noun *discovery*, *Columbus'* is the specifier and *of America* is the complement. When the structure illustrates an IP, X stands for the verb *discover*, *Columbus* is the specifier and *America* the complement. What is important about this account for the present purposes is that elements such as *of*-constructions and *s*-genitives in the NP are regarded as correspondences of arguments in the clause.

The view of lexical nominalizations and clauses as clearly defined VPs and NPs with separate sets of projections is challenged by, for example, Comrie (1976), Comrie and Thompson (1985) and Koptjevskaja-Tamm (1993). On the basis of empirical data from a vast number of languages, they propose instead that lexical nominalizations and clauses should be placed on a clausal-nominal continuum representing varying degrees of nouniness. The clausal-nominal continuum is described in section 2.2.1.

2.2.1 The clausal-nominal continuum

Several scholars have argued that there is a clausal-nominal continuum from the clause to the full-fledged NP, as in (4) (cf. e.g. Ross 1973, Comrie and

Thompson 1985, Lehmann 1988, Koptjevskaja-Tamm 1993, Mackenzie 1996:326):

(4)

a. We expected **that James would produce a thesis.**

b. We expected **James to produce a thesis.**

c. We expected **James' producing a thesis.**

d. We expected **James' production of a thesis.**

e. We expected **the production of a thesis**.

f. We expected **the production**.

It is assumed that the structures in (4) render approximately the same semantic content (Lehmann 1988).

The idea of a clausal-nominal continuum has been used in translation studies by for example Solfjeld (1996, 1997) in a comparison of verbal and nominal style in Norwegian translations of German non-fiction texts. Solfjeld (1996, 1997) draws on the idea by Lehmann (1982, 1988) that there are more or less prototypical ways of denoting a predication. He argues: (Solfjeld 1996:568):

> A clause consisting of, among other features, subject in the nominative case and finite verb, is for example the linguistic category that conveys the function predication best –and hence conveys this function better than an infinitive, which has no finite verb form and no subject in the nominative case.

In (4a-f), we can see how typical verbal categories such as finiteness, tense, aspect and valency are neutralized as one moves from the clausal to the nominal end of the continuum. The idea is that if a speaker desires to convey a predication as explicitly and clearly as possible, the finite clause is the best choice. According to this view, a text where predications are conveyed by clauses is more accessible, or comprehensible, than a text where predications are conveyed by means of lexical nominalizations (see also discussion in section 2.3).

Solfjeld (1997) found that there were many more finite than non-finite verb forms in Norwegian translations compared to their German source

texts, and this led him to the conclusion that Norwegian non-fiction uses a more clausal style than German, which is more nominal. Another of Solfjeld's results was that deverbal nouns ('Verbalsubstantive') were a common source for clausal translations (Solfjeld 1997:138ff). Solfjeld concludes that Norwegian translators typically move from the nominal end towards the clausal end on the clausal-nominal continuum when they translate German non-fiction texts. One reason for this according to Solfjeld (1997:38) is an emphasis on 'oral style' in Norway which favors the use of clauses rather than deverbal nouns (see also discussion in 8.3).

2.2.2 Rank-shift

The clausal-nominal continuum can be modified by the idea of rank-shift and both notions are important for the description of *nouniness* in this thesis, i.e. how nominal a construction is.

According to Halliday (cf. Halliday 1994:12, Halliday and Matthiessen 2004:9) there is a rank typical of clauses and a rank typical of words.[12] When a clause functions in a position typical of an NP, i.e. as an embedded constituent rather than a hypotactic clause, it is rank-shifted (Halliday and Matthiessen 2004:9,646):

(5)

a. A (ranking) clause:

John constructed the building.

b. A rank-shifted clause:

That John constructed the building is a fact.

The idea of rank-shift is useful in this study because translations of English lexical nominalizations can be described in terms of different ranks, expressing different degrees of nouniness. The ranking clause shows no degree of nouniness, whereas the rank-shifted clauses have some degree of nouniness since they figure in a nominal position in the clause. If we compare rank-shift to the clausal-nominal continuum, the (ranking) finite

[12] Halliday (Halliday and Matthiessen 2004:9) uses the term *ranking clause* for what I refer to as a *clause*.

clause in (5a) is at the far clausal end and the rank-shifted clause in (5b) has moved some ways towards the nominal end. A lexical nominalization such as in (6) below, however, is not affected by rank-shift, as it has the structure of a prototypical NP. [13]

(6) A lexical nominalization:

John's construction of the building was a fact.

Since the lexical nominalization is formally a full-fledged NP, it is at the far nominal end of the clausal-nominal continuum.

The translations in (7), (8) and (9) are corpus examples exhibiting different degrees of nouniness. In (7), a lexical nominalization corresponds to a clause, in (8), a lexical nominalization corresponds to a rank-shifted clause and in (9), a lexical nominalization corresponds to a lexical nominalization:

(7) Lexical nominalization → Ranking finite clause

a. **Much prior programming of the mind** was needed to spot a musk orchid in the grass. (ENPC/ESPC JL1)

b. **Man måtte programmere sitt sinn omhyggelig på forhånd** for å oppdage en honningblomst i gresset. (ENPC JL1T)

(8) Lexical nominalization → Rank-shifted finite clause

a. During evolution, there was great selection pressure for immediate action: crucial to our survival is **the instant distinction of predator from prey and kin from foe**, and the recognition of a potential mate (ENPC/ESPC JL1).

b. I løpet av utviklingen har det vært et sterkt seleksjonspress for ureflektert handling: Det har hatt avgjørende betydning for vår evne til å overleve **at vi umiddelbart har kunnet skille rovdyr fra byttedyr og venn fra fiende**. (ENPC JL1T)

(9) Lexical nominalization → Lexical nominalization

a. The story was not a factual account of the physical origins of life

[13] The NP is, however, related to a clause by means of *agnation* (cf. section 2.2.3 for a discussion of the term *agnation*).

upon earth but was **a deliberately symbolic attempt to suggest a great mystery and to release its sacred power** (ENPC/ESPC KA1).

b. Historien var ingen saklig beretning om den fysiske opprinnelse til livet på jorden; den var **et bevisst symbolsk forsøk på å antyde et stort mysterium og frigjøre dets hellige kraft. (**ENPC KA1T)

These examples show that lexical nominalizations can have different types of translations. As pointed out in section 1.2, the different translations can help to throw light on the meaning of the source lexical nominalization.

2.2.3 Agnation

In SFL (cf. e.g. Halliday 1994, Halliday and Matthiessen 2004:31), the systematic relationship between one structure and another, as indicated in examples (8-10) can be described as *agnation*, a term taken from Gleason (1965).[14] Language users choose from a network of related constructions, depending on the functional demands of the communicative situation. This network is described as a *network of agnates*. This explains how lexical nominalizations are not only related to finite clauses, but potentially to all the structures that are situated along the clausal-nominal continuum (such as *to*-infinitives and *gerunds*). Example (10) exemplifies such an agnation network:

[14] As pointed out by Heyvaert (2003:35), however, Gleason stresses that two agnate structures should have the same major lexical items. Studies in SFL have a wider definition of agnation, which includes structures with slightly different lexical content as agnates as long as they are related in meaning. For example, Halliday and Matthiessen (1999:209) regard the clauses*: the child is happy* and *the child rejoices* as agnates.

(10)

a. Clause

She loves me and this is no secret. →

b. Clausal nominalization (non-finite)

Her loving me is no secret.

c. Clausal nominalization (finite)

That she loves me is no secret.

c. Lexical nominalization

Her love for me is no secret.

In (10), the proposition *she loves me* is represented by: (a) a (ranking) clause, (b) a non-finite clausal nominalization (c) a finite clausal nominalization and (d) a lexical nominalization.

The concept of agnation is useful since it underlines that there are alternative ways of expressing a particular propositional content, without claiming that one structure is a transformation of another. The concept of agnation simply shows how a structure can be related to another structure in "a pattern of systemic relationships (…)" (Halliday and Matthiessen 2004:31). Also, while both typological studies and generative studies provide insight into the internal structure of lexical nominalizations, they have little to say about the conditions of use for nominalized structures. Along with the concept *network of agnates* comes the view that the structures along the clausal-nominal continuum are functionally and semantically motivated: any choice from the network is meaningful and should therefore be considered as a motivated instantiation of meaning potential (i.e. language as a whole) (cf. Halliday and Matthiessen 2004:26ff). I therefore return to the concept agnation network in the discussion of translations in chapter 4, 5, 6 and 7.

2.3 Accessibility

Style manuals in English, Norwegian and Swedish often warn against 'unnecessary use' of (lexical) nominalizations, because they can reduce the comprehension of texts (cf. e.g. Blamires 2000:226ff, Vinje 2002:98), and linguistic studies also sometimes emphasize that lexical nominalizations can

be difficult to understand (cf. e.g. Halliday and Martin 1993). Taking the lexical nominalization as our point of departure, we therefore need to address the question why the lexical nominalization is more difficult to understand than its agnate clause.

In SFL it is common to talk about the *accessibility* of texts.[15] Halliday (Halliday and Martin 1993:69), for instance, states that nominalizations and "a pile-up of nouns" may reduce accessibility and that unnecessary use of nominalizations can cause readers to feel alienated from a text. The reason for this is that in order to understand a text with many nominalizations we must "reconstruct our mental image of the world so that it becomes a world made out of things, rather than a world of happening" (Halliday and Martin 1993:82). For a reader not used to formal writing, the natural habitat of lexical nominalization, this reconstruction can be difficult and comprehension may be at risk (cf. e.g. Halliday and Martin 1993:70, Halliday and Matthiessen 2004:636f).

Another study pointing to the inherent difficulty of lexical nominalization is Inger Lassen's (2003) study of accessibility and acceptability of technical manuals. Lassen finds that accessibility varies according to the educational and professional background of the readers. Thus, readers familiar with the genre of technical manuals have a clear tendency to choose nominalizations rather than clauses (2003:114f), whereas readers not familiar with the genre choose clauses over nominalizations. Although several other sentence pairs were tested by Lassen (such as non-finite clause vs. finite clause, object omission vs. object retention, premodification vs. postmodification), the result for nominalizations vs. clauses was particularly noteworthy.

2.3.1 Lexical nominalizations as grammatical metaphor

One way of capturing the relation between two paradigmatically related structures is to describe them as congruent and metaphorical expressions (Halliday 1994:340ff, Halliday and Matthiessen 1999, Thompson 2004:221,

[15] By *accessibility* is meant roughly the same as *comprehensibility*, i.e. how easy it is to understand a construction. As it is used in this thesis, accessibility should therefore not be confused with the crosslinguistic hierarchy known as the *Noun Phrase Accessibility Hierarchy*, as proposed by Ed Keenan and Bernard Comrie (1977).

Halliday and Matthiessen 2004:636ff).[16] The general idea is that any given meaning in language will have a congruent expression encoding that particular meaning (Thompson 1996:165). Metaphorical expressions, on the other hand, are structures representing extended meanings. In the words of Thompson (1996:165) they are used "for other recognisably related uses: (...) the grammatical class of noun can be extended to cover actions, events and states".

According to this view, the verb is the congruent way of expressing a process, whereas lexical nominalizations are grammatical metaphors. Consider (11):

(11) They badly needed reasons to support the cost of a Mars expedition, and what goal could be more enticing than **the discovery of life there**? (ENPC/ESPC JL1)

In (11) the NP in bold is a grammatical metaphor related to the clause *if they should discover life there*, which expresses the process *discover* congruently.

In order for a construction to qualify as a grammatical metaphor some trace of the meaning from the 'old' element must be present in the re-categorized item. For example: *the discovery of life* is a metaphor because it behaves like a noun, a 'thing', but at the same time it conveys some of the process meaning associated with the verb *discover*. According to Halliday and Matthiessen (1999:243): "[a grammatical metaphor] is a fusion, or 'junction', of two semantic elemental categories: [...] *development* is a 'process-thing'". This is not the same as viewing grammatical metaphors as transformations of finite structures, however: the deverbal noun is an element which exists in its own right as a full-fledged component in the language system, and not as a transformation of a deep-structure. That is, while congruent and metaphorical expressions are 'potentially co-representational' (cf. Halliday 1994:344, Halliday and Matthiessen 2004:642f), there is in most cases a functional explanation for the metaphorical expression. In the case of lexical nominalizations, the added

[16] Note that the term *congruent* is used differently here from how it is used to describe translations (cf. 1.3.3).

element is that *processes* can be conceived as stative *abstract* things that can be referred to, defined and maintained throughout a piece of discourse.[17]

The semantic changes from process to thing have been noted by many scholars from different theoretical frameworks. In cognitive studies lexical nominalizations have been described as metaphors. This description is based on the claim that nouns prototypically profile things and verbs profile processes (Langacker 1987, Taylor 1989:672). Lakoff and Johnson (1980), for example, say about lexical nominalization that "events and actions are conceptualized metaphorically as objects, activities as substances, states as containers". Moreover, from the perspective of Dik's functional grammar, Mackenzie (1996:338) argues that "to present a process as though it were a thing is to present it as something it is not". However, the notion grammatical metaphor is different from other uses of metaphor since it is a grammatical notion, i.e. the domain of the metaphor is the grammar, as opposed to the lexis (cf. Halliday and Matthiessen 1999:232).

Consider (12b) as an illustration of grammatical metaphor. In example (12a), there is a congruent relation between meaning and form, whereas in (12b) there is grammatical metaphor (Halliday and Martin 1993:80):

(12)

a. The cast acted brilliantly so the audience applauded for a long time.

b. The cast's brilliant acting drew lengthy applause from the audience.

There are several grammatical differences between (12a) and (12b). The verbs *acted* and *applauded* in (12a) have been turned into the nouns *acting* and *applause* in (12b). Moreover, *the cast* has the genitive form (*the cast's*) and *the audience* appears in a prepositional phrase (*from the audience*). The adverbials (circumstances in SFL terminology) *brilliantly* and *for a long time* are now adjectives modifying the noun in the noun phrase (nominal group in SFL terminology). The cause-effect relation between the two clauses in (12a) is denoted by a verb rather than a conjunction. In other words, the alteration from (12a) to (12b) 'makes it sound as though *acting* and *applauding* were things, and as if the only event that took place was the

[17] Some lexical nominalizations can also denote concrete things, namely result nominalizations such as e.g. *John's building,* in the meaning *the building that John owns* (see discussion of result nominals in 3.6).

cause relation between them (*acting drew lengthy applause*)' (Halliday and Martin 1993:80).

According to Halliday and Matthiessen (1999:235), structures like (12a), where processes are denoted by verbs, are more basic than structures in which a process is denoted by a noun, as in (12b), in the sense that they come earlier in language acquisition.[18] In the words of Halliday and Matthiessen (1999:235ff), the verb, or clause, has 'semogenetic priority' over the nominalization. This means that it is likely that nominalizations must sometimes be *unpacked* into a congruent expression in order to be understood (Halliday and Martin 1993:31). For example, a lexical nominalization such as *John's construction of the building* may require a mental reconstruction into the clause *John constructed the building* and then back again to the lexical nominalization, before it is fully understood. Put differently, their status as grammatical metaphors may slow down the comprehension of lexical nominalizations.

Another reason why lexical nominalization might slow comprehension is the fact that a heavy use of nominalization creates a lexically dense text, i.e. a text with many lexical items in each clause (cf. e.g. Biber 1992, Chafe and Danielewicz 1987:99-101, Halliday 1994:350-352, Halliday and Martin 1993, Halliday and Matthiessen 2004:654).[19] In *Comprehending Oral and Written Language* Jay Samuels (1987:322) explains the impact of lexical density on a text thus:[20]

> Sentences that contain too much information can lead to poor comprehension. For example, two texts may contain the same number of words, but one of the texts may contain more concepts. The text with the greater density of concepts will be more difficult to comprehend.

And many years earlier Jespersen (1924:139) argued that:

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[18] The clause also tends to precede the nominalization in texts, so that a nominalization refers anaphorically to a clause (cf. the discussion of lexical nominalizations as Theme/Given in 2.5.1).

[19] Lexical density is calculated by computing the rate of lexical words to function words per clause (Halliday and Matthiessen 2004:654).

[20] Halliday and Matthiessen (2004:655) use only the unembedded clauses in a text to calculate lexical density. As noted by Vande Kopple (2003:367), this makes sense since "if you do not proceed in terms of unembedded clauses, you have to count some words twice, once for the overarching or matrix clause, and once for the embedded clause."

> When we express by means of nouns what is generally expressed by finite verbs, our language becomes not only more abstract, but more abtruse, owing among other things to the fact that in the verbal substantive some of the life-giving elements of the verb (time, mood, person) disappear. While the nominal style may therefore serve the purposes of philosophy, where, however, it now and then does nothing but disguise simple thought in the garb of profound wisdom, it does not lend itself so well to the purposes of every day life.

What Jespersen suggested is that lexical nominalizations are useful in abstract disciplines, but should be avoided in everyday speech.

To sum up, there are at least two reasons why lexical nominalizations are considered to reduce comprehension. Firstly, lexical nominalizations are grammatical metaphors expressing an incongruent relation between semantics and grammar and, secondly, lexical nominalizations produce a lexically dense text.

2.3.2 Grammatical metaphor vs. transcategorization

Not all lexical nominalizations are grammatical metaphors. Halliday and Matthiessen (1999:243) distinguish grammatical metaphor from transcategorization. The demarcation line between grammatical metaphor and transcategorization is important as transcategorized elements have a congruent mapping between meaning and form.

Some lexical nominalizations are clear examples of a process represented as a thing, i.e. they are grammatical metaphors:

(13) Grammatical metaphor:

Peter's analysis of radio waves is currently entering a new phase.

In other cases, the lexical nominalization may be a transcategorization, i.e. it denotes a person or a thing rather than a process:

(14) Transcategorization:

The analyst carefully examined the grammatical metaphors at hand.

(15) Transcategorization:

Peter's analysis can be found in the latest issue of Scientific Weekly

The agentive noun in (14), *the analyst*, refers to a human being, and the nominalization in (15), *Peter's analysis*, refers to a finished product that can be found in physical form on a piece of paper. As both (14) and (15) refer to physical objects, the prototypical meaning of 'ordinary' nouns, they are examples of transcategorization rather than grammatical metaphor.

The difference between grammatical metaphor and transcategorization can be difficult to establish, however. Halliday and Matthiessen (1999:243) suggest that there is a gradient scale between the two, and that there is not a great difference between:

> deriving a thing from a process, as 'one who makes', 'that which is made', and construing a process as a thing 'making, creation'; with 'action of making, act of making' somewhere in between. (Halliday and Matthiessen 1999:243)

At one end of the scale, we have the prototypical transcategorized noun with concrete reference, as in e.g. *the analyst* ('one who makes'),' or *the analysis* ('that which is made'), and at the other end of the scale is the prototypical grammatical metaphor represented by a deverbal noun interpreted as a process and exemplified by *making* and *creation*, with 'the act of making' in between. However, Halliday and Matthiessen do not give any further exemplification of intermediate types. This means that although they (Halliday and Matthiessen 1999:243) introduce the idea that there might be various degrees of grammatical metaphor, the intermediate categories remain fuzzy and we are not given criteria for how to distinguish between different senses. In chapter 3, I further address issues related to meanings (such as e.g. the intermediate meaning 'act of making' and the process meaning 'making' in the quote from Halliday and Matthiessen above). At this stage, however, we can conclude that the demarcation line between transcategorization and

grammatical metaphor is difficult to draw and that this fuzziness may be another reason why lexical nominalizations can be difficult to access.

2.4 Lexical nominalization and function

Although lexical nominalizations can sometimes reduce reader comprehension, it has also been shown that they fullfill certain communicative needs and can function as rhetorical tools enabling writers to present their view in a clear and concise way. In this section, the focus will be on how a text may benefit from the use of lexical nominalization.

2.4.1 The functions of lexical nominalization from a textual perspective

In their studies of scientific English from Chaucer to the present, Halliday and Martin (1993) argue that the language of science has developed in a certain fashion due to the specific communicative needs of the genre. Although lexical nominalizations are seen as a choice from the language system, there are usually very specific motivations having to do with the information structure explaining why they are used.

In SFL the information structure is associated with a special metafunction: the textual metafunction (cf. Halliday and Matthiessen 2004:64ff). In addition we need to distinguish the *ideational* and the *interpersonal* metafunction. The interpersonal metafunction structures how we interact with other people in the system of mood and modality and the ideational metafunction structures how we experience the world. The textual metafunction, finally, organizes interpersonal and ideational meaning in the textual systems of Theme-Rheme (cf. Halliday and Matthessen 2004:64ff, chapter 3) and Given and New information (cf. Halliday and Matthiessen 2004:87ff). In what follows I discuss the function of lexical nominalizations in textual systems.

Lexical nominalizations are often used as *Theme*. The Theme is formally defined as the first element with a function in transitivity and functionally as "[t]he element which serves as the point of departure of the message; it is that which locates and orients the clause within its context" (Halliday and Matthiessen 2004:64). The remaining part of the clause is defined as the Rheme. In this study, the definition Theme covers *the topical*

theme (cf. Halliday and Matthiessen 2004:79ff), i.e. the first element with a function in transitivity. In addition there is *the multiple theme* which includes elements without constituency status preceding the topical theme (e.g. conjunctions or interpersonal elements such as discourse particles and disjuncts) (see Halliday and Matthiessen 2004:79ff).

Consider the deverbal noun in thematic position in (16):

(16) Much of science is done like this, and it can be enjoyable to discover new compounds or mathematical concepts or old ones in strange places. *But* **these discoveries** usually require rigorous mental and physical preparation and often the learning of a new language. (ENPC/ESPC JL1)

In (16) the NP functioning as subject in the clause, i.e. *these discoveries* (in bold), is the topical theme, whereas the conjunction *but* (italized) is part of a multiple theme.

What is achieved by having the deverbal noun these discoveries as Theme in (16)? First, it allows the writer to place a process as Theme, i.e. as the starting point of the message, and second, these discoveries refers anaphorically to the preceding context (to discover new compounds or mathematical concepts) preparing the reader for the new information realized by the NPs *rigorous mental and physical preparation and often the learning of a new language*.21 According to Halliday and Martin (1993:131), this discourse function is typical of grammatical metaphors: we use [them] to "repeat what has gone before and as a springboard for the next move" (see also similar arguments in Koptjevskaja-Tamm 1993:267, Halliday and Martin 1993:64, Hopper and Thompson 1980, Noonan 1985). This means that the strucure in (16) involves both the system of the clause (i.e. Theme and Rheme) and the system of Given and New information. The latter system is not restricted to the clause, but to the information unit, and can therefore "extend over more than one clause, or less than one clause" (Halliday and Matthiessen 2004:88). In the unmarked case, however, the

[21] *Discover* is first introduced as the head of the VP *to discover new compounds or mathematical concepts* and then re-categorized as the head of the NP *these discoveries*. referring back to information which has been introduced by means of a clause earlier in the discourse context.

information unit corresponds to the clause, and Given information typically corresponds to the Theme.

Third, (16) shows how a lexical nominalization is common both in the Theme and in the Rheme (Halliday and Matthiessen 1999:262). The causal relation between the two lexical nominalizations is realized by the relational verb *require*. The prototypical relational verb is BE, expressing 'identity' between two entities, but the relation established between two lexical nominalizations may also be one of cause, condition, time, etc. (cf. Halliday 1994:119). The relational verb in these clauses is congruently realized by a conjunction or some other explicit marker signalling the type of relation, and the nominalizations by clauses. Example (17) illustrates the clauses corresponding to the lexical nominalizations in (16):

(17) In order **to discover** new compounds or mathematical concepts, one **has to prepare** rigorously mentally and physically and often **learn** a new language.

In (17), the relation between the clauses is realized by *in order to* rather than the relational verb *require*. Example (18) illustrates two other examples where the relation between two NPs is realized by a relational verb (a) and (b) (lexical nominalizations in bold, relational processes in italics):

(18)

a. **All adequate understanding of aphasia or agnosia** *would*, he believed, *require* a new, more sophisticated science. (ENPC/ESPC OS1)

b. Alternatively, **the formation of ice that expresses the ordered perfection of a snowflake** *represents* **a decrease of entropy of the same amount.** (ENPC/ESPC JL1)

In (18b) it is difficult to find a paraphrase, but the structure is typical. The distribution of different clause types in a text is linked to genre. For English, clauses with relational verbs are the prevailing clause-type in scientific texts, as well as in academic prose in general (Halliday and Martin 1993, Halliday and Matthiessen 2004:643).

Example (19) illustrates the use of lexical nominalizations in a larger text extract. The example is taken from the beginning of a paragraph in

which dark and white daisies are used to illustrate that the Earth is a living, self-sufficient biota.

(19)

(1) The next season would see the dark daisies off to a head start, for their seeds would be the most abundant.

(2) Soon their presence would warm not just the plants themselves, but, as they grew and spread across the bare ground, they would increase the temperature of the soil and air, at first locally and then regionally.

(3) With this rise of temperature, the rate of growth, the length of the warm season, and the spread of dark daisies would all exert a positive feedback and lead to the colonization of most of the planet by dark daisies.

(4) The spread of dark daisies would eventually be limited by a rise of global temperature to levels above the optimum for growth.

(5) **Any further spread of dark daisies** would lead to a decline in seed production (ENPC/ESPC JL1)

Example (19) illustrates the anaphoric function of lexical nominalization. How dark daisies grow and spread is first introduced in a clause (sentence 2, underlined) and then resumed as a lexical nominalization (sentence 3, 4 and 5, underlined). The lexical nominalizations denoting Given information are placed in thematic position.

The same switch from a clause to a nominalization recurs later in the same paragraph:

(19)

(10) In addition, when the global temperature is high, white daisies will grow and spread in competition with the dark ones.

(11) The growth and spread of white daisies is favored then because of their natural ability to keep cool (ENPC/ESPC JL).

The transition from New to Given forms the back-bone of the text. A description of how the white daisies grow is first introduced by a clause (underlined) and then referred to in the lexical nominalization in sentence 11

(underlined). Moreover, by means of the last lexical nominalization (sentence 11), the paragraph is neatly rounded off.

To sum up, lexical nominalization is important as a rhetorical device in discourse. Its contribution to the cohesive structure of texts can largely be described in terms of its role in the textual system Theme-Rheme and Given-New.

2.4.2 Lexical nominalization in definitions

Lexical nominalizations are furthermore used to define new terminology. According to Halliday and Martin (1993:261), a nominalized structure defining a specific term serves the function of "[ridding] the discourse of the grammatical metaphors which were essential to the process of constructing a scientific reading of reality in the first place". By means of the term, technical knowledge is defined and distilled (cf. Halliday and Martin 1993:225).

The use of nominalizations as technical definitions is illustrated in (20):

(20) **The self-regulation of the system** is an active process driven by the free energy available from sunlight. (ENPC JL1)

In (20), a 'self-regulation of the system', which is later reduced to *self-regulation* is defined as *as active process driven by the free energy available from sunlight*. By using *self-regulation* (of the system), the reader is saved the cognitive effort of retrieving the long explanation every time it is needed in the discussion. Consequently, granted that the reader is able to unpack the metaphor when it is introduced, the effort of processing the lexical nominalization will be less complicated the next time it is introduced.

2.4.3 Lexical nominalizations as complex categories

One basic difference between verbs and nouns is that NPs have 'far greater potential than verbal groups for creating experientially complex categories' (Halliday and Matthiessen 1999:180) (cf. also Hartnett 2001:104, Koptjevskaja-Tamm 1993:266). In other words, since the noun can be modified by a large number of modifiers, the NP is a more welcoming

environment for additional information than the VP, which can usually take only one or two specifying adverbials. By construing an experience as a thing, i.e. a noun, we open up for the possibility of elaboration. Consider (21):

(21) **His powerful intervention in their affairs** had demonstrated beyond reasonable doubt that Yahweh was up to the job of being their elohim (ENPC/ESPC KA1)

The lexical nominalization *his powerful intervention in their affairs* takes on a specific textual meaning: it sums up the description earlier in the section of how Yahweh made his voice heard. Using the deverbal noun *intervention* rather than the verb *intervene* makes it possible to describe the nature of the event by means of adjectives like *powerful*. Compared to the clause *he intervened powerfully in their affairs and this demonstrated beyond reasonable doubt that Yahweh was up to the job*, the NP *powerful intervention* sounds less clumsy, perhaps due to the fact that we get rid of the the adverbial 'powerfully'.[22] This advantage was noted already by Jespersen (1924:266) who pointed out that when 'verbal nouns' have attributes they are preferable to long and clumsy VPs. Jespersen (1924:137) illustrated his point with the examples in (22) and (23):

(22) The Doctor's extremely quick arrival and uncommonly careful examination of the patient brought about her very speedy recovery.

(23) The Doctor arrived extremely quickly and examined the patient uncommonly carefully; she recovered very speedily.

The resources provided by the NP to expand information can be used to create elaborate taxonomies (cf. Halliday and Martin 1993, Halliday and Matthiessen 1999, Hartnett 2001:104). An example of this is given in (24):[23]

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[22] It seems also that 'powerful intervention' is more frequent than 'intervene powerfully'; a search for 'powerful intervention' on Google gave 902 hits, whereas various forms of the verb *intervene* + the adverb *powerfully* resulted in 60 occurrences (date of access: May 20, 2004).

[23] Example (24) is taken from a dictionary entry on the web: http://www.teachervision.com/ce6/sci/A0859781.html (date of access: June 19, 2003).

(24)

> **Uniform motion** is motion at a constant speed in a straight line. **Uniform motion** can be described by a few simple equations. The distance *s* covered by a body moving with velocity *v* during a time *t* is given by $s=vt$. If the velocity is changing, either in direction or magnitude, it is called **accelerated motion** (see acceleration). **Uniformly accelerated motion** is motion during which the acceleration remains constant. The average velocity during this time is one half the sum of the initial and final velocities. If *a* is the acceleration, v_o the original velocity, and v_f the final velocity, then the final velocity is given by $v_f=v_o + at$. The distance covered during this time is $s=v_ot + 1/2\ at^2$. In **the simplest circular motion** the speed is constant but the direction of motion is changing continuously. The acceleration causing this change, known as centripetal acceleration because it is always directed toward the center of the circular path, is given by $a=v^2/r$, where *v* is the speed and *r* is the radius of the circle.

The term *uniform motion* and its description is the topic of the text. In (26), various 'types of motion' (in bold) are presented and the NP is modified to establish new terms (e.g. *uniformly accelerated motion*). The various types of motion (*uniform motion, accelerated motion*, *uniformly accelerated motion* and *circular motion*) add to the cohesion of the paragraph.

2.5 Summary

To sum up, lexical nominalization is a structure that has all the formal characteristics of an NP (i.e. the participants in the process are coded as modifiers of the noun) and can be related to other more or less nominal/clausal structures by means of agnation.

In SFL, lexical nominalizations function as grammatical metaphor. They are processes dressed up as 'things' (cf. Halliday and Matthiessen 1999) and this makes them less accessible than their agnate clauses. The congruent way of expressing meaning (the clause) tends to precede the metaphorical or non-transparent way of expressing meaning (the lexical nominalization). In other words, clauses have semogenic priority over lexical nominalizations.

Not all lexical nominalizations are grammatical metaphors, however. Some are transcategorized elements that are not necessarily related to a clause and part of the same network of agnates, but are used as a prototypical

noun: they refer to a ‘thing’ in the sense of a ‘physical thing’ and not a ‘process’. Difficulty arises when a lexical nominalization is ambiguous between a metaphorical and a transcategorized meaning. For example *John’s building* can refer to the thing that has been built, or the act of building.

Lexical nominalizations have a number of important functions. The lexical nominalization can be a powerful text-structuring device. For example, a lexical nominalization can be used to sum up or reduce the information in a previously mentioned clause. In SFL this is described as placing lexical nominalizations as Themes in the sentence. Finally, the nominalization process enables us to define new terminology.

3 THE MEANING OF LEXICAL NOMINALIZATIONS

3.1 Introduction

The main purpose of this chapter is to discuss the meaning of English lexical nominalizations as a platform for the discussion of translation correspondences in chapters 4 - 7.

In the previous chapter I described lexical nominalizations as grammatical metaphors, i.e. as 'processes' dressed up as a 'things' or as 'transcategorized' elements denoting physical things. In this chapter I make a more fine-grained analysis of the meaning of lexical nominalizations on the basis of different types of event meaning and different types of 'things' (cf. 2.3.2).

The model is Grimshaw's classification of lexical nominalizations into *complex-event nominals*, *simple-event nominals* and *result nominals*. Complex-event nominals are lexical nominalizations that have process meaning, and are therefore often described as *process nominals* (cf. Alexiadou 2001) or *action nominals* (cf. Koptjevskaja-Tamm 1993:5), simple-event nominals are lexical nominalizations that lack process meaning,[24] and result nominals are lexical nominalizations that lack all resemblance to verbal meanings: they denote abstract or concrete things, i.e. they are transcategorized elements (cf. 2.3.2). As a background, I relate my analysis to Vendler's well-known semantic classification into fact, propositions and events (cf. e.g. Vendler 1967,1968).

The chapter has the following structure: section 3.2 gives a brief overview of Vendler's model and section 3.3 discusses Grimshaw's model. Section 3.4 deals with complex-event nominals, section 3.5 with simple-event nominals and 3.6 with result nominals.

3.2 Vendler's semantic categories

Many scholars use Vendler's (1967, 1968, 1970) semantic model of nominalizations, where nominalizations are divided into the categories *proposition, facts* and *events* (see e.g. Koptjevskaja-Tamm 1993:13, Zucchi

[24] Simple-event nominals roughly correspond to what has been referred to as *act nominals*, cf. Koptjevskaja-Tamm (1993:20).

1993).[25] Example (1) illustrates a lexical nominalization as a fact, (2) as a proposition and (3) as an event (Vendler 1967: 225-6):

(1) Fact

The collapse of the Germans was fortunate.

(2) Proposition

The collapse of the Germans is unlikely.

(3) Event

The collapse of the Germans was gradual.

According to Vendler, facts, propositions and events are determined by the type of complement-taking predicate. For example, propositions follow predicates such as *assert* and *believe*, facts follow predicates such as *know* and *regret* and events follow predicates such as *hear* and *continue* (cf. Koptjevskaja-Tamm 1993:17). The distinction between facts and propositions depends on whether a factive or a non-factive predicate is used and thus goes along with Kiparsky and Kiparsky's (1970) distinction between 'factive' and 'non-factive' predicates. A fact is objectively given, while propositions (opinions, beliefs, predictions) are subjective.[26]

Vendler (1967:225f) argued further that there is a connection between the form of the nominalization and the types of meanings it can convey. Lexical nominalizations (referred to as *perfect nominals*) can refer to facts, propositions and events, while clausal nominalizations, such as gerunds and *that*-clauses (referred to as *imperfect nominals*) can refer to propositions and facts, but not to events. In other words, you can replace *the collapse of the Germans* with a *that*-clause when it is a fact or a proposition, but not when it is an event:

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[25] Vendler's model is a development of Lee's (1960) division of nominalizations into facts and events.

[26] Compare also the distinction between *potential facts* and *state of affairs* in Dik's functional grammar (cf. Hengeveld and Mackenzie 2006:673, Mackenzie 2007:221) and between *metaphenomena* and *macrophenomena* in SFL (Halliday and Matthiessen 2004:441), which seem to me to correspond to Vendler's categories fact/proposition and event.

(4) Fact

a. **The collapse of the Germans** was unfortunate.

b. **That the Germans collapsed** was unfortunate.

(5) Proposition

a. **The collapse of the Germans** is unlikely.

b. **That the Germans will collapse** is unlikely.

(6) Event nominalization

a. **The collapse of the Germans** was gradual.

b. ***That the Germans collapsed** was gradual.

The relation between different forms of nominalizations and meaning noted by Vendler can be illustrated in translations. In (7) and (8) an *at*/*att*-clause (i.e. a *that*-clause) is possible, but not in (9), where a different strategy has been used by the translators:

(7)

a. The arbitrariness of even a chronological division is underlined by **the persistence of the Archean biota**; their world has never ended, but lives on in our guts. (ENPC/ESPC JL1)

b. Tilfeldigheten i en kronologisk inndeling blir understreket ved **at livsformene fra arkeikum stadig varer ved**. (ENPC JL1T)

c. Att även en kronologisk indelning har stora svagheter visas av **att grupper av organismer som levde under arkeozooikum fortfarande finns kvar**. (ESPC JL1T)

(8)

a. For these competent and dedicated biologists, *positing* **the regulation of the atmosphere by microbial life** seemed as absurd as expecting the legislation of some human government to affect the orbit of Jupiter. (ENPC JL1)

b. *Å hevde* **at atmosfæren ble regulert gjennom mikroorganismenes liv** var for disse dyktige og standhaftige biologene like absurd som å vente at en regjering av personer kunne fastsette regler for planeten Jupiters kretsløp. (ENPC JL1T)

(9)

a. **Much prior programming of the mind** was needed to spot a musk orchid in the grass. (ENPC/ESPC JL1)

b. **Man måtte programmere sitt sinn omhyggelig på forhånd** for å oppdage en honningblomst i gresset. (ENPC JL1T)

c. För att hitta ett honungsblomster i gräset **krävs det en benhård koncentration**, ett fritidsnöje som inte uppskattas av särskilt många. (ESPC JL1T)

Most of Vendler's examples were of deverbal nouns morphologically related to an intransitive verb preceded by an *s*-genitive (e.g. *Mary's arrival*) or of deverbal nouns morphologically related to a transitive verb followed by an *of*-construction (e.g. *the singing of the Marseillaise*). In both these cases a paraphrase with a clause is relatively straightforward and as a consequence Vendler did not address the question of whether deverbal nouns have argument structure and how this affects the relation between the lexical nominalization and the clause.

Examples such as *John's study* or deverbal nouns followed by clauses (e.g. *Khrushchev's spasmodic attempts to eradicate them*) have a less clear relation to a clause. This means that the *s*-genitive, *to*-infinitive and *that*-clauses and other elements in the noun phrase need to be further analysed in terms of argument structure. Put differently, the question of whether such elements are arguments or modifiers, i.e. whether or not they are syntactically required, is essential to capture how clause-like the lexical nominalization is. In short, Vendler's categories are critical to capturing some relations of agnation, but the categories can be further modified. The next section gives an overview of Grimshaw's theory of argument structure in deverbal nouns. The theory explains further agnation relations and is therefore the model focused on in the subsequent discussion of translation correspondences.

3.3 Grimshaw's theory of argument structure

In *Argument structure* (1990), Jane Grimshaw distinguishes between different types of deverbal nouns: those with argument structure and those without. Hence, for Grimshaw the interesting question is not the meaning of lexical nominalizations, but whether or not deverbal nouns, like verbs, take

grammatical arguments. However, as Grimshaw's distinction is built on an analysis of the deverbal noun taking into account aspectual properties of the verb to which the deverbal noun is morphologically related, semantics plays a decisive role in the theory.

Grimshaw's categories are interesting because they allow us to assign different argument status to adnominal elements, i.e. elements other than the head in the lexical nominalization (cf. Mackenzie 1997, 2007). Arguments are syntactically required whereas other elements, which are optional, function as modifiers. Moreover, the term *argument* should not be confused with *complement*. A complement can be defined as an element 'subject to the subcategorization restrictions of the head noun or the main verb' (Andersen 2007:59) without being syntactically required (cf. the discussion of examples (10), (11) and (12) below).

Grimshaw refers to deverbal nouns with grammatical arguments as *complex-event nominals*, whereas deverbal nouns without argument structure can be split into the types *simple-event nominal* and *result nominal*. Complex-event nominals are recognized by the fact that they have an associated event structure, which can be futher analysed into aspectual subparts, whereas simple-event nominals and result nominals cannot be further subclassified. In other words, complex-event nominals focus on the unfolding of a process, and are therefore described as having process meaning (Grimshaw 1990:5). The three types are illustrated in (10), (11) and (12):[27]

(10) Complex-event nominal

Once installed in power, Lenin drew up a second programme, which called for **the establishment of the dictatorship of the proletariat** and **the industrialisation of the country**. (ENPC MAW1)

(11) Simple-event nominal

This was a difficult subject to raise with Leonid Brezhnev, who saw himself as the saviour of the private plots after **Khrushchev's spasmodic attempts to eradicate them.** (ENPC MAW1)

[27] Grimshaw refers to *deverbal nouns* as complex-event nominals, simple-event nominals and result nominals. However, I will refer to the lexical nominalization (i.e. the NP) as a complex-event nominal, simple-event nominals and result nominals.

(12) Result nominal

He heard of Stalin's incompetence in the early months of the war, and of his refusal to take seriously the **constant warnings** he received **of Hitler's plans to invade.** (ENPC MAW1)

In (10), the two *of*-constructions are obligatory arguments and the lexical nominalization is a complex-event nominal, meaning that the lexical nominalizations refer to processes involved in *establishing* and *industrializing*. In (11), on the other hand, the *to*-infinitive can be omitted without a change in meaning: both with and without the *to*-infinitive, *attempts to eradicate them* is a simple-event nominal referring to an event or act of attempting as a whole, not to a process. In (12) the *of*-construction cannot be regarded as an argument because the head noun *warnings* refers to a message, i.e. the lexical nominalization has result meaning.

My analysis of lexical nominalizations is based on Grimshaw's categories, with some modifications. For example, whereas Grimshaw splits adnominal elements into arguments (with complex-event nominals), complements (with simple-event nominals) and modifiers (with result nominals), I only distinguish between arguments and modifiers, including complements in the modifier category. There are two reasons for this. The first and most obvious reason is that the boundary between complements and modifiers is considerably more fuzzy than the boundary between arguments and non-arguments (see e.g., discussion in Bowen 2005). The second reason is that I wanted to avoid confusion between the terms complement (which usually refers to adnominal elements that are lexically determined, but can be omitted) and argument (which refers to adnominal elements that are syntactically required to express a certain meaning).

When applied to real corpus data, the categories complex-event, simple-event and result nominals are sometimes fuzzy, as will be pointed out in the discussion. In the rest of the chapter I present and describe the categories of lexical nominalization.

3.4 Complex-event nominals

This section is structured as follows: section 3.4.1 discusses the general properties distinguishing complex-event nominals from other types of lexical nominalizations. Section 3.4.2 explains internal and external arguments with

verbs and their relevance to the argument structure of deverbal nouns. The remainder of the section discusses some problematic cases where it is difficult to decide whether an adnominal element is an argument or a modifier. Section 3.4.3 discusses ergative structures (such as e.g. *the melting of the snow*), section 3.4.4 the argument status of *s*-genitives, *by*-constructions, premodifiers and elements in compounds, and 3.4.5 lexical nominalizations headed by deverbal nouns in *-ing*.

3.4.1 General properties of complex-event nominals

To begin with it is important to point out that despite their name, complex-event nominals do not always have an event meaning in the Vendlerian sense, but can have an event, fact or proposition meaning. A quote from Austin (1961:104) can perhaps help clarify this issue:

> [p]henomena, events, situations, states of affairs are commonly supposed to be genuinely in-the-world (…). Yet surely of all of these we can say that they are facts. *The collapse of the Germans* is an event and is a fact - was an event and was a fact.

Halliday (1994:269) (cf. also Halliday and Matthiessen (2004:440f)), who uses the terms *fact* and *act* rather than *fact* and *event*, describes this similarity in meaning in the following words: "[t]here is a only a minimal distinction, and perhaps even blending between (projection: fact) *she liked the snow falling* (that the snow was falling) and (expansion: act) she watched *the snow falling* (as the snow was falling)." Compare also Mackenzie (2007:224), who proposes that nominalizations such as complex-event nominals 'designate' events (referred to as 'state-of-affairs' by Mackenzie), but that 'the designation' can be 'metonymically extended' to other semantic categories.

What is important in Grimshaw's analysis is, however, not the meaning of the complex-event as a proposition, fact and event, but whether the event portrayed as a fact, proposition or event has 'an internal aspectual analysis' (cf. Grimshaw 1990:5).[28] What this means is that complex-event meanings

[28] Grimshaw's analysis is based on a model of event-structure by Pustejovsky (1988) (see also Pustejovsky 1998).

have aspectual properties which gives them process meaning (cf. Grimshaw 1990:26).

According to Grimshaw (1990:50ff), three criteria distinguish complex-event nominals from simple-event and result nominals:

- they are non-count.
- rhey can take aspectual modifiers.
- they have argument structure.

First, complex-event nominals are non-count, meaning that they cannot be preceded by the indefinite article, a numeral or a demonstrative such as *that* and they cannot be changed into the plural (cf. Grimshaw 1990:54). Second, complex-event nominals allow aspecual modifiers such as *constant*. Third, they have argument structure, which means that the internal argument of the corresponding verb must be kept, e.g. the direct object.[29] Example (13) illustrates the three criteria described above (Grimshaw 1990:54):

(13)

a. They observed **the/*an/*one/*that/constant assignment of the problem.**

b. ***The assignments of the problems** took a long time.

Thus, the complex-event nominal is an example of the type of lexical nominalization which is sometimes referred to as an *action nominal*, i.e. a deverbal noun referring "to actions and whose participants are an agent and a patient" (e.g. *John's construction of the building*) and that has a systematic relation to the clause (Koptjevskaja-Tamm 1993:12).

3.4.2 External and internal arguments

Although complex event nominals take syntactically required arguments, their argument-taking properties differ from those of the verb. According to Grimshaw, the argument-taking properties of the noun only require overt realization of the *internal* argument of the corresponding verb, whereas the *external* argument can be omitted (cf. Grimshaw 1990:107ff,122), and

[29] See 3.4.3 for an explanation of external and internal arguments.

arguments must be realized by means of a preposition before the argument. The criterion that only internal arguments are syntactically required explains why the subject does not need to be realized in complex-event nominals such as (14):[30]

(14) A scapegoat was killed to cancel the old, dying year**; the public humiliation of the king** and the enthronement of a carnival king in his place re-produced the original chaos (…). (ENPC/ESPC KA1)

The distinction between external and internal arguments describes differences in meaning between lexical nominalizations morphologically related to transitive and intransitive verbs.

According to Grimshaw (1990:44) the distinction between external and internal arguments is based on two separate semantic analyses: "one in terms of aspectual properties and one in terms of thematic properties". The external argument is the most *prominent argument* in *the thematic hierarchy* and in *the aspectual hierarchy*, whereas the internal argument has a closer connection to the verb. Moreover, there can be only one external argument, but two internal arguments. If there are two the internal arguments, for instance both a direct and an indirect object, these are ranked in terms of prominence relative to each other.

The thematic analysis is based on the semantic role of the argument. According to Grimshaw (1990:7f, 24) each argument can be regarded as a participant realizing a particular thematic role (such as Agent, Patient) and "argument structures are constructed in accordance with the thematic hierarchy" (Grimshaw 1990:7):[31]

(15) (Agent/Cause (Goal/Source/Location (Patient)))[32]

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[30] It should also be mentioned that Grimshaw's observation (1990:24,41) that the Agent/Cause can be suppressed in complex-event nominals is in line with many functional and pragmatic descriptions of nominalization, where it is stated that one of the prime functions of nominalization is to allow the Agent of the corresponding clause to be omitted (Andersen 1998a,b, Hartnett 2001).

[31] *Thematic role* corresponds to what is referred to as *semantic role* (cf. Payne 1997) or participant role in SFL (cf. Halliday and Matthiessen 2004:168ff). Thematic roles should therefore not be confused with the textual term*Theme* used in chapter 2.

[32] Grimshaw (1990:24) uses the term Theme rather than Patient. As I refer to Theme in the sense of textual Theme, however, Patient is used here for clarity.

In (15), the participant surrounded by the highest number of brackets is the most deeply embedded participant in the structure. [33] Thus, from an *encoding* perspective, participants realizing thematic roles such as Goal, Source, Location or Patient are more deeply embedded in the clause than the Agent, which is added later in the projection. In example (16), for instance, the base projection is *hit the ball*, and the Agent *Levin* is added later.[34] From a *decoding* perspective, on the other hand, the Agent comes first in the clause, which explains why it is called the most prominent argument:

(16) (Agent: *Levin*) hit (Patient: *the ball*).

The thematic hierarchy as described by Grimshaw can be compared with other theories on argument structure. For example, Langacker (1999:84) states that the transitive object is the "[s]ingle participant in a thematic relationship that functions as an event's conceptually autonomous 'core'", i.e. the subject is added later.

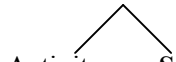
The other hierarchy that is important in order to distinguish between the external and internal argument is the *aspectual hierarchy*. This hierarchy is based on the event-structure theory developed by Pustejovsky (1998). Pustejovsky argues that the internal temporal structure of a verb (and a noun) can be divided into one event or two sub-events. The event-structure of an intransitive activity verb is illustrated in (17) and the event structure of a transitive accomplishment verb in (18):

(17) Activity

|

Activity

(18) Accomplishment



[33] In (24) the Patient is surrounded by an extra set of brackets because Grimshaw is of the opinion that the Patient is placed after the Goal in a structure where there is both a Goal and a Patient present (e.g. *he* (Agent) *gave her* (Goal) *a kiss* (Patient). However, Grimshaw's position regarding this issue is a matter of controversy. Although there is general consensus that the Agent is more prominent than the Patient, the relative order of the other participants is not agreed upon (cf. e.g. Foley and Van Valin 1984, Bresnan and Kanerva 1989).

[34] See Radford (2004) for a thorough description of projection.

What is described in (17) and (18) is how an activity verb is realized by one on-going event (17), whereas an accomplishment verb can be subdivided into one sub-event referring to an on-going activity and to a sub-event referring to the end-point of the activity (18) (with emphasis on the end-point of the action, as indicated in bold). The generalization proposed by Grimshaw is that the external (and most prominent) argument is always the argument participating in the first sub-event, while the argument participating in the second sub-event is the internal and less prominent argument.

Thus, if we take the verb *kick*, it can be used intransitively or transitively, with partly different meanings:

(19) Intransitive:

The baby is kicking.

(20) Transitive:

Paul kicked the ball.

In (19), *kick* is an activity and in (20) it is an accomplishment. In both (19) and (20) the subject (i.e. *the baby* in (29) and *Paul* in (20)) is the argument involved in the initial phase of the process of kicking. This means that according to the aspectual hierarchy the subject is the most prominent argument in both (19) and (20), and is therefore the external argument. On the other hand, the intransitive verb in (19) only has one argument, which we have seen is the external argument, and consequently there is no internal argument. In (20), on the other hand, there is a second argument, namely the direct object (*the ball*). The direct object is the argument involved in the second sub-event of the accomplishment verb, i.e. the resulting phase, and *the ball* is therefore the internal and less prominent argument from the aspectual point of view. For nominalizations, only those nominalizations with an event-structure consisting of two sub-events can be complex-event nominals. Importantly, this does not mean that the lexical nominalization must always have accomplisment meaning with focus on the last sub-event. Activity meanings are also possible, provided that there is an internal argument present creating an event-structure consisting of two sub-events.

According to Grimshaw the external argument is the most prominent one in both the thematic and the aspectual hierarchy. In (21), the two views of the thematic and aspectual hierarchy are combined, and the external argument is marked by 1 (cf. Grimshaw 1990:28):

(21)

A Intransitive[35]
He ran
(Agent)
1

B Transitive
They studied the assignment
(Agent (Patient))
1 2

C Ditransitive
He gave her a kiss ~
(Agent (Goal (Patient)))
1 2 3

D Ergative [36]
The snow melted
((Patient))
2

The external arguments are the arguments surrounded by one set of brackets. In A the subject of the intransitive verb is the external argument, but there is no internal argument, and consequently Grimshaw argues that there is no corresponding deverbal noun with complex-event meaning. This means that lexical nominalizations such as *John's running* or *the running of John* are not complex-event nominals. In B *they* (subject) is the external argument and *the assignment* (direct object) is the internal argument of the transitive verb *study*. This is reflected in the nominalization where *they* is optional whereas the internal argument *the assignment* is obligatory *((their) study of the*

[35] Grimshaw (1990:41) uses the term *unergative* for what I will refer to as intransitives.
[36] Grimshaw (1990:41) uses the term *unaccusative* for what I will refer to as ergative.

assignment). In C *he* is the external argument (subject) and *her* (indirect object) is an internal argument that can be suppressed because of the presence of the more prominent internal argument *a kiss* (direct object) (cf. Grimshaw 1990:14). The corresponding complex-event nominal is ((*his*) *giving of a kiss (to her*)).

To sum up, lexical nominalizations morphologically related to transitive verbs, such as *the construction of the building* are complex-event nominals although there is no explicit realization of the external argument, i.e. the subject. Conversely, lexical nominalizations such as *John's construction* cannot be complex-event nominals because the internal argument is not expressed. Lexical nominalizations morphologically related to intransitive verbs are not possible as complex-event nominals, as they lack an internal argument. This leaves us with the analysis of lexical nominalizations morphologically related to the ergative structure in D: *the snow melted*. The analysis of ergative arguments turns out to be somewhat problematic, and I have therefore chosen to discuss them in a separate section.

3.4.3 Ergative lexical nominalizations

Deverbal nouns morphologically related to ergative verbs such as *melt* present a particular problem. If we consider the ergative structure in example (21) again, i.e. *the snow melted*, we can see that according to Grimshaw (1990:122), the only argument of the ergative verb *melt* (i.e. the subject *the snow*) should be regarded as the internal argument, and there is no external argument. This view has the consequence that because there is no external or most prominent argument that can be suppressed, nouns morphologically related to an ergative verb e.g. *the melting of the snow* cannot be complex-event nominals. However, this prediction does not hold true. Grimshaw (1990:122) herself gives the example *the rapid melting of the ice* with the comment that "it is not entirely clear what conclusion we should draw from the data (…)" and other scholars have argued that these types can be complex-event nominals (cf. e.g. Alexiadou 2001:41f).

In my data, several of the instances of deverbal nouns related to ergative verbs clearly have process meaning associated with complex-event nominals. Example (22) is one instance of this:

(22) And this, mercifully, held to the end - for despite **the gradual advance of his disease** (a massive tumour or degenerative process in the visual parts of his brain) Dr P. lived and taught music to the last days of his life (ENPC/ESPC OS1).

In (22), the presence of the aspectual modifier *gradual* suggests that we have a complex-event nominal, as aspectual modifiers are only possible with complex-event nominals (cf. 3.4.1).

One explanation could be that deverbal nouns morphologically related to ergative verbs include a suppressed argument, which explains why process meaning is possible. Consider example (23):

(23) In begetting the child, the god's energy had been depleted, so to replenish this and to ensure **the circulation of all the available mana**, the first-born was returned to its divine parent (ENPC/ESPC KA1).

In (23), *mana* has a subject-like role, i.e. *the mana* circulates, but cannot be seen as the Instigator of the action (*circulation of mana*). Rather, some external force must have initiated the circulation, and not the mana itself. This external 'force' can be viewed as the suppressed argument and is described in this thesis as the *Instigator*.[37]

The status of the Instigator as the suppressed argument in a lexical nominalization morphologically related to an ergative verb can be explained using Halliday's model of ergativity (cf. Halliday 1994:163-173), Halliday and Matthiessen 2004:288-305).[38] Halliday and Matthiessen argue that in clauses headed by an ergative verb, one central participant is always involved in the process, namely the *Medium* (Halliday and Matthiessen

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[37] As an interesting aside, it can be mentioned that my material includes seven examples with explicit Instigators: e.g. *Impression: probably Korsakov's syndrome, due to alcoholic degeneration of the mammillary bodies* (ENPC/ESPC OS1). In this example, the premodifying adjective *alcoholic* refers to the Instigator of the degeneration process, namely *alcohol*.

[38] Halliday (1994:163) and Halliday and Matthiessen (2004:288-305) use *Agent* for the semantic role expressing external agency in ergative constructions. However, to avoid confusion with *Agent* in other linguistic frameworks, I follow Davidse (1992:108-109) and use *Instigator* for this role.

2004:284).[39] If only the process and its central participant are expressed, the clause consists of a Medium and a predicate, as in example (24):

(24) (Medium :**The pencil**) (Predicate: **broke**).

The Instigator only comes into play for ergative verbs, if we ask the question whether the process is self-instigated or instigated externally:

(25) (Instigator: **John**) (predicate: **broke**) (goal: **the pencil**).

In (25), an Instigator is added in subject position, pushing the subject of (24) to object position. Note also that with ergative verbs, the labels *transitive* and *intransitive* are no longer appropriate. In transitive/intransitive constructions, the subject is Agent in both structures, as in the pair *the tourist hunted*/*the tourist hunted the lion* (Halliday and Matthiessen 2004:288). In ergative pairs, the same element can be the subject in a one-participant clause, and the object in a two-participant clause. For example, in Halliday's example *the cloth tore*/*the nail tore the cloth,* 'the cloth' is Medium/subject in the first clause and Patient/object in the second, and yet it is *the cloth* that tears in both clauses (Halliday 1994:163). This implies that 'the cloth' has some degree of agency even in the two-participant structure.

The notion ergativity as it is used by Halliday (1994) and Halliday and Matthiessen (2004) can therefore explain examples like (32). That is, in (32), the Medium is present and the ergative Instigator is suppressed, satisfying the argument structure of *circulation* (i.e. providing it with an internal argument). It follows from this argument that *the circulation of all the available mana* has complex-event meaning.

[39] It is important to recognize that *the Medium* is not synonymous with the internal argument, even if the Medium functions as an internal argument. 'Medium' is a semantic label and 'internal argument' a syntactic one.

3.4.4 Arguments and modifiers

In addition to the distinction between external and internal arguments, we need to distinguish between arguments and modifiers (cf. 3.3). This section discusses some problematic examples where it is uncertain whether the lexical nominalization has arguments or modifiers. As only complex-event nominals take arguments, whereas simple-event and result nominals take modifiers (cf. 3.3), it is impossible to keep the discussion of arguments and modifiers distinct from the discussion of meaning in lexical nominalization. The section includes analyses of the *s*-genitive, *by*-phrases, premodifing adjectives and the first N in N + N compounds such as *bicycle repairing*.

In section 3.4.3, we saw that deverbal nouns differ from verbs in their argument-taking capacities: only internal arguments, i.e. the direct object and the ergative Medium, are licensed by argument structure, whereas external arguments, i.e. the transitive and intransitive subject, are not. We have also seen that the reason for this is that external arguments are more prominent and can therefore be suppressed. Thus, the adnominal elements in bold in (26) and (27) are arguments, whereas those in (28) and (29) are modifiers:

(26) Transitive object

The building **of data bases**.

(27) Ergative Medium (as argument)

The chemical and physical evolution **of a planet.**

(28) Premodifier related to subject of transitive verb.

El's special protection**.**

(29) Postmodifier related to subject of transitive verb.

A mere trace of carbon dioxide is present, far below **the expectation of planetary chemistry.**

Another difference between nouns and verbs is that deverbal nouns only take arguments in the form of a PP. In Grimshaw's (1990:70) words:

> (…) nouns do not behave as full argument-takers. Although they do take prepositional arguments (…) they never take sentential arguments, nor do they take arguments in so-called passive nominals. The generalization is that nouns take arguments only when they combine with prepositions.

It follows from this analysis that the *of*-construction in (30) is an argument, whereas the *that*-clause in (31) is a modifier.

(30) PP as argument

a. **John's construction *of the building***

b**.** **John's construction**

(31) *That*-clause as modifier

a. **the old man's assertion *that "The Earth is an organism"***

b. **the old man's assertion**

The analysis of the *that*-clause as a modifier makes sense, since it can be omitted without a change of meaning of the deverbal noun, (cf. discussion of *that*-clauses in 3.6.1): The question is whether the *s*-genitives in (30) and (31) can be arguments. According to Grimshaw (1990:51) adnominal elements realizing external arguments are grammatical subjects only if they occur in lexical nominalizations with an explicit internal argument. For example, in (30a), *John's* is the subject due to the presence of the internal argument *the building*. In (30b) and in (31a) and (31b), on the other hand, the *s*-genitive is not the subject, as there is no internal argument (object). Nevertheless, even in (30a), *John's* can always be omitted, and Grimshaw therefore argues that the *s*-genitive cannot be a 'real argument', but an *argument adjunct* (*a*-adjunct). Despite this, I will refer to the *s*-genitive as a (grammatical) subject in examples such as *John's construction of the building*.

My analysis differs from Grimshaw as I take the view that the *s*-genitive can realize proper arguments, i.e. internal arguments. Consequently, the *s*-genitive can realize the transitive object or the ergative Medium (and can occur in nominalizations with complex-event meaning):

(32) **Stalin's** defeat

(33) **The Earth's** evolution

As observed by Alexiadiou (2001:99) one argument in favor of regarding the *s*-genitive in (32) and (33) as an argument is the fact that the *s*-genitive can only be interpreted as the internal argument in these examples. In an example such as *John's construction* where there is no object, on the other hand, the most likely interpretation of the *s*-genitive is the owner of *construction*.

Another problematic case consists of structures where an argument is realized in a *by*-phrase. Grimshaw (1990:87) argues that the *by*-phrase has the same qualities as the *s*-genitive: it only corresponds to the subject if there is also an object present (Grimshaw 1990:87, cf. also Hornstein 1977:148,n12). A structure with *by* as subject and the object realized by an *of*-construction is exemplified in (34):

(34) **The spending by governments of enormous sums of public money on weapons and military forces** follows no such pattern (ENPC/ESPC CS1).

In (34), *of enormous sums of public money* is the object and the *by*-phrase the subject of *spending*.

If only a *by*-phrase is present, on the other hand, Grimshaw (1990:53) argues that it cannot be an argument. However, this is not always clear. In (35), for example, the *by*-phrase can be analyzed as the subject, even if there is no object present:

(35) Now we are on the brink of **greatly increased spending by both NATO and Warsaw Treaty Organisation countries**, with new versions of most existing weapons being developed, and some entirely new ones as well, particularly for use in space (ENPC/ESPC CS1).

If the *by*-phrase in (35) is a subject, the head noun *spending* should be interpreted as a complex-event nominal, as suggested also by the *–ing* suffix and the property [–count] (cf. discussion 3.4.6). As complex-event nominals

have argument structure, I have chosen to regard *by*-phrases as arguments, even in cases where no object is present (cf. also arguments in favor of treating *by*-phrases as an argument in Zucchi 1993).

Another type of adnominal element that is problematic is the premodifying adjective. Grimshaw argues that some adjectives can be arguments. Consider (36) – (38):

(36) The Iran-Iraq war, **the Soviet occupation of Afghanistan**, and **the US planning of a rapid deployment force for the Persian Gulf** are pointers to the explosive situation surrounding the supply of raw materials in a militarised world (ENPC/ESPC CS1).

(37) Impression: probably Korsakov's syndrome, due to **alcoholic degeneration of the mammillary bodies."** (ENPC/ESPC OS1).

(38) The MTS was the key to **Soviet control** and **transformation of the rural areas**. (ENPC/ESPC MAW1)

Grimshaw (1990:81) refers to premodifying adjectives like those in (36)-(38) as *group adjectives*, and suggests that similarly to *s*-genitives and *by*-phrases they are ambiguous: when they occur with an object, they correspond to subjects, but when they occur in constructions without an object, they are modifiers. Thus, the group-adjectives in (36)-(38) are subjects, whereas the lexical nominalizations in (39)-(41) have no arguments, only modifiers:

(39) The myth of a Chosen People and **a divine election** has often inspired a narrow, tribal theology from the time of the Deuteronomist right up to the Jewish, Christian and Muslim fundamentalism that is unhappily rife in our own day (ENPC/ESPC KA1)

(40) Such a surface is cold when compared with a dark surface under comparable **solar illumination** (ENPC/ESPC JL).

(41) The newly independent nations were sympathetic to the Soviet Union, and in these last months before **the Sino-Soviet split**, the onward march of socialism seemed to be proceeding according to plan (ENPC/ESPC CS1).

In my analysis I follow Grimshaw in regarding premodifying adjectives as subjects only when an object is present.

Another problematic construction is the N + N compound consisting of N + a deverbal N. The question is whether the first N in such constructions can be an argument, or whether it is always a modifier. Grimshaw argues that the first N can be the object of the deverbal N, as in *bicycle repairing* (Adams 2001:68). Grimshaw (1990:68) refers to N+N compounds with an argument as *synthetic compounds* (see also Adams 2001:79).[40] Synthetic compounds only allow for relationships of the 'object + deverbal N' type, not the 'subject + deverbal N' type, as illustrated in (42) and (43) (Grimshaw 1990:17).

(42) Book-reading (by students)

(43) *Student-reading of books.

By virtue of having argument structure, synthetic compounds such as (42) have complex-event meaning.

3.4.5 Deverbal nouns in *-ing*

Grimshaw (1990:66) observes that the meaning of a lexical nominalization is partly related to the suffix on the deverbal noun. For example, in English most deverbal nouns in *-ing* are complex-event nominals, whereas deverbal nouns in
-ment and *-ion* are likely to be ambiguous between complex-event and result meaning (cf. 3.6). This section therefore discusses lexical nominalizations headed by deverbal nouns in *–ing*.

In English, the *–ing* suffix is associated with aspectual meaning in deverbal nouns. This can be illustrated by means of the following examples from Quirk et al. (1985:1551), showing that deverbal nouns in *–ation* and *–ing* in (44) and (45) can have partly different interpretations:

[40] However, Adams (2001:78) uses the term *syntactic* compound, to underline the verb-object relation between the two components.

(44) His **exploring** of the mountain is taking a long time.

(45) His **exploration** of the mountain took/will take three weeks.

In (44), the focus is on the process of exploring rather than the event of exploring in its entirety, whereas in (45), the entire event is in focus, i.e. the event is viewed as a whole. We can say that the *–ing* suffix brings out process meaning in (44). Grimshaw (1990:67) argues that this property of the *-ing* suffix is carried over to nouns, so that deverbal nouns in *–ing* typically have a complex-event or process meaning, while deverbal nouns with other suffixes, such as *–ation* are ambiguous between a complex-event and a simple-event meaning (Grimshaw 1990:66). Thus, it seems fairly straightforward to consider all deverbal nouns in *–ing* as complex-event nominals.

However, not all *–ing* suffixes have the same meaning. To begin with, some deverbal nouns in *–ing* are lexicalized and have result meaning (cf. Grimshaw 1990:56). Often these types are interpreted as either concrete or abstract things, as illustrated in (46) and (47):

(46) Concrete thing:

The building is enormous.

(47) Abstract thing:

With **a feeling of being sucked feet first into quicksand** I said I would try.

In (46) *building* refers to the concrete entity produced by the activity *building* and can be described as a concrete thing (see section 3.6.) and in (47) *feeling* is the result of a mental process (*feeling*), and can be described as an abstract thing or a *metaphenomenon* (see sections 3.6.1 and 3.6.2).

Further, there are examples that are problematic because we have a conflict of criteria. Consider (48), which contains an *-ing* nominalization and its translations into Norwegian and Swedish:

(48)

a. About ten million species are estimated to exist. When any individual fails to get energy and food, fails to act to maintain its identity, we realize it is moribund or dead. An important step in **our**

understanding is to recognize the significance of collections of living things (ENPC/ESPC JL1).

b. Et viktig skritt i **vår forståelse** er å anerkjenne hvor viktig samlingen av levende ting er (lit. an important step in our understanding is) (ENPC JL1T).

c. Det är också viktigt **att förstå att levande väsen samarbetar i grupper** (lit. to understand that living things cooperate in groups) (ESPC JL1T).

In (48a) the criteria point in different directions. On the one hand, there is no explicit direct object (cf. 3.4.1), which is incompatible with complex-event meaning. On the other hand, *understanding* has the suffix *–ing*, which is associated with a complex-event nominal, and the lexical nominalization also seems to be [-count]. The use of different translation strategies in Norwegian and Swedish show the indeterminacy of the source structure: in the Norwegian translation (48b) a nominal structure is used, whereas in the Swedish translation (48c), we find the non-finite clause *att förstå att...* ('to understand that...').

In (49), in contrast, *understanding* must be interpreted as a complex-event nominal since a direct object is present:

(49)

a. In **the understanding of a microbe, an animal, or a plant***,* the top-down physiological view of life as a whole system harmoniously merges with the bottom-up view originating with molecular biology: (ENPC/ESPC JL1).

b. Når det gjelder **forståelsen av en mikroorganisme, et dyr eller en plante** [lit. the understanding of a microbe, an animal or a plant]**,** vil det fysiologiske ovenfra-og-ned-synet på livet som et helhetlig system forene seg harmonisk med nedenfra-og-opp-synet som har sin opprinnelse i molekylærbiologien, et syn som ser på livet som en samling av et umåtelig stort antall ultramikroskopiske deler (ENPC JL1T).

c. **När man vill förstå en mikroorganism, ett djur eller en växt** [lit. when one wants to understand a microbe, an animal or a plant], sammanfaller de båda betraktelsesätten, att livet består av ett väldigt antal mikroskopiskt små delar (ESPC JL1T).

According to Grimshaw's criteria, we have seen that we have a result nominal with a deverbal head in*–ing* in (48a), and a complex-event nominal

with a deverbal head in *–ing* in (49a). We can therefore conclude that the *-ing* suffix is not always associated with complex-event meaning.

3.5 Simple-event nominals

Unlike complex-event nominals, which can be facts, events and propositions (cf. 3.4.1), simple-event nominals are most likely to be interpreted as events. However, there are some cases where a factual or propositional reading is possible, usually when there is a conflict of criteria, as in (50):

(50) Then there is the puzzling constancy of the climate, *in spite of* **an ever-increasing output of heat from the Sun**.

The lexical nominalization in (50) is [+count] and should therefore be a simple-event (or result nominal, cf. 3.6), but a paraphrase with *in spite of the fact that the Sun puts out an ever-increasing amount of heat* seems possible. This suggests that even simple-event nominals can have a factual meaning. On the whole, however, my material suggests that simple-event nominals typically denote events and not facts or propositions.[41]

The reason for this can be that simple-event nominals have a less clear relation to the clause than complex-event nominals. Simple event nominals always denote events without process meaning, and they therefore differ from complex-event nominals, which describe an event with process meaning. In this section, I first discuss the properties distinguishing simple-event nominals from complex-event nominals (3.5.1). I then go on to discuss simple-events with *to*-infinitives (3.5.2), which is a type presenting particular problems.

3.5.1 General properties of simple-event nominals

Firstly, simple-event nominals disallow aspectual modifiers expressing duration, whereas complex-event nominals allow the same aspectual

[41] This view is supported by Koptjevskaja-Tamm (1993) who uses Vendler's semantic distinctions *fact*, *proposition* and *event* to describe most 'action' nominalizations, but includes some additional types, of which *act nominals* (cf. Koptjevskaja-Tamm 1993:18) seems to correspond to simple-event nominals.

modifiers as their verbal counterparts (Grimshaw 1990:58-59). This is illustrated in (51a) and (51b):

(51)

a. Complex-event nominal:

The observation of the patient *for two weeks*.

b. Simple-event nominal:

***The observation** *for two weeks*.

Moreover, whereas complex-event nominals cannot be preceded by the indefinite article, a numeral or a demonstrative such as *that*, or changed into the plural, simple-event nominals can both occur after an article and they are found in the plural:

(52)

a. They studied the/an/one/that **assignment**.

b. **The assignments** were long.

The criterion [-argument structure], i.e. no overt argument is required, means that the internal argument (the direct object and the Medium in ergative structures) can be omitted, as in *John's construction* (*of the building*). Simple-event nominals are therefore typically so-called reduced structures (cf. Koptjevskaja-Tamm 1993:12).

There are problematic examples, however, and the claim that simple-event nominals cannot take arguments has been criticized as being too restrictive (cf. e.g. Alexiadou 2001:13). Consider (53):

(53) The classical Korsakov's syndrome - **a profound and permanent, but pure, devastation of memory** caused by alcoholic destruction of the mammillary bodies - is rare, even among very heavy drinkers.

The lexical nominalization in (53) has simple-event meaning. The indefinite article establishes that the lexical nominalization is [+count] and therefore a simple-event nominal. In examples like (53), Grimshaw would argue that the

of-construction is *argument-related* but not licensed by argument structure and therefore not a proper argument.

Example (54) is more complicated:

(54) When his Czech friend Mlynar came to visit him in Stavropol in 1967, Gorbachev himself criticised Khrushchev strongly for **the constant reorganisations of the farms and industry** (ENPC MW).

In (54) there is a conflict between different criteria: the head noun is in the plural, suggesting simple-event meaning, whereas the presence of an aspectual modifier (*constant*) suggests complex-event (i.e. process) meaning. A solution to the problem illustrated in (54) is given by Andersen (2007:64) who proposes that there may be two types of complex-event nominals (cf. 3.4.1), one with *internal* focus that is [-count], focusing on the internal unfolding of the event, and one with external focus that is [+count] viewing the event as a whole. Thus, although Grimshaw's criteria can be used to describe tendencies, there will always be examples that are indeterminate.

To sum up, most simple-event nominals are deverbal nouns without an object-like element in the form of a prepositional phrase, i.e. they are typically examples of 'reduced structures' (cf. Koptjevskaja-Tamm 1993:12). Simple-event nominals can be distinguished from complex-event nominals by the criteria [-argument structure] and [+count]. In the terminology used in SFL, the difference between complex-event nominals and simple-event nominals can be expressed in terms of degrees of metaphor. While complex-event nominals are prime examples of grammatical metaphors, simple-event nominals have a lower degree of grammatical metaphor, due to their lacking some of the verbal features exhibited by complex-event nominals.

In the next section I look into examples where the simple-event nominal includes a *to*-infinitive, which turns out to be a problematic type.

3.5.2 *To*-infinitives

When they occur after verbs, *to*-infinitives with a nominal function are commonly described as direct objects, as illustrated in (55) (Huddleston and Pullum 2002:1259, Biber et al. 1999:658):

(55) **Kim** [S] **decided** [V] **to go to Bonn** [O]

When *to*-infinitives occur after a deverbal noun, it is therefore often assumed that they have object function. Example (66) exemplifies the lexical nominalization corresponding to (65) (cf. Huddleston and Pullum 2002:1259):

(56) **Kim's decision to go to Bonn** was ill-advised**.**

However, according to Grimshaw the *to*-infinitive and (*that*-clauses) cannot be the argument of a deverbal noun since "only verbs [and not deverbal nouns] can take sentential arguments" (Grimshaw 1990:73). Nevertheless, *to*-infinitives are more or less loosely attached to the deverbal N, and for this reason Grimshaw argues that we need two categories to describe them: *complements* and *modifiers*. Only complements are associated with simple-event meanings and can be distinguished by their ability to be separated from their head across a copula. Grimshaw (1990:98f) uses the NPs *their attempt to climb a mountain* and *their decision to leave at six* to illustrate her point. Although the constructions appear alike, the *to*-clause after *attempt* is regarded as a complement since it cannot be separated from its head across a copula and the *to*-infinitive after *decision*. This entails that *attempt* is a simple-event nominal, whereas *decision* is not, as illustrated in (57) and (58):

(57) ***Their attempt** was **to climb a mountain.**

(58) **Their decision** was **to leave at six.**

In addition, Grimshaw (1990:130) mentions that a *to*-infinitive can appear after deverbal nouns as a purpose clause with adverbial function, as in (69):

(59) **airborne assaults (in order) to secure their flanks**

The evidence that the *to*-infinitive is an adverbial is the possibility of inserting *in order* between the head noun and the *to*-infinitive.

In sum, Grimshaw argues that there are three types of *to*-infinitives basing herself on syntactic criteria: complements cannot be separated from

the head by a copula, modifiers occur when separation is possible and purpose clauses can be introduced by *in order to*. Thus, Grimshaw provides good syntactic observations for the behavior of different types of *to*-clauses and *that*-clauses and their relationship to the head noun. However, the analysis relies on a limited set of deverbal nouns, such as *attempt* and *decision*, and does not discuss the semantic type of the verb to which the deverbal heads are morphologically related. In my analysis of simple-event nominals I use ideas from SFL (cf. Halliday 1994, Halliday and Matthiessen 2004), which can be employed to describe basically the same distinctions as in Grimshaw, but as SFL is "is a semanticky kind of grammar" (Halliday and Matthiessen 2004:31) it has the advantage that we need to make generalizations on the basis of the semantic category of the verb to which the deverbal head is morphologically related, rather than relying solely on the syntactic analysis of a construction. Following Matthiessen (1995), I distinguish between *material verbs* (i.e. action verbs such as *go, give*), *utterance verbs* (i.e. such as *state*, *propose*), *mental verbs* (e.g. cognition verbs such as *think*, *believe*) and *relational verbs* (verbs of 'being' and 'having', Halliday and Matthiessen 2004:210).[42]

The types discussed in this section only cover the types that could be found in my material. Of the deverbal nouns followed by *to*-infinitives, there were two types of *to*-infinitives in simple-event nominals. These are described as purpose clauses and nominalized verb phrase complex. Section (3.5.2.1) discusses purpose clauses and section (3.5.2.2) discusses nominalized verb phrase complexes (VPC) (*attempt to qualify*).

3.5.2.1 Deverbal N + purpose *to*-infinitive

Example (59a) shows a deverbal noun followed by a *to*-infinitive which seems to express a purpose relation to the main deverbal noun:

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[42] Many SFL studies (cf. Halliday and Matthiessen 2004) also distinguish the categories *existential* and *behavioural* verbs. Following Matthiessen (1995), these categories are subsumed under *relational* and *mental* verbs in this work. It should also be noted that the term 'verb' is not used in by Matthiessen, rather linguistis of the SFL school refer to *processes*. A further terminological difference is that I have substitured *utterance verb* for *verbal process*.

(59)

a. IN THE early hours of 6 June 1944, preceded by **airborne assaults to secure their flanks**, the Allied armies landed on the beaches of Normandy to begin Operation Overlord, the struggle for North-West Europe (ENPC/ESPC MH1).

b. Tidigt på morgonen den 6 juni 1944 landsteg de allierades arméer på Normandies kust. Det var inledningen till Operation Overlord, kampen om Nordvästeuropa. Den hade föregåtts av **anfall av fallskärmssoldater *för att* säkra flankerna** (lit. assaults by paraschutesoldiers *for to* secure the flanks) (ESPC MH1T).

The purpose relation is made explicit in the Swedish translation in (59b) by means of the explicit purpose marker *för att* corresponding to the English purpose marker *in order to*. When an explicit purpose marker is used, it seems possible to move the purpose clause, indicating that it does not have a fixed position in the NP, and is therefore not a syntactically required argument. Consider example (60) where I have moved the purpose clause in the Swedish translation (59b) to the front:

(60) **För att säkra flankerna,** hade den föregåtts av anfall av fallskärmsoldater (lit. **For to secure the flanks**, had it been preceded by assaults by parachute soldiers).

In clauses, the non-argument status of purpose clauses is captured by Halliday and Matthiessen's (2004:376) analysis of *to*-infinitive clauses as a hypotactically related dependent clause rather than an embedded complement or argument of the verb (cf. also Halliday 1994:225ff).

(61) You have to pay **to go in.** ~ (**in order) to go in**, you have to pay.

Example (62) illustrates the syntactic structure proposed for these structures by Halliday (cf. 1994:259):

(62) **You have to pay (in order) to go in.**

[Main clause [S: **You**] [VP: **have to pay**]] [dependent non-finite clause **(in order)** [VP: **to go**] [adv: **in**]].

If the *to*-infinitive follows a deverbal N, on the other hand, the position of the *to*-infinitive appears to be more fixed and it is more difficult to argue that the *to*-infinitive is not required. Example (63a) illustrates a deverbal noun followed by a *to*-infinitive; (63b) shows the syntactic parsing of this structure and (63c) shows that fronting of the *to*-infinitive purpose clause is doubtful, i.e. the *to*-clause seems to have a fixed position:

(63)

a. A back-projection arrangement permits tracing of the film **to prepare graphic montages of patterns of action** (OMC).[43]

b. [NP [Head Noun: tracing of the film] [Complement: **to prepare graphic montages of patterns of action.**]]

c. ?**To prepare the graphic montages of patterns of action**, a back projection arrangement permits tracing of the film.

However, as illustrated in (60) if an explicit purpose marker such as *in order* introduces the *to*-infinitive, movement of the purpose clause becomes possible. I have therefore chosen to regard *to*-infinitives where it is possible to insert a definite purpose marker as an adverbial clause after deverbal nouns.[44]

3.5.2.2 Nominalized Verb Phrase Complexes

There is another type of simple-event deverbal noun followed by a *to*-infinitive where the *to*-infinitive seemingly corresponds to the direct object in a corresponding clause. Example (64a) is an illustration:

(64)

a. This was a difficult subject to raise with Leonid Brezhnev, who saw

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[43] This example is taken from a separate component of the Oslo Multilingual Corpus (OMC) containing one source text: "Communication and cooperation in early infancy: a description of primary intersubjectivity" by Colwyn Trevarthen, and ten parallel translations in Norwegian.

[44] See also Bowen (2005:192), who, in a study of noun complementation in English, uses the criterion [+movable] to distinguish between *to*-infinitives as adjuncts and *to*-infinitives as complements after nouns. *To*-infinitives that can be separated from the head noun are regarded as adjuncts.

himself as the saviour of the private plots after **Khrushchev's spasmodic attempts to eradicate them.** (ENPC/ESPC MAW1)

In these cases the deverbal noun refers to an action, as in (64a) (e.g. *attempt to find*) and the *to*-infinitive cannot be separated from the head across a copula (cf. 3.5.2), or moved to an alternative position in the sentence, as illustrated in (64b):

(64)

b. *Leonid Brezhnev saw himself as the saviour of the private plots after, **to eradicate them,** Krutshev's spasmodic attempts.

Comparison can be made with a corresponding clause with a verb such as *attempt* followed by a *to*-infinitive. The following analyses are given as alternatives for the sentence *Alice tried to reach the key,* here replaced by *Alice attempted to reach the key* by Halliday (cf. Halliday 1994:281, see also Halliday and Matthiessen 2004:501ff):

(65)

a. [S: **Alice**] [VPC: **attempted to reach**] [Odir: **the key**]

b. [S: **Alice**] [V: **attempted**] [Inf.obj: **to reach the key**]

Example (65b) is the conventional analysis of the structure with a verb + infinitive object, an analysis which is reflected in Grimshaw's definition of *to*-infinitives after *attempt* as complements. In the analysis in (65a) *attempted to reach* is a *verb group complex* (cf. Halliday 1994:278, Halliday and Matthiessen 2004:51f), where the VPC is regarded as one process composed of two parts that represent different subparts, or phases, of the overall process. Consider now (66), which is a nominalization of (65):

(66) **Alice's attempt to reach the key**

If we regard (66) as a nominalized verb complex (henceforth: nominalized VPC) following the analysis in (65a), the tight relation between the head deverbal noun and the following *to*-infinitive is captured. The second

process (*to reach*) is an expansion of the first (*attempt*). The crucial point is that we can do this without suggesting, as the term *complement* does, that the *to*-infinitive is the object of the verb.

Example (67b) illustrates how the nominalization in (64) can be analyzed as a nominalized VPC. The analysis with a clause has been added for clarity (67a).

(67)

a. [S: **Krushchev**] [Adv: **spasmodically**] [VPC **attempted to eradicate**] [Odir: **them**].

b. [Subject modifier: **Khrushchev's**] [Adv: **spasmodical**] [VPC: **attempt to eradicate**] [Odir: **them**].

Example (67a) is the parsing of a clause with a VPC, and (67b) is the corresponding nominalization. The first verb in VPC are normally verbs of CONATION, i.e., *trying and succeeding* (Halliday 1994:280) or aspectual verbs, such as *beginning*, *continuing* and *ending*. For example a sentence like *I began to play* would be parsed as [Subject: *I*] + [VPC: *began to play*].

3.6 Result nominals

Result nominal can have the same form as simple-event nominals and both are [+count] and [-argument structure], but they differ in meaning. Whereas simple-events have event meaning and refer to an act (cf. 3.5), result nominals prototypically refer to the outcome of an event or action, i.e. to an abstract or concrete thing. The concrete-thing meaning is the result meaning most commented on in the literature, as in e.g. *his criticism of the book is to be found on page 15* (Chomsky 1970:194), *the agreement that they signed was submitted in four copies* (Koptjevskaja-Tamm 1993:20), but as I will show the meaning can also be abstract.

The main reason why it is important to distinguish between simple-event nominals and result nominals is that only simple-event nominals can be considered as grammatical metaphors (cf. 2.3.1), while result nominals are transcategorized items with a prototypical noun meaning: they refer to an abstract or concrete thing (cf. 2.3.2). For this reason, it can be questioned whether result nominals have a systematic relation to the clause.

In Grimshaw's account the distinction between simple-event nominals and result nominals is reflected in the status of the adnominal elements associated with each type; complements are associated with simple-event meanings and modifiers with result nominals. As evident from my analysis above (cf. 3.3) I only distinguish between arguments and modifiers, which means that Grimshaw's category complements is included under modifiers. It follows that the distinction between simple-event and result nominals is based on semantic criteria in my analysis. Three types of result nominals have been distinguished: *metaphenomena, product nominals* and *event-artefact nominals*. The types are based on work in SFL and the analysis of different types of verbs corresponding to the deverbal noun. Metaphenomena are discussed in 3.6.1, product nominals in 3.6.2 and event-artefact nominals in 3.6.3.

3.6.1 Metaphenomena

In this thesis deverbal nouns morphologically related to utterance and mental verbs and followed by a *to*-infinitive or a *that*-clause are considered as the same type, their common denominator being that they denote what Halliday and Matthiessen refer to as *metaphenomena.* Metaphenomena can be distinguished from phenomena in the real world, i.e. they are abstract things rather than direct observations of reality (cf. Halliday 1994, Halliday and Matthiessen 2004: 249, 441:).[45]

The deverbal nouns occurring as metaphenomena are related to utterance and mental verbs. In SFL, utterance and mental verbs are regarded as *projecting* verbs, i.e. verbs which can project metaphenomena in the form of *to*-infinitives and *that*-clauses (cf. Halliday 1994:250-273, Halliday and Matthiessen 2004:467-485). This analysis differs from traditional grammar which views *that*-clauses and *to*-infinitives after utterance and mental verbs as objects. The SFL analysis is illustrated in examples (68-70):

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[45] This means that metaphenomena are related to the Vendlerian categories *fact* and *propositions*, which in Lyon's (1977) categorization of *first, second* and *third-order entities* correspond to *third-order entities*, i.e. truly abstract entities with no relation to time and space (see further discussion in 5.2.4.1).

(68)

a. **I wish (that) they would keep quiet.**

b. [S: **I**] [V: **wish**] [projected metaphenomenon: **(that) they would keep quiet**.]

(69)

a. **Mary hopes to go to Sweden next year.**

b. [S: **Mary**] [V: **hopes**] [projected metaphenomenon: **to go to Sweden next year**.]

(70)

a. **He said that Mary is wrong.**

b. [S: **He**] [V: **said**] [projected metaphenomenon: **that Mary is wrong**].[46]

When a projecting verb, such as *wish*, *hope* or *say,* is turned into a deverbal noun, Halliday and Matthiessen (2004:470) argue that it denotes the *name* of the metaphenomenon and specifies the content of the subsequent *that*-clause or *to*-infinitive, as in examples (71-73).[47]

(71) **my wish that they would keep quiet**

(72) **Mary's hope to go to Sweden next year**

(73) **his statement that Mary is wrong** [48]

Halliday's notion of projection is useful since it allows us to distinguish which types of verbs can be turned into deverbal nouns with a metaphenomenal meaning (i.e. verbal and mental nouns). When a noun is morphologically related to a projecting verb, (i.e. utterance or mental verbs) the deverbal noun takes on the meaning of the projected entity and both

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[46] The examples are taken from Halliday (1994:259).

[47] A similar observation is made in Bowen (2005). She introduces the notion *semantic restrictiveness*, which is described as a relation where "the head noun defines, semantically, the complement clause" (Bowen 2005:18).

[48] The examples are taken from (Halliday 1994:264).

entities in the construction 'utterance or mental noun + *to*-infinitive/*that* clause' refer to a metaphenomenon.

Consider (74), where the *to*-clause specifies the content of *desire*:

(74) **my desire to explain the origin of the world**

There are also syntactic arguments in favor of the analysis that *desire* and the *to*-infinitive refer to the same entity. Grimshaw (1990:95) observerves that *desire* can be separated from a postpositioned *to*-infinitive across a copula, as in (75):

(75) **My desire** was **to explain the origin of the world.**

Thus, the fact that the *to*-inifinitive can be 'separated across a copula' after utterance and mental nouns can be used as evidence that the *to*-infinitive is not an argument. Moreover, the same criterion can be used to explain that the *to*-infinitive is an apposition. For instance, Schmid (2000:30) refers to the ability of some nouns to be separated from their 'complement' clause across a copula as 'experiential identity' and states that all such examples are clear examples of 'appositive postnominal clauses'. Also, Schmid's observation is consistent with Quirk et al.'s (1985:1301) statement that a condition "for two linguistic units to be in apposition" is that they have identical reference.

Not only *to*-infinitives can be regarded as appositions. The same criterion can be applied to *that*-clauses after mental and utterance nouns as well, to show that they are appositions. Consider (76) (cf. Heyvaert 2003:211ff):

(76)

a. Just **the thought that he may have killed her** is unbearable.

b. **That he may have killed her** is unbearable.

c. **The thought** is unbearable.

Heyvaert argues that the function of the *that*-clause in (76a) is to "restate and specify the nominal that precedes it", which means that the two entities are

elements at the same level, and that each of the elements can function on their own, as illustrated in (76b and c) (Heyvaert 2003:216).

An additional argument for this analysis can be found in translations. Consider (77b) where the Swedish translator has omitted the head noun (*the promise*) in the English source (77a):

(77)

a. Indeed, the sacrifice would make a nonsense of Abraham's entire life, which had been based on **the promise that he would be the father of a great nation** (ENPC/ESPC KA1).

b. Offret skulle rentav omintetgöra hela Abrahams liv som ju gick ut på **att han skulle bli anfader till ett stort folk** (lit. that he would be the ancestor to a great people). (ESPC KAT1).

The fact that an *att*-clause (*that*-clause) suffices to render the content of the NP, *the promise that he would be the father of a great nation,* suggests that the *that*-clause and the deverbal nouns have identical reference.[49]

3.6.2 Product nominals

There are two types of product nouns, depending on the type of verb the deverbal noun is morphologically related to. This section briefly describes these two types.

Prototypically, product nominals are deverbal nouns morphologically related to so-called 'build verbs' such as *bake* or *produce* (Levin 1993), i.e. verbs that denote some action from which there is a natural outcome. When they have a product meaning, deverbal nouns morphologically related to verbs of creation denote the concrete outcome of the creation process. Example (78) is an illustration:

[49] However, omission of head nouns followed by appositional *att*-clauses can have undesired effects on the translation. As pointed out to me by Mall Stålhammar (PC), the interpretation of the 'bare' *att*-clause in (77b) is likely to shift from an external to an internal perspective, meaning that rather than *the promise*, the reader would insert *the thought* in (77b).

(78) It is difficult to arrive at a firm figure for **world military industrial production.**

In (78), *production* refers to the industrial goods that are produced and not the process or event of producing.

However, there are some deverbal nouns with a product meaning although they are not related to a verb of creation. In these cases, the deverbal noun refers to the object of the verb to which the noun is morphologically related. Example (79) is an illustration:

(79) The amount of petroleum consumed for military purposes (including its indirect use in producing military goods) has been estimated at between 5 and 6 percent of total **world consumption.** (ENPC/ESPC CS1)

In (79), the lexical nominalization *world consumption* refers to petroleum, i.e. what is consumed, and not to the process of consuming petroleum.

There is no formal way in which product nominals can be distinguished from simple-event nominals and other types of result nominals. Context and intuition determine how the noun should be interpreted.

3.6.3 Event artefact

Another sub-group of result nominals consists of event artefact nominals. This category is often ambiguous between a simple-event interpretation (e.g. *exam* = the event of taking an exam) and an event artefact interpretation (e.g. *exam* = the exam paper). Consider (80a) and (80b):

(80)

Event artefact

a. **John's exam** is on the table

Simple event

b. **John's exam** is tomorrow

In both (80a) and (80b), context rather than the form of the lexical nominalization indicates the proper interpretation. Event-artefact nominals often function in constructions that I refer to as expanded predicates in chapter 5, namely structures consisting of semantically light 'function verbs' such as *have* or *make* (cf. Schmid 2000:25) followed by a deverbal noun or lexical nominalization (cf. 5.8). Example (81) is an example of this:

(81) I became especially interested in apes and made **a long study of chimpanzees**

In the construction *make a long study of chimpanzees,* the head verb *make* is lexically empty and the process is specified by the object, i.e. the NP *a long study of chimpanzees*.

3.7 Summary

In this chapter I have considered the meaning of lexical nominalizations and presented a platform for the contrastive analysis of lexical nominalizations based on the argument structure of deverbal nouns.

The main focus has been on Grimshaw's distinction between complex-event nominals, simple-event nominals and result nominals. Grimshaw's categories are based on the argument structure of the deverbal noun. Complex-event nominals have an internal aspectual analysis implying process meaning and can therefore take aspectual modification; they are [-count] and they have argument structure. Simple-event nominals describe a single act and can therefore not take aspectual modification; they are [+count] and they lack argument structure. In terms of the Vendlerian categories fact, propositions and events, complex-events can refer to all three categories, whereas simple-event nominals are more likely to be interpreted as events rather than as facts or propositions. Result nominals denote abstract or concrete things; they are are [+count] and they lack argument structure.

The typical features of complex-event nominals, simple-event nominals and result nominals are illustrated in table 3.7.

Table 3.7 Features of complex-event nominals, simple-event nominals and result nominals

Complex-event nominals	Simple-event nominals	Result nominals
[+process] [+aspectual modification] [-count] [+argument structure]	[+act] [-aspectual modification] [+count] [-argument structure]	[+product] [-aspectual modification] [+count] [-argument structure]

Since complex-event nominals include verbal categories such as [+argument structure] and have an aspectual analysis, they are more verb-like than simple-event nominals and result nominals. This means that complex-event nominals are prototypical examples of grammatical metaphor. Simple-event nominals, on the other hand, do not include verbal properties other than referring to an event, and therefore have a lower degree of grammatical metaphor. Result nominals, lastly, denote abstract or concrete things and are clear examples of transcategorized elements.

In the next chapters the translations of lexical nominalizations into Norwegian and Swedish are considered.

4. TRANSLATIONS OF TRANSITIVE LEXICAL NOMINALIZATIONS WITH A SUBJECT AND AN OBJECT

4.1 Introduction

The notion *transitive* is normally used about verbs that require an object, but not about nouns. In this thesis, however, *transitive* is used about deverbal nouns morphologically related to a transitive verb (e.g. *construction*) and about lexical nominalizations with transitive deverbal nouns as head (e.g. *John's construction of the building*).

Transitive lexical nominalizations with both a subject and an object, i.e. an adnominal element corresponding to the subject or the object of a clause, are considered separately from those with only an object. Table 4.1 compares the frequency of transitive lexical nominalizations with both a subject and an object with the frequency of lexical nominalizations with either a subject or an object:

Table 4.1 Transitive lexical nominalizations in English originals

Lexical Nominalization	Frequency	%
subject and object	73	17%
subject or object	355	83%
Total	428	100%

The table shows that there are 73 (17%) deverbal nouns with a subject and object and 355 (83%) with a subject or an object, suggesting that in English popular science at least, lexical nominalizations with both the subject and the object realized are by no means a marginal phenomenon.[50] This is interesting since it has been suggested that structures with both a subject and an object are infrequent in natural discourse (Hopper and Thompson 1980:285, Mackenzie 1985:32, Dik 1985:27, Koptjevskaja-Tamm 1993:15, Andersen 1998a,b, Butler 2003:272, Mackenzie 2007). For example, Hopper and Thompson (1980:285) found that out of 100 transitive nominalizations in

[50] Intransitive lexical nominalizations and ergative lexical nominalizations are not included in table 4.1. These types are discussed in chapter 7.

English, only five had overtly realized arguments (cf. also Koptjevskaja-Tamm 1993:260).[51]

This chapter discusses transitive nominalizations where both the subject and the object of a corresponding clause are overtly realized in the lexical nominalization. For example, the subject may be realized by the *s*-genitive or in a *by*-phrase and the object by an *of*-construction (*John constructed the building → John's construction of the building/The construction of the building by John*). The different constructions are listed below, with reference to the sub-section dealing with each specific type:

A. *s*-genitive + deverbal N + *prep* + NP (section 4.3 and 4.4)
Lysenko's perversion of genetics

B adjective + deverbal N + *of* + NP (section 4.5)
Soviet control and transformation of the rural areas

C. *s*-genitive + deverbal N + *that*-clause (section 4.6)
the old man's assertion that "The Earth is an organism"

D. *s*-genitive + deverbal N + *to* + NP (section 4.7)
Khrushchev's spasmodic attempts to eradicate them

E. deverbal N + *by* + N + *of* + NP (section 4.8)
the confirmation by the Vikings of the utter sterility of Mars

F. *s*-genitive + deverbal N + *by* + NP (section 4.8)
their final destruction by the wind

Not all the adnominal elements in the lexical nominalizations above can be considered as arguments in the NP. The *s*-genitive, the *to*-infinitive and the *that*-clause have no argument status. As discussed in chapter 3, their more peripheral status is shown by the fact that they can be omitted without any change in meaning. For the sake of simplicity, however, I will refer to all adnominal elements that can be related to the subject and the object of a corresponding clause as subject and object.

The discussion of transitive nominalizations takes place in chapter 4 (transitive lexical nominalizations with subject and object), chapter 5

[51] It should be noted, however, that many of these studies only considered lexical nominalizations with the structure *s*-genitive + deverbal N + *of*-construction.

(transitive lexical nominalization object) and chapter 6 (transitive lexical nominalization with subject). Dividing the discussion of lexical nominalizations into separate chapters for deverbal nouns with both a subject and an object and those with only one of the two (i.e. either the subject or the object) has the disadvantage that some observations recur in different chapters. For example, translations of the *of*-construction are discussed both for structures with a subject and an object and for those with only an object (cf. chapter 5). Lexical nominalizations with both a subject and an object are dicussed first because they are more closely related to clauses. For example, on the clausal-nominal continuum, they are usually placed closer to the clausal end than reduced structures, regardless of the argument-status of the adnominal element (cf. 2.2.1, Mackenzie 1996). Moreover, lexical nominalizations with both a subject and an object are more transparent with regard to participant-roles. An *s*-genitive may for instance realize a subject or an object function in a one-participant construction (e.g. *Jonathan's murder*), whereas such ambiguity does not occur in two-participant constructions. To avoid extensive overlap, this chapter primarily focuses on translations of the subject, while a more thorough discussion of the object is postponed to chapter 5.

4.2 Translations of '*s*-genitive + deverbal N + *prep* + NP'

The '*s*-genitive + deverbal N + *prep* + NP' structure (e.g. *John's construction of the building*) is frequently commented on in discussions of lexical nominalizations (cf. e.g. Chomsky 1970, Langacker 2000:76, Alexiadou 2001, Mackenzie 2007). The type is illustrated in (1) and (2):

(1) *s*-genitive + deverbal N + *of* → *s*-genitive + deverbal N + *av*

a. My first reaction on reading **W. Ford Doolittle's criticism of the Gaia hypothesis** in CoEvolution Quarterly in 1979 was shock and incoherent disbelief**.** (ENPC/ESPC JL1)

b. Min første reaksjon da jeg leste **W. Ford Doolittles kritikk av Gaia-hypotesen** i CoEvolution Quarterly i 1979, var sjokk og forvirret vantro. (ENPC JL1)

c. Min första reaktion när jag läste **W. Ford Doolittles kritik av Gaiahypotesen** i CoEvolution Quarterly 1979 var chock och misstro. (ESPC JL1T)

(2) *s*-genitive + deverbal N+ prep object → *s*-genitive + deverbal N + *prep* object

a. **His powerful intervention in their affairs** had demonstrated beyond reasonable doubt that Yahweh was up to the job of being their elohim: they would worship him alone and cast away the other gods. (ENPC/ESPC KA1)

b. **Hans maktfulle inngripen i deres anliggender** hadde fjernet enhver rimelig grunn til å betvile at Jahve var oppgaven voksen som deres elohim: De var villige til å dyrke ham alene og kaste vrak på de andre gudene. (ENPC KA1T)

c. **Hans kraftfulla ingripande i deras öden** har visat att han utan varje rimligt tvivel kan klara av att vara deras 'elohim. De vill tillbedja honom och förkasta de andra gudarna. (ESPC KA1T)

The Norwegian and Swedish translations in (1) and (2) are congruent: the *s*-genitive corresponds to the *s*-genitive, while the *of*-construction corresponds to an *av*-construction, and the prepositional object corresponds to a prepositional object.[52]

The number of congruent and non-congruent translations of the type *John's construction of the building* is presented in table 4.3:

Table 4.2 The translation of '*s*-genitive + deverbal N + *prep* + NP' in Norwegian and Swedish

Translation correspondence	Norwegian		Swedish	
congruent	33	(69.0%)	30	(62.5%)
non-congruent	15	(31.0%)	18	(37.5%)
Total	48	(100.0%)	48	(100.0%)

Table 4.2 shows that there is a high proportion of congruent translation: 33 of 48 (69%) in the Norwegian translations and 30 of 48 (62.5%) in the Swedish translations.

The high proportion of congruent translations could be expected from descriptions of lexical nominalization in Norwegian and Swedish. It has been claimed for both Norwegian and Swedish (cf. Andersen 1998a:11ff,

[52] The distinction between lexical nominalization with a prepositional object and structures with a preposition that has no correspondence in a corresponding clause is discussed in 5.2.

Koptjevskaja-Tamm 1993:177, Teleman et al. 2000:III:31) that the *s*-genitive prototypically realizes the subject and the *av*-construction (*of*-construction) the object in lexical nominalizations. Thus, we should not expect any major formal differences between the languages that require a systematic change in the translations.

Nevertheless, there was a substantial proportion of non-congruent translations suggesting that even if the structure is possible in all three languages, there may be differences in usage. The nominal paraphrases are discussed in section (4.2.1) and the translations with a clause in section (4.2.2).

4.2.1 Nominal paraphrases

As we have seen, non-congruent translations can be divided into two types: one where the structure is altered, but the nominal status is kept, defined in this thesis as nominal paraphrases, and one where the lexical nominalization is turned into a clause (cf. 1.3.3). In translations of lexical nominalizations such as *John's construction of the building*, a distinction can be made between changes affecting the *s*-genitive and changes affecting the prepositional phrase. I discuss the former type first and then the latter.

Example (3) illustrates the possibility of omitting the *s*-genitive:[53]

(3) *s*-genitive + N + *prep* + NP → ϕ + N + *prep* + NP

a. Fearing a reaction against **his massacre of the prophets**, Elijah fled to the Sinai peninsula and took refuge on the mountain where God had revealed himself to Moses. (ENPC/ESPC KA1)

b. Elia fryktet en reaksjon på **nedslaktingen av profetene** og flyktet til Sinai-halvøya; han tok opphold på det fjellet hvor Gud hadde åpenbaret seg for Moses. (ENPC KA1T)

c. Av fruktan för repressalier för **massakern på profeterna** flydde Elia till Sinaihalvön och tog sin tillflykt till berget Horeb där Gud hade visat sig för Moses. (ESPC KA1T)

In (3a), the *s*-genitive is co-referential with the subject of the sentence, i.e. *Elijah*, and can therefore be omitted. As a result the definite form is used in

[53] I am indebted to Hilde Hasselgård (PC) for fine-tuning my observations regarding the examples with an omitted *s*-genitive.

both Norwegian and Swedish; compare the rule that in clauses where the subject and the *s*-genitive are co-referential, the English *s*-genitive often corresponds to a definite form in Norwegian/Swedish (cf. e.g. Svartvik and Sager (1977:204f) Eng. *He fractured his leg* → Sw. *Han bröt benet* (Eng: He broke the leg)).

There were two examples where the *s*-genitive was omitted in Norwegian but not in Swedish. Consider (4):

(4)

a. I published the results in a book called *Manwatching* and for twenty years continued **my investigations into that bizarre species Homo sapiens.** (ENPC/ESPC DM1)

b. Jeg offentliggjorde resultatet i en bok jeg kalte *Se på mennesket* og fortsatte i ennå tyve år **studiet av den bisarre arten Homo sapiens.** (ENPC DM1T)

c. Resultaten publicerade jag i en bok som heter *Människan — en fälthandbok* och under tjugo år fortsatte jag med **mina undersökningar av den bisarra arten Homo sapiens.** (ESPC DM1T**)**

(5)

a. He recalled, and almost relived, his war days and service, the end of the war, and **his thoughts for the future.** (ENPC/ESPC OS1)

b. Han husket, nesten gjennomlevde, sin tid i krigstjeneste, slutten på krigen og **tankene om fremtiden.** (ENPC OS1T)

c. Han erinrade sig och återupplevde nästan sin tid som värnpliktig under kriget, krigsslutet, och **sina tankar om framtiden.** (ESPC OS1T)

The reason for the *s*-genitive being omitted in Norwegian but not in Swedish in (4) and (5) can perhaps be related to the fact that in Norwegian, unlike in Swedish, it is natural to place a pronoun as an *s*-genitive after the noun when the subject and the *s*-genitive are co-referential (*He read his speech → Han leste talen sin* (He read speech + genitive). A construction with a postposed genitive sounds awkward when inserted into a lexical nominalization (cf. *nedslaktingen sin av profetene* (slaughter + genitive + of the prophets)), and

it is therefore easier for the translator to simply leave out the *s*-genitive.[54] As mentioned above, there is a general tendency in translation to omit information that can be deduced from context, a tendency that has been referred to as *simplification* in translation studies (cf. Baker 1992 and discussion in 1.3.2). On the whole, however, the changes concerning the *s*-genitive are fairly straightforward and have little or no impact on the meaning of the lexical nominalization. Note also that (4a) and (5a) are [+count], which suggest that they have simple-event or result meaning, although they have the structure of a complex-event nominal.

There were some isolated examples of '*s*-genitive + deverbal N+ *of* + NP' nominalizations that were turned into compounds, as in (6):

(6) *s*-genitive + deverbal N + *of*-construction → *s*-genitive + compound

a. But I was not alone in this ignorance; in the vigorous objections to or support for Gaia made by colleagues in all sciences, none observed that what was said followed naturally from **Vernadsky's view of the world**. (ENPC JL1T)

b. Men jeg var ikke alene om denne uvitenheten. Av alle innvendinger mot eller støtteerklæringer for Gaia-hypotesen som kom fra kolleger innen alle vitenskaper, var det ingen som påpekte at det jeg hadde sagt, fulgte helt naturlig av **Vernadskys verdensanskuelse**. (ENPC JL1T)

c. Men jag var inte ensam i min okunnighet. Vid de livliga diskussioner som följde för och emot Gaiateorin, som fördes av mina kolleger inom de flesta vetenskapsgrenar, var det ingen som påpekade att det jag sade följde naturligt på **Vernadskys världsbild**. (ENPC JL1T)

This strategy is more evident in the translations of lexical nominalizations without the *s*-genitive (e.g. *the view of the world*) and is therefore discussed in relation to this type in 5.5.2.

In (7c), the postmodifying PP is translated with an *att*-clause in the Swedish translation and kept in the Norwegian translation:

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[54] In fact, it is doubtful whether a postposed genitive is used in constructions with a deverbal noun followed by a PP: a search in the monolingual *Oslo-korpuset av taggede norske tekster (bokmålsdelen)* (http://www.tekstlab.uio.no/norsk/bokmaal/) gave no hits for the construction *N + sin + av*. Rather, it seems that when a genitive is used in nominalizations, it is preposed in Norwegian as well (cf. *sin opprinnelse i utforskningen av muligheter for liv på Mars* (ENPC JL1T)).

(7)

a. Most noticeable, however, is **J's perception of a certain distinction between man and the divine.** (ENPC/ESPC KA1)

b. Det mest bemerkelsesverdige er **imidlertid Js erkjennelse av et visst skille mellom mennesket og det guddommelige.** (ENPC KA1T)

c. Mest anmärkningsvärd är dock **jakivistens uppfattning att det råder viss skillnad mellan människan och det gudomliga.** (ESPC KA1T)

The possibility of a congruent translation (Norw.) and an *att*-clause (Sw.) side by side can be explained if we regard both the *of*-construction in the English original and the *av*-construction/*att*-clause in the translations as appositions. For example, Quirk et al. (1985:1284) suggest that the concept of apposition can be used about an *of*-construction that "corresponds directly to the clausal appositive" (i.e. a *that*-clause after a mental or verbal noun, cf. 3.6.1), and Schmid (2000:191) writes that the appositive relation between the head noun and the postmodifying *of*-prepositional phrases is sometimes 'open to question'. If regarded as appositive, however, the *of*-construction in (7a) is not an object, but a postmodifier. I will return to this question in chapter 5, where a thorough discussion of the *of*-construction is presented.

4.2.2 Non-congruent translations into clauses

In (8), a lexical nominalization with two arguments has been translated with a clause:

(8) *s*-genitive + deverbal N + *of* → clause

a. **Mikhail Gorbachev's endorsement, when in power, of the individual farmer's right to supplement his income from selling his privately grown fruit and vegetables** harks back to his own childhood memories of how vital this tiny extra stipend could be to a rural family. (ENPC/ESPC MAW1)

b. **Noe av det første Mikhail Gorbatsjov gjorde da han kom til makten var å understreke bøndenes rett til å spe på inntekten ved å selge den frukten og de grønnsakene de hadde dyrket selv**. (ENPC MAW1T)

c. **Efter makttillträdet förbättrade Michail Gorbatjov förutsättningarna för den enskilde jordbrukaren att bättra på sina inkomster genom försäljning av frukt och grönsaker som han själv odlat**. (ESPC MAW1T)

The lexical nominalization in (8a) functions as the subject and the Theme of the clause. The Theme is long and heavy, which is typical of learned registers in English (cf. 2.4). Halliday (1994:353), for example, argues that technical registers in English tend to use "(…) complex passages 'packaged' in nominal form as Themes". The fact that both the Norwegian and the Swedish translator have used a clause indicates that there might be an aversion towards highly complex NPs as Themes in Norwegian and Swedish that sometimes triggers restructuring. Further evidence for this can be found in Hasselgård (1998, 2004, 2005:36ff), who argues that there is a tendency to use lighter Themes in Norwegian. Compare also Johansson (2004:49), who argues that English has more nominalizations and indefinite NPs as subjects and that Norwegian prefers "lighter Themes than English".

In (9), the Norwegian translator has used a nominal *at*-clause:

(9) *s*-genitive + N + *prep* + NP→ rank-shifted clause

a. Now they had to decide whether to go over to the complex new system, to supervise the elections of the team leaders, arrange a method to calculate how much each team had produced at harvest time, and work out how much cash to subtract for **the team's use of the farm's machinery and other services.** (ENPC/ESPC MAW1)

b. Nå måtte de bestemme seg for om de ville gå over til det nye kompliserte kontraktsystemet. De måtte i så fall overvåke valgene av ledere for kontraktgruppene, finne frem til en metode for å regne ut hvor stor del av avlingen hver av gruppene hadde produsert, og finne ut hvor mye man måtte trekke fra lønningene som kompensasjon for **at gruppen hadde fått benytte brukets maskinpark og andre tjenester.** (ENPC MAW1T)

As in (8b,c), the translation with a clause in (9b) may be explained by the length and complexity of the lexical nominalization in the source text.[55] However, semantic concerns should also be taken into consideration. In (9b), the translation of *use* in Norwegian (i.e. *utnytting* or *bruk* (use)) would most

[55] Particularly since the translator has inserted the deverbal noun *kompensasjon* (compensation).

likely be interpreted as a lexical nominalization with manner meaning, i.e. referring to the manner in which an action is carried out and not to the action itself.[56] In the English original, however, it seems more likely that a factual meaning is intended. A nominal *at*-clause usually has factual meaning and is therefore a good translation in (9b) (cf. 3.2).[57]

Translations with an inserted N before the clausal translation also occurred. There were two types depending on the type of head noun: *shell noun + apposition* or *circumstantial N + relative clause*. In addition, there was a third type of N + clause structure, where the object of the source lexical nominalization was turned into a nominal, followed by a relative clause. As the observations regarding these structures overlap with the discussion of lexical nominalizations with an object-like adnominal element in chapter 5, the discussion is postponed to 5.2.4 (Translations with an inserted N + clause) and 5.2.6 (Translations with a N + relative clause).

4.3 Translations of 'adjective+ deverbal N + *of* + NP'

In the structure 'adjective+ deverbal N + *of* + NP' (e.g. *Soviet transformation of the rural areas*), the premodifying adjective typically functions as a subject and the *of*-clause as an object, as illustrated in (10a):

(10)

a. The classical Korsakov's syndrome - a profound and permanent, but pure, devastation of memory caused by **alcoholic destruction of the mammillary bodies** - is rare, even among very heavy drinkers. (ENPC/ESPC OS1)

b. Det klassiske Korsakovs syndrom — en dyp og varig, men "ren" ødeleggelse av hukommelsen, forårsaket av **alkoholbetinget ødeleggelse av corpora mammillaria** — forekommer sjelden, selv hos mennesker som drikker svært mye. (ENPC OS1T)

c. Det klassiska Korsakovs syndrom — en djupgående och bestående, men "ren" nedbrytning av minnet orsakad av **att mammillarkropparna förstörts av spritmissbruk** — är sällsynt, också bland gravt alkoholiserade personer. (ESPC OS1T)

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[56] So far I have not discussed lexical nominalizations with manner meaning. Some comments about this type are provided in 5.3.3.

[57] This was pointed out to me by Hilde Hasselgård (PC).

The Norwegian translation in (10b) is congruent: the adjective is translated with an adjective and the *of*-construction with an *av*-construction. The Swedish translator in (10c), on the other hand, has opted for an *att*-clause (*that*-clause), reflecting a factual interpretation.

Of nine occurrences in the material, only one was translated congruently in both Norwegian and Swedish. This is mostly due to the fact that the premodifying adjective was often translated with the *s*-genitive:

(11)

a. The MTS was the key to **Soviet control and transformation of the rural areas.** (ENPC/ESPC MAW1)

b. MTS-ene var nøkkelen til **sovjetmaktens kontroll med og omforming av landområdene**. (ENPC MAW1T)

c. MTS var nyckeln till **sovjetmaktens herravälde över landsbygden och omvandling av den.** (ESPC MAW1)

In (11) the adjective *Soviet* has been turned into the *s*-genitive s*ovjetmaktens* (the Soviet power's). Example (12) illustrates a similar change:

(12)

a. We will discuss the two other sources of the Pentateuch **the Deuteronomist (D) and Priestly (P) accounts of the ancient history of Israel** - in Chapter Two. (ENPC/ESPC KA1)

b. I kapittel 2 skal vi drøfte de to andre kildene i Mosebøkene — deuteronomisten (D) og den prestelige (P) — og **deres fremstillinger av Israels gamle historie.** (ENPC KA1T)

c. I kapitel två skall vi behandla Pentateukens båda andra källor- **deuteronomistens (D) och prästcodex' (P) skildringar av Israels äldre historia.** (ESPC KA1T)

In (12), *Deuteronomist* and *Priestly* become the possessive pronoun *deres* (their) in the Norwegian translation (12b), and the *s*-genitives *deuteronomistens* and *prästcodex'* (the Deuteronomist's and Priestly's) in the Swedish translation (12c). The changes in (11b,c) and (12b,c) reflect a pattern: in most of the examples where the premodifying adjective was changed, it refers to an animate entity as Agent/subject. A likely explanation for turning a premodifying adjective into an *s*-genitive is therefore Koptjevskaja-Tamm's (1993:208) observation that the *s*-genitive is strongly

associated with the subject in Swedish (and Norwegian) lexical nominalizations.

In one example, the Norwegian translator has chosen a lexical nominalization, whereas the Swedish translator has used a clause:

(13)

a. There has been **a scholarly debate about this**: some critics believe that the covenant did not become important in Israel until the seventh century BCE. (ENPC/ESPC KA1)

b. Det har vært **diskusjon om dette blant bibelforskerne**: Noen mener at pakten ikke fikk betydning for Israel før på 600-tallet f.v.t. (ENPC KA1T)

c. **Härom tvistar de lärde:** Somliga anser att förbundet inte fick någon betydelse i Israel förrän på 600-talet f.v.t. (ESPC KA1T)

The clausal translation by the Swedish translator in (13c) can perhaps be explained by there being a paradigmatic relation between the existential clause in (13a) and a clause such as in (13c). Schmid (2000:25), for example, argues that existential-*there* constructions with a deverbal N + *that*-clause as notional subject are paradigmatically related to verbs with complement clauses (i.e. *that*-clauses). He illustrates his point with the following sentences (Schmid 2000:25):

There is speculation that he might move into politics.

People are already speculating that he might move into politics.

The only difference between the lexical nominalization as notional subject in (13a) and the lexical nominalization in Schmid's example is that the clause following the lexical nominalization in (13a) is a prepositional phrase rather than a *that*-clause. It can be argued, however, that the paradigmatic relation is valid for lexical nominalizations with prepositional phrases as well, i.e. that (13a) and (13c) are part of the same network of agnates, to use the terminology in chapter 3 (cf. 2.2.3).

4.4 Translations of '*s*-genitive + deverbal N + *that*-clause'

The material contained only four instances of the '*s*-genitive + deverbal N + *that*-clause' nominalization (e.g. *their conviction that Babylon was a sacred place*). Example (14) illustrates the structure with translations:

(14)

a. Vernadsky, who was to become an outstanding Soviet scientist, was deeply impressed by **the old man's assertion that "The Earth is an organism."** (ENPC/ESPC JL1)

b. Vernadsky, som senere skulle bli en fremstående sovjetisk vitenskapsmann, fikk en dyp forståelse av **den gamle mannens påstand om at "Jorden er en organisme". (ENPC JL1T)**

c. Vernadsky blev senare en framstående vetenskapsman i Sovjetunionen. Han blev starkt påverkad av **den gamle mannens försäkran att "Jorden är en organism". (ESPC JL1T)**

Although the translations of (14a) are similar, the Norwegian translation (14b) has been regarded as non-congruent due to the insertion of the preposition *om* between the head deverbal noun and the postmodifying *at*-clause, while the Swedish translation in (14c) keeps the structure of the original and is therefore congruent.

The inserted preposition in (14b) is interesting for several reasons. Firstly, the translation reflects a typological difference between English and Norwegian, since a preposition cannot be followed by a *that*-clause in English (cf. Quirk et al. 1985:659)[58]. Secondly, there is a syntactic difference between (14a) and (14b): the *that*-clause in (14a) can be regarded as an apposition (cf. chapter 3), but the *at*-clause in (14b) cannot, due to the inserted preposition. Thirdly, there is an interesting difference between the Norwegian and Swedish translations since the Norwegian translation seems to require an inserted preposition between the head deverbal noun and the *at*-clause (*that*-clause), whereas Swedish can do without (cf. also Teleman et al. 2000:III:126ff).

The pattern with an inserted preposition in Norwegian is evident in the translations of deverbal nouns followed by *that*-clauses without the *s*-genitive as well, and is further commented on in section 5.5.

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[58] At least not in the majority of cases (for exceptions, see Seppänen 1989).

4.5 Translations of '*s*-genitive +deverbal N + *to*-infinitive'

The '*s*-genitive +deverbal N + *to*-infinitive' nominalization is illustrated in (15a):

(15)

a. This was a difficult subject to raise with Leonid Brezhnev, who saw himself as the saviour of the private plots after **Khrushchev's spasmodic attempts to eradicate them.** (ENPC/ESPC MAW1)

b. Det var ingen lett oppgave å ta opp dette spørsmålet med Leonid Bresjnev. Han betraktet seg selv som de private jordlappenes redningsmann etter at **Khrustsjov hadde forsøkt å avskaffe dem på sin lunefulle måte.** (ENPC MAW1T)

c. Det ämnet var svårt att ta upp med Leonid Brezjnev som betraktade sig som privatodlingarnas räddare efter **Chrusjtjovs ryckvisa försök att utrota dem.** (ESPC MAW1)

There were three examples of this structure in the material. Of these, two lexical nominalizations were translated non-congruently, and one congruently in both Norwegian and Swedish. The congruent translations were not of the same source lexical nominalization, as illustrated by the Norwegian translation with a clause (15b) as opposed to the Swedish translation with a lexical nominalization (15c) of (15a) above.

As proposed in chapter 3, a *to*-infinitive following a deverbal N can be a purpose clause (e.g. *assaults to secure their flanks*) (cf. 3.5.2.1), part of a nominalized verb phrase complex (VPC) (e.g. *Khrushchev's spasmodic attempts to eradicate them*) (cf. 3.5.2.2), or a metaphenomenon (e.g. *an invitation to be an experimenter***)** (cf. 3.6.2). The three examples of '*s*-genitive + deverbal N + *to*-infinitive' structures in the material were all analyzed as nominalized VPCs. A nominalized VPC consists of one process composed of two sub-processes where the second process is an expansion of the first. According to this analysis, the *to*-infinitive in (15a) functions as a 'second' sub-process extending the 'first' process *attempt*, and is viewed as a part of the nominalized VPC rather than the direct object of *attempt* (cf. Halliday 1994:282, 3.5.3). Thus, the nominalized VPC corresponds to the VPC illustrated in (16) (cf. 3.5.3):

(16) [S: Khrushchev] [Adv: spasmodically] [VPC: attempted to

eradicate] [Odir: them].

Similarly to the translations of the '*s*-genitive + deverbal N + *that*-clauses', the Norwegian translators have inserted a preposition between the head deverbal noun and the following clause in nominalized VPCs:

(17)

a. To reminisce about the first memory of my personal life may seem irrelevant in **our quest to understand Gaia.** (ENPC/ESPC JL1)

b. Det vil kanskje virke noe irrelevant når jeg fortaper meg i den første erindring fra mitt personlige liv i **vårt forsøk på å forstå Gaia.** (ENPC JL1)

The inserted preposition can be considered as part of the nominalized VPC, i.e. it corresponds to a VPC which may contain the same preposition. The preposition *på* inserted in (17b), for instance, occurs in the VPC *vi forsøkte oss på å forstå Gaia* (lit. we attempted us *on* to understand Gaia)) and is therefore of a different type than the inserted preposition with the '*s*-genitive + deverbal N + *that*-clause' type, which was inserted between the deverbal noun and an appositive clause and had no counterpart in a possible corresponding clause.

More observations concerning nominalized VPC are made in section 5.6.2, which deals with nominalized VPCs without the *s*-genitive (e.g. *an attempt to express their wonder*).

4.6 Translations of passive nominalizations

There were two passive-like structures in the material. The two types are illustrated in (18) and (19):

(18) *s*-genitive+ deverbal N + *by* + NP

The two Vikings now sit there brooding silently, no longer allowed to report the news from Mars, hunched against **their final destruction by the wind** with its burden of abrasive dust and corrosive acid. (ENPC/ESPC JL1T)

(19) deverbal N + *of*+ NP + *by* + NP

The quest for life elsewhere is no longer an urgent scientific goal, **but the confirmation by the Vikings of the utter sterility of Mars** has hung as a dark contrasting backcloth for new models and images of the Earth. (ENPC/ESPC JL1)

In 1970, Chomsky (1970:202) argued that passive formation consisted of two steps: *Agent-Postposing* and *NP Preposing*. By means of these transformations an 'active' structure, such as *the committee's rejection of John,* could be turned into the structure *the rejection of John by the committee* by means of Agent-Postposing, and then further changed into *John's rejection by the committee* by means of NP-Preposing. Thus, if we use the reasoning from Chomsky (1970), the structure 'deverbal N + *of* + NP+ *by* + NP' (cf. 25) reflects a "semi-performed" passive transformation, whereas the structure *s*-genitive + deverbal N + *by*+ NP' (cf. 23) is a complete passive transformation.

Quirk et al. (1985:1289) refer to structures such as (18) as passive nominalizations, assuming that they are systematically related to passive clauses, but they do not mention structures such as (19). Similarly to Chomsky, Huddleston and Pullum (2002:46), argue that lexical nominalizations as (19) represent a mixture of the active and the passive voice, since the object is realized by a post-posed *of*-construction and the agent by a *by*-phrase. However, unlike Chomsky, Huddleston and Pullum use the 'mixed' structure as an argument against the notion of passive nominalizations.

Translations with a clause may throw some light on the analysis of *by*-nominalizations. The central question is whether passive or active clauses are used as translations. There were seven occurrences of transitive two-argument structures where *by* introduces the Agent in English, four of which were translated with a clause in Norwegian, whereas all the *by*-constructions were translated with a clause in the Swedish material. The translations of the *s*-genitive+ deverbal N + *by* + NP are discussed first, and then the translations of deverbal N + *of* + NP+ *by* + NP.

In (20), both translators have used a 'passive' structure:

(20)

a. The two Vikings now sit there brooding silently, no longer allowed

to report the news from Mars, hunched against **their final destruction by the wind with its burden of abrasive dust and corrosive acid.** (ENPC/ESPC JL1T)

b. Nå sitter de to Vikingene der oppe og grubler i taushet, for de får ikke lenger lov til å sende nyheter fra Mars. De venter på **den endelige tilintetgjørelse**, **som vil besørges av vinden og dens nedbrytende støv og etsende syre.** (ENPC JL1T)

c. De två Vikingarna sitter nu tyst ruvande, utan att vidare få sända några nyheter från Mars och väntar på sitt slutliga öde - **att förstöras av det nötande sura dammet.** (ESPC JL1T)

The reason for the structure not being translated congruently is probably that the preposition corresponding to the agentive *by* in Norwegian and Swedish is identical to the preposition introducing the direct object in lexical nominalizations (i.e. the correspondence of *of*). A congruent translation with *av* would therefore be ambiguous.[59] What happens in the Norwegian translation (20b) is that *their* is omitted and the role of *av* is made explicit in a relative clause (*som vil besørges av vinden og dens nedbrytende støv og etsende syre*). The Swedish translator has used a passive clause, as could be expected from the observation by Quirk et al. (1985:1289) that the structure '*s*-genitive + deverbal N + *by*+ NP' is systematically related to a passive.

However, there were also some examples of active clauses as translations, as in (21), where the Norwegian translator has used a passive and the Swedish translator has used an active:

(21)

a. In those days, before **its destruction by the machines of agribusiness vandals**, the English countryside was a heavenly garden. (ENPC JL1)

b. Dette var **tiden før den engelske landsbygd ble ødelagt av maskinene til vandalene innen det kommersielle landbruk**, og

[59] However, agentive *av* used to be productive in Swedish lexical nominalizations, and possibly in Norwegian as well. In *Svenska Akademiens Ordbok 1898*, vol I:88, the example *Konstantinopels eröfring af Turkarna* (Constantinople's conquest of the Turks) is said to be unambiguously interpreted as *the conquest of Constantinople* ***by*** *the Turks*, but Wellander (1973) notes that the constructions *Handelsbankens övertagande av Mälarbanken* (Handelsbanken's take-over of Mälarbanken) is ambiguous between the readings 'the take-over of Handelsbanken by Mälarbanken' and 'the take-over of Mälarbanken by Handelsbanken' (cf. Koptjevskaja-Tamm 1993:206).

landskapet var som en himmelsk have. (ENPC JL1T)

c. På den tiden, **innan industrijordbrukens vandaler hade hunnit förstöra den**, var den engelska landsbygden en verklig lustgård. (ESPC JL1T)

The occurrence of both active and passive translations of the structure '*s*-genitive + deverbal N+ *by* + NP' in Norwegian and Swedish suggests that there is no automatic association between this structure and the passive.

Example (22) illustrates the structure 'deverbal N + *of* + NP + *by* + NP':

(22)

a. The quest for life elsewhere is no longer an urgent scientific goal, **but the confirmation by the Vikings of the utter sterility of Mars** has hung as a dark contrasting backcloth for new models and images of the Earth. (ENPC/ESPC JL1)

b. Søkingen etter liv andre steder er ikke lenger noe påtrengende vitenskapelig mål, men **Vikingenes bekreftelse av Mars' totale sterilitet** danner nå et mørkt bakteppe som gir kontrast til nye modeller og forestillinger når det gjelder Jorden. (ENPC JL1T)

c. Jakten efter liv på andra planeter är inte längre ett viktigt vetenskapligt mål, **utan Vikingarna har snarare genom att bekräfta Mars fullständiga sterilitet** skapat en mörk bakgrund för vårt eget sätt att betrakta livet på Jorden. (ESPC JL1T)

Two of the Norwegian translations retaining NP status are of the type illustrated in (22b), where the *by*-phrase is turned into the *s*-genitive (cf. *Vikingenes* (the Vikings')). As argued above for premodifying adjectives that were turned into *s*-genitives (cf. 4.3), changes of *by*-phrases into *s*-genitives can be explained by Koptjevskaja-Tamm's (1993) observation that there is a strong connection between the *s*-genitive and the subject in Swedish (and Norwegian) lexical nominalizations. Moreover, a congruent translation of a nominalization like (22a) (*the confirmation by the Vikings of the utter sterility of Mars*) would involve two postmodifiers introduced by *av*, a construction that is avoided in Norwegian due to its ambiguous nature.

In example (23), the Norwegian translator has used a passive construction, and the Swedish translator an active one:

(23)

a. With this rise of temperature, the rate of growth, the length of the warm season, and the spread of dark daisies would all exert a positive feedback and lead to **the colonization of most of the planet by dark daisies.** (ENPC/ESPC JL1T)

b. Og på grunn av temperaturstigningen, veksttempoet og lengden av den varme årstiden, ville utbredelsen av de mørke tusenfrydene føre til en positiv feedback som ville gi som **resultat at mesteparten av planeten ble befolket av mørke tusenfryder.** (ENPC JL1T)

c. Genom att temperaturen höjs, växer de mörka tusenskönorna också fortare och deras växtsäsong blir längre. Det bildas en positiv återkoppling som gör att **mörka tusenskönor kan kolonisera en stor del av planeten.** (ESPC JL1T)

This structure occurs only in the text JL1 (i.e. *the Ages of Gaia* by James Lovelock), where it is always turned into the passive by the Norwegian translator, whereas the Swedish translator has used both the active and the passive. The differences between the target languages may therefore be attributed to translator's style.

In sum, it seems that passive nominalizations were not normally translated congruently, probably due to the fact that the correspondence of *by* in Norwegian and Swedish is the preposition *av*, which prototypically realizes the object. Instead, translators resort to a clause, or a translation where the *by*-phrase is turned into an *s*-genitive. The rather common use of a passive clause suggests that the lexical nominalizations with *by* are more often interpreted as 'passive-like' by translators than other lexical nominalizations.

4.7 Summary

This chapter has provided some evidence that translations can be used to throw light on the meaning of the source structure as well as to point to subtle differences in preferences of use in English, Norwegian and Swedish lexical nominalizations.

Several types of translations have been discussed. An overview of the different types of translation correspondences can therefore be useful. Table 4.9a-c list the types of lexical nominalizations and translation

correspondences discussed in this chapter and give their frequencies in Norwegian and Swedish.

Table 4.9a Translations of the types: *John's construction of the building/Soviet transformation of the rural areas* into Norwegian and Swedish

Translation correspondence	Norwegian	Swedish
congruent translation	34	30
clause	6	11
N + clause	3	3
adjective → *s*-genitive	5	5
s-genitive or adjective → ∅	4	2
object → ∅	1	2
compound	3	2
deverbal N + *at/att*-clause	0	1
deverbal N + *prep*+ *at/att*-clause	1	0
paraphrase	0	1
Total	57	57

Table 4.9b Translations of types: *their conviction that Babylon was a sacred place/Krushchev's attempt to eradicate them*

Translation correspondence	Norwegian	Swedish
congruent	0	3
clause	3	3
s-genitive →∅	1	2
prep + *at/att*-clause	4	0
Total	8	8

Table 4.9c Translations of types: *their final destruction by the wind/ the confirmation by the Vikings of the utter sterility of Mars*

Translation correspondence	Norwegian	Swedish
congruent	0	0
clause	4	8
s-genitive →∅	1	0
by → *s*-genitive	3	0
Total	8	8

As is evident from the tables, some of the forms were rather rare in my material. We can therefore not draw any far-reaching conclusions on the basis of these data. On the other hand, the fact that we do have congruent translations for all types except the passive types (cf. table 4.9c) is sufficient evidence to claim that English, Norwegian and Swedish have a similar battery of lexical nominalization types realizing both a subject and an object. Hence, when there are differences between the original and translations, we can expect that these are due to other issues than typological differences between the languages. Also, the many congruent translations indicate that similarly to English, structures with both a subject and an object are not a marginal phenomenon in Norwegian and Swedish popular science, at least not in translated text.

What patterns could be found among the non-congruent translations? First of all, the clause was particularly popular with the type *s*-genitive + deverbal N + *prep* + NP (i.e. *John's construction of the building*) and the passive types. These types prototypically have a complex-event meaning and this is a likely reason why they were translated with a clause. Because of their argument structure, complex-event nominals are more obviously related to a clause than other types and they also appear to imply a higher degree of metaphorization. Because they are grammatical metaphors complex-event nominals may come across as particularly difficult, inviting the translator to use a more accessible structure such as a clause (cf. 2.3).

Another explanation for the translations with a clause may be that Norwegian and Swedish are more reluctant to use long and complex NPs as textual Themes. This is, on the other hand, a position typical for lexical nominalizations in English, especially in scientific texts (cf. 2.4.2).

If we look at the non-congruent translations retaining NP status, the tables show that English uses a wider repertoire of adnominal elements related to subject roles in comparison to Norwegian and Swedish. Both subjects realized by *adjectives* (e.g. *Soviet transformation of the rural areas*) and *by* + NP (e.g. *the confirmation by the Vikings of the utter sterility of Mars)* have been turned into the *s-genitive* in Norwegian and Swedish.

There was a slight difference in translation preferences between the Norwegian and the Swedish translators in that the Norwegian translators omitted the *s*-genitive in some cases when the Swedish translator did not. In these cases, the omission was explained by the observation that

nominalizations where the subject of the sentence and the *s*-genitive are co-referential are used less often in Norwegian than in Swedish (cf. 4.4.1)

Regarding translations of the object, the translation correspondences indicate that non-congruent translations can disambiguate the function of *of*-constructions. Congruent translations or clauses are used if the *of*-construction is an argument, whereas different types of nominal paraphrases are preferred when the *of*-construction does not have an argument role.

In the next chapter we look more closely into the translations of transitive lexical nominalizations with an object, to see if the patterns suggested in the translations of the object in this chapter can be confirmed on a larger set of data.

5 TRANSLATIONS OF LEXICAL NOMINALIZATIONS WITH AN OBJECT

5.1 Introduction

In this chapter I study transitive lexical nominalizations with an object such as e.g. *the construction of the building* or an object-like adnominal element, such as *the accusation that the Gaia hypothesis is teleological* and how they are translated into Norwegian and Swedish.

As shown in chapter 4, there were far more instances of lexical nominalizations with a subject or an object than lexical nominalizations with both a subject and an object. Of the 428 examples of transitive lexical nominalizations, 355 (83%) examples had a subject or an object, whereas 73 (17%) examples had both a subject and an object (cf. table 4.1). If only the subject or the object is realized, previous studies have found that lexical nominalizations with an omitted subject (e.g. *the construction of the building*) are more common than those with an omitted object (e.g. *John's construction*) (Mackenzie 1997:106). This is confirmed in my material: of the 355 instances with a subject or an object, there were 260 examples with an object and 95 with a subject:

Table 5.1a The frequency of lexical nominalizations with a subject and an object.

Lexical nominalization	Frequency	%
subject	95	27%
object	260	73%
Total	355	100%

The higher frequency of lexical nominalizations with only an object can in part be explained by the fact that the object is required for complex-event nominals, whereas the subject is always optional. Since the subject is never part of the argument structure in nouns, I have chosen to postpone the discussion of lexical nominalizations with a subject until chapter 6. This leaves the largest category of lexical nominalizations, namely those with an object, for this chapter.

The chapter discusses the following five types of lexical nominalizations with objects:

A. deverbal N+ *prep*+NP

the accumulation and transport of thousands of tons of stores

B. *s*-genitive + deverbal N

its presentation

C. N + deverbal N (compound)

land use

D. deverbal N + *that*-clause

the accusation that the Gaia hypothesis is teleological

E. deverbal N + *to*-infinitive

any desire to explain the origin of the world

Each of the types above presents its own set of problems. The *of*-construction (type A) is particularly troublesome because it can be used in many different ways, each with a different meaning. The translations of type A are discussed in section 5.2. The *s*-genitive (type B) normally realizes the subject but is used here for the object, and is discussed in 5.3. Type C *land use* is interesting from the point of view of whether the first N is an argument or not and is discussed in section 5.4. The translations of type D and E are discussed in section 5.5 and 5.6 respectively.

In addition, this chapter includes a discussion of two patterns involving lexical nominalizations that frequently give rise to a translation with a clause. One pattern is *lexical nominalizations following prepositions*, as in (1):

(1) This was all happening half a century ago, *before* **the invention of the aqualung**.

The other pattern is lexical nominalizations as the object of a semantically 'light verb', so-called *expanded predicates*, illustrated in (2):

(2) They were able to *make* **excellent use of it.**

The translations of lexical nominalizations after a preposition are discussed in section 5.7 and the translation of lexical nominalizations in expanded predicates in section 5.8.

The main aim of the chapter is to use translations to throw light on the use and meaning of lexical nominalizations with objects. As many of the types of lexical nominalizations discussed in this chapter are 'reduced' variants of the lexical nominalizations with both a subject and an object discussed in chapter 4, some observations concerning the objects are repeated. However, due to the larger number of examples, we may expect to find more evidence for some tendencies as well as a richer picture of the factors influencing translations. Hopefully, this will lead to more insights about lexical nominalizations.

5.2 The type 'deverbal N + *prep* + NP'

In this section I discuss the translations of 'deverbal N + *prep* + NP', such as e.g. *the accumulation of thousands of tons of stores*. The congruent translations of the structure are discussed in 5.2.1, the nominal paraphrases in 5.2.2, the translations with a clause in 5.2.3 and the translations with an inserted N followed by a clause in 5.2.4. In addition, translations with an N + a relative clause are discussed in 5.2.5.

First, it is necessary to describe the construction 'deverbal N + *prep* + NP' in more detail. In most cases the 'deverbal N + *prep* + NP' type consists of a deverbal noun followed by an *of*-construction, such as in *the accumulation of thousands of tons of stores*, but this is not true in all cases. In some cases, the deverbal N is followed by a preposition other than *of*:

(3)

a. When people began to devise their myths and worship their gods, they were not seeking to find **a congruent explanation *for* natural phenomena.** (ENPC/ESPC KA1)

b. Da folk begynte å dikte mytene sine og tilbe sine guder, var det ikke for å gi noen **bokstavelig forklaring *på* naturfenomenene.** (ENPC KA1T)

c. När hon började gestalta sina myter och tillbedja sina gudar sökte

hon inte efter **någon bokstavlig förklaring *till* naturfenomenen.** (ESPC KA1T)

What is important in (3) is that both the source language and the target languages have lexical nominalizations consisting of a deverbal noun followed by a lexically determined preposition that does not correspond to a preposition used with the agnate verb (cf. *(their) explanation for natural phenomena* → **(they) explain for natural phenomena*). Compare Andersen (2007:58), who refers to prepositions such as those in (3) as *lexical prepositions* that have their 'own lexical contribution to make' and are therefore 'not inserted in the nominalization process'. In my material all the lexical nominalizations with a lexical preposition are [+count] which suggests that they differ in meaning from lexical nominalizations with deverbal Ns followed by *of*-constructions (which typically are [-count] and have complex-event meaning). Since the lexical nominalization in (3a) does not have complex-event meaning, we can conclude that the postposed PP in (3a) is a postmodifier rather than an argument. There were 11 examples of this type among the deverbal N + *prep* + NP lexical nominalizations and 10 were translated with a congruent structure. I do not include these examples in the discussion in this chapter.

Lexical nominalizations such as the one illustrated in (4a), on the other hand, are included:

(4)

a. The concept that the Earth is actively maintained and regulated by life on the surface had its origins in **the search for life on Mars.** (ENPC/ESPC JL1)

b. Forestillingen om at Jordens tilstand blir aktivt regulert og vedlikeholdt av livet på overflaten, hadde sin opprinnelse i **utforskningen av muligheter for liv på Mars.** (ENPC JL1T)

c. Idén att Jordens miljö aktivt underhålls och regleras av livet på dess yta uppkom i samband med **att man sökte efter liv på Mars.** (ESPC JL1T)

The Norwegian translation in (4b) uses the preposition *av* (corresponding to English *of*) and the Swedish translation contains an agnate clause. These translations reflects that the preposition *for* in (4a) corresponds to the

preposition of a prepositional verb (*the search for life on Mars → (they) searched for life on Mars*), and that (4a) can be related to a clause. Put differently, the PP in (2a) is a prepositional object and can be compared to an object in an *of*-construction, such as in *the accumulation of thousands of tons of stores,* even if it is not inserted in the nominalization process.

The remainder of the section discusses the translations of the 'deverbal N + *prep* + NP' type, with focus on the translation of the *of*-construction.

5.2.1 Congruent translations

Table 5.2.1 shows the frequencies for congruent and non-congruent translations of the type *the construction of the building:*

Table 5.2.1 Translations of type *the construction of the building* in Norwegian and Swedish

Translation correspondence	Norwegian		Swedish	
congruent	132	(67.0%)	121	(61.5%)
non-congruent translation	65	(33.0%)	76	(38.5%)
Total	197	(100.0%)	197	(100%)

The ratio of congruent translations of the type 'deverbal N + *prep* + NP*' (the construction of the building*) is similar to the ratio for the '*s*-genitive + deverbal N + *prep* + NP' type (*John's construction of the building*) discussed in chapter 4 (cf. 4.2), which could be expected from the fact that in most cases the former is a reduced version of the latter. Example (5) is an instance of such a 'reduced structure' where it is easy to imagine a subject:

(5)

a. **The scientific study of the relationship between brain and mind** began in 1861, when Broca, in France, found that specific difficulties in the expressive use of speech, aphasia, consistently followed damage to a particular portion of the left hemisphere of the brain. (ENPC/ESPC OS1T)

b. **Det vitenskapelige studiet av forholdet mellom hjerne og bevissthet** begynte i Frankrike 1861, da Broca oppdaget at spesielle vansker i den ekspressive bruk av talen, afasi, med konsekvens fulgte skade i en bestemt del av den venstre hjernehalvdelen. (ENPC

OS1T)

c. **Det vetenskapliga studiet av förhållandet mellan hjärna och medvetande** tog sin början år 1861 då Broca i Frankrike fann att specifika rubbningar av talförmågan, afasi, var en konsekvens av skador i en bestämd del av vänster hjärnhalva. (ESPC OS1T)

The lexical nominalization in (5a) is translated congruently by both the Norwegian and Swedish translator with the preposition *av*. However, not all congruent translations of the *of*-construction use this preposition. Consider (6):

(6)

a. Everything on earth was thus believed to be a replica of something in the divine world, a perception that informed the mythology, ritual and **social organisation of most of the cultures of antiquity** and continues to influence more traditional societies in our own day. (ENPC/ESPC KA1)

b. Alt på jorden ble derfor antatt å være en kopi av noe i den guddommelige verden, og denne antagelsen preget mytologi, ritualer og **sosial organisering i de fleste av oldtidens kulturer** og virker fremdeles inn på de mer tradisjonelle samfunn i vår egen tid. (ENPC KA1T)

c. Att allting här på jorden var en avbild av någonting i gudavärlden var en uppfattning som genomsyrade mytologi, riter och **samhällsstruktur i de flesta av forntidens kulturer** och som än i dag påverkar mera traditionella samhällen. (ESPC KA1T)

The Norwegian translation of (6a) is congruent since the syntactic structure of the original is kept and the Swedish translation is a nominal paraphrase. What is interesting in (6) is that a translation with *av* is impossible in Norwegian and Swedish. The reason for this is probably related to meaning.

If we compare *of* with *av* in Norwegian and Swedish, it is clear that *av* is used to denote the direct object, but it is not clear that it can be used to realize other relations. In English, on the other hand, *of* can express a number of different relations. According to Langacker (2000:76ff) the shared meaning of all occurrences of *of* is that the preposition denotes an intrinsic relationship between two entities. For example, *the bottom of the jar* denotes a part of the jar (part-whole relation), *the father of the bride* denotes a family relation between the father and the bride (relational nouns), and *the*

examination of the students denotes the 'nuclear' argument of the deverbal noun (i.e. the internal argument/the direct object).

Koptjevskaja-Tamm also discusses the problem that *av* has a more restricted use in Swedish than in English. She argues (Koptjevskaja-Tamm 1993:177) that the reason why *av* is semantically more restricted than *of* is that *av* is not a genitive construction and is therefore used more restrictively to denote intrinsic relations. For example, the relation between *the father* and *the bride* cannot be expressed by *av* in Norwegian and Swedish (*(Norw.) *faren/**(Sw.) *fadern av bruden*), and *av* can only be used to denote some part-whole relations but not others. To illustrate, *av* does not correspond to the *of*-construction in *the lid of the jar*, (*(Norw.) lokket av boksen /*(Sw.) locket av burken), but this correspondence is possible in *the top of the hill* ((Norw.) toppen av bakken /(Sw.) toppen av backen). On the other hand, the *s*-genitive is possible in all examples, and would also be possible in (6): compare (Norw.)*Oldtidens kulturers sociale organisering*) /*(*Sw.) *Forntidens kulturers sociala organisering* (The cultures of Antiquities' social organization).

Thus, if *of* is translated by another preposition than *av* it can be an indication that the *of*-phrase does not function as an argument, but instead, to use the words of Andersen (2007:58) as "a lexical preposition which has its own lexical contribution to make to the composition of the nominal and the dependent." The fact that the *of*-construction in (6a) is turned into another preposition in (6b) and (6c) indicates that it is a postmodifer rather than an argument.

5.2.2 Nominal paraphrases

I will only consider translations of the type 'deverbal N + *of* + NP*'* in the discussion of non-congruent translations of the type *'*deverbal N + *prep* + NP*'*. The various types of non-congruent translations and their frequency are presented in table 5.2.2: [60]

[60] The total number of non-congruent translations is lower in table 5.2.2 than in table 5.2.1. This is because the non-congruent translations of the structure *deverbal N + prepositional object* (e.g. *the search for Mars*) are not discussed.

Table 5.2.2 Non-congruent translations of the type *the construction of the building* in Norwegian and Swedish

Translation correspondence	Norwegian	Swedish
clause	35	33
deverbal N + (*prep*)+ clause	5	10
N+N compound	7	9
of → *s*-genitive	7	7
of → ∅	1	4
other	5	3
Total	60	66

Table 5.2.2 shows that clausal translation was the most frequent translation type. However, in this section I only discuss translations which did not result in a change of nominal status, i.e. nominal paraphrases (cf. 1.3.3). Translations with a clause are dealt with in 5.2.4 and translations with a N + clause in section 5.2.5 and 5.2.6.

5.2.2.1 Translations with N + N compound

In chapter 4 it was noted that some lexical nominalizations of the type '*s*-genitive + deverbal N + *prep* + NP' (e.g. *John's construction of the building* were turned into '*s*-genitive + compound'. For example, *Vernadsky's view of the world* was rendered as *Vernadskys verdensanskuelse* (Norw.) (cf. 4.2.1). Similarly, some lexical nominalizations of the type 'deverbal N + *prep* + NP' were turned into a lexicalized compound (7 occurrences in Norwegian and 9 in Swedish).

Consider (7):

(7)

a. Neurology's favourite word is "deficit", denoting an impairment or incapacity of neurological function: **loss of speech, loss of language, loss of memory, loss of vision, loss of dexterity, loss of identity** and **a myriad other lacks and losses of specific functions (or faculties)**. (ENPC/ESPC OS1T)

b. Nevrologiens yndlingsord er "deficientia", et uttrykk for svekkelse eller manglende evne i nevrologisk funksjon. Det kan være **tap av taleevnen, tap av språk, tap av hukommelse, tap av synsevnen, tap av oppfattelsesevnen, tap av identitet** og **en rekke andre**

mangler og tap av bestemte funksjoner (eller evner). (ENPC OS1T)

c. Neurologins favoritord är "bortfall" och det står för en försämring eller defekt i den neurologiska funktionen: **röstförlust**, **språkförlust**, **minnesförlust**, **synförlust**, **förlust av den finmotoriska samordningen**, **förlust av identiteten**, och **avsaknaden och förlusten av en myriad andra specifika funktioner (eller förmågor)**. (ESPC OS1T)

In (7b) the Norwegian translator has opted for a congruent translation (with *av*-constructions), whereas the Swedish translator has chosen both compounds and congruent translations (7c). The compounds in the Swedish translation are synthetic compounds where the first N is the grammatical object of the second N (cf. 3.4.4).[61] This analysis is supported by Andersen (1998a:5) who suggests that *avstenging av brønnramme* (Norw.) (lit. closing of X) and *brønnramme-avstenging* (Norw.) (lit. x-closing) are systematically related and equal in meaning.

Now consider (8):

(8)

a. I had taken off his left shoe and scratched the sole of his foot with a key - a frivolous-seeming but essential **test of a reflex** - and then, excusing myself to screw my ophthalmoscope together left him to put on the shoe himself. (ENPC/ESPC OS1T)

b. Jeg hadde tatt av ham den venstre skoen og skrapte ham under foten med en nøkkel. Det kan virke løssluppent, men det er faktisk en viktig **refleksprøve.** (ENPC OS1T)

c. Jag hade tagit av honom vänsterskon och strukit en nyckel under fotsulan — ett till synes bagatellartat men viktigt **reflextest** — och därpå överlät jag åt honom att ta på sig skon i det jag skruvade ihop min ögonspegel. (ESPC OS1T)

In (8b) and (8c) both the Norwegian and the Swedish translators have chosen compounds, i.e. *refleksprøve* (Norw.) and *reflextest* (Sw.) (lit. reflex test). However, the compounds in (8) are of a different type than the compounds in

[61] It can also be observed that there exist scientific terms for all the lexical nominalizations in (7a), and it can be expected that these scientific terms are used in more formal texts in all the three languages. For example, the scientific term for *loss of language* is *aphasia* in English and *afasi* in Norwegian and Swedish.

(7): they are *root compounds* (cf. Adams 2001:78). Root compounds cannot express process meaning: they are [+count] and they are often semantically fuzzy between simple-event and result meaning. For instance, Quirk et al. (1985:1571) claim that *meat delivery* can refer to 'the act of delivering meat' (i.e. a simple-event type) or 'the meat that was delivered' (i.e. a result nominal of the product type), but not to the process of delivering meat (i.e. the complex-event meaning), which would prototypically be expressed as *meat delivering*, i.e. a synthetic compound where *meat* functions as the grammatical object of *delivering*.

The translations of (7) and (8) reflect two different functions of *of*-constructions. Synthetic compounds correspond to the *of*-construction as grammatical object and root compounds correspond to the *of*-construction as postmodifier.

5.2.2.2 *Of* → *s*-genitive

There were some examples where the *of*-construction was turned into the *s*-genitive (seven in each target language). This happened in lexical nominalizations that straddle the boundary between transitive and ergative structures.

In section 3.4.3, we saw that the object in a transitive clause (e.g. *John kicked the ball*) can correspond structurally to the object in an ergative two-participant structure (*John opened the door*), but that the two objects have different semantic roles. Whereas the transitive object is usually described as Goal, the ergative object is usually described as the Medium (Halliday and Matthiessen 2004:293). This semantic difference between the Goal and the Medium is manifested by the fact that whereas the former shows no degree of agency, the latter does. This is true even for lexical nominalizations headed by a deverbal noun morphologically related to an ergative verb: here too the Medium shows some degree of agency, and is therefore easily mistaken for an intransitive subject. For example, in *the circulation of the blood*, *the blood* may appear to correspond to an intransitive subject such as *John* in *John runs* (compare: *the blood circulates*). However, whereas *John's running* depends on John himself, *the circulation of the blood* must be initiated by some external force, namely the *Initiator* (cf. Halliday and Matthiessen 2004:299). In the example *the circulation of the blood*, the

initiator is *the heart*: if the heart quits beating, the blood stops circulating (cf. discussion in 3.4.3, 7.1).

In example (9a) and (10a) it is difficult to determine whether a transitive or an ergative analysis should be chosen:

(9)

a. Ja., for example, starts his history of God with an account of **the creation of the world** which, compared with the Enuma Elish, is startlingly perfunctory: (ENPC/ESPC KA1)

b. For eksempel begynner J sin gudshistorie med en beretning om **verdens skapelse** som sammenlignet med Enuma elisj er forbløffende lemfeldig: (ENPC KA1T)

c. Jahvisten inleder till exempel sin historia om Gud med en skildring av **världens skapelse** som, jämfört med Enuma Elish, är påfallande summarisk: (ESPC KA1T)

(10)

a. It has been suggested that some of the psalms celebrated **the enthronement of Yahweh in his Temple on the Feast of Tabernacles**, which, like **the enthronement of Marduk**, re-enacted his primal subjugation of chaos. (ENPC/ESPC KA1)

b. Det har vært fremsatt formodninger om at enkelte av salmene har hyllet **Jahves innsettelse på tronen** i hans tempel på løvhyttefesten, som på samme måte som **Marduks innsettelse** skulle forestille hans opprinnelige seier over kaos. (ENPC KA1T)

c. Det har hävdats att vissa psaltarpsalmer är hyllningar till **Jahve då han intar sin tron i templet** vid lövhyddohögtiden, då man liksom vid **Marduks tronbestigning** på nytt gestaltade hur guden i urtiden hade lagt under sig kaos. (ESPC KA1T)

In (9a), it can be argued that *the world* participates actively in its own creation, at least from a linguistic if not from a religious perspective, and, regarding (10a), it is possible that *Jahve* and *Marduk* participate actively in the process of receiving their own crowns, indicating that (9a) and (10a) are ergative structures. On the other hand, it is also possible to view the *of*-constructions as direct objects in (9a) and (10a), that is, *not* participating in the process of change, suggesting that the construction is transitive. For example, in (9a) the world does not necessarily participate in its own

making, and, in (10a) it can be assumed that people can be enthroned without any active participation on their own part.

Since the analysis of (9a) and (10a) was not clear, I decided to include them as transitive nominalizations, which must be considered as the default analysis. However, their translation is interesting as the analysis of ergative structures shows that ergative Mediums have a tendency to be turned into the *s*-genitive in Swedish and Norwegian lexical nominalizations (cf. 7.3.1).

5.2.2.3 *Of* → ∅

In some translations the *of*-construction was omitted (one occurrence in the Norwegian material and four in the Swedish), as illustrated in the Swedish translation in (11b):

(11)

a. By contrast a full atmospheric analysis, which the Viking was not equipped to do, would have provided a clear answer; indeed, even in the 1960s, **analyses of the Martian atmosphere** were available from telescopes that used infrared instead of visible light to look at Mars. (ESPC JL1)

b. Men en atmosfäranalys, vilket Vikinglandaren inte hade utrustning för att göra, skulle ge ett entydigt svar. Redan på sextiotalet hade man faktiskt teleskoputrustning som kunde göra **en sådan analys** genom att studera det infraröda ljuset från Mars i stället för det synliga. (ESPC JL1T)

In most of the examples where it was omitted, the *of*-construction was not an argument, but a postmodifier, i.e. the lexical nominalization has result nominal meaning, as in (11a) (note that the lexical nominalization in (11a) is [+count]). There are, however, some examples where it seems that the object has been omitted even though the lexical nominalization has complex-event meaning. Consider (12):

(12)

a. The people who, in a period of **disarmament and conversion of industries to civilian production**, will be most difficult to retrain and redeploy. (ENPC CS1)

b. Det er disse mennesker som i en periode med **nedrustning og**

omlegging til sivil produksjon vil skape de fleste problemer angående omplassering og omskolering. (ENPC CS1)

The Norwegian translation (12b) keeps the complex-event meaning of (12a), as suggested by the *-ing* suffix on the deverbal noun (i.e. *nedrustning og omlegging*), which often expresses process meaning in Norwegian (cf. Faarlund et al. 1999:99, Andersen 2007:66). Thus, the Norwegian translation is an example of a complex-event nominal without an overtly realized object. There are three such examples in Norwegian and two in Swedish. In all these examples, the object can be inferred from context. For example, the lexical nominalization in (12b) *nedrustning og omlegging til sivil produksjon* (lit. *disarmament and conversion to civilian production*) has been preceded by a paragraph describing the reference of the omitted object *av industrier* (*of industries*). Nevertheless, the fact that these objects are omitted suggests that not all complex-event nominals require that the object must be explicitly realized, as suggested by Grimshaw (1990) (cf. chapter 3).

5.2.2.4 Translations with deverbal N + *prep* + *at/att*-clause

In lexical nominalizations where a deverbal N morphologically related to a mental or utterance verb, such as *thought* and *statement,* is the head, the *of*-construction was sometimes turned into a preposition + (Norw.) *at*-clause /(Sw.) *att*-clause (*that*-clause). There was one such translation in the Norwegian material and three in the Swedish material. Example (13) is an illustration:

(13)

a. It would have been **an extraordinary experience of the empowerment of the oppressed against the powerful and the mighty.** (ENPC/ESPC KA1)

b. Det ville ha vært **et helt enestående eksempel på at de undertrykte tiltok seg makt og satte seg opp mot de sterke og mektige.** (ENPC KA1T)

c. Det rörde sig då om **en unik upplevelse av att de förtryckta satte sig upp mot dem som hade makt och myndighet.** (ESPC KA1T)

The translations with a preposition + *at/att*-clause resemble the type with an appositional *at/att*-clause (cf. the anaysis of 3.6.1). However, it is more difficult to argue that the *at/att*-clauses are appositions if a preposition is inserted between the deverbal noun and the *at/att*-clause. Thus, whereas the analysis of the *that*-clause after deverbal nouns morphologically related to a mental or utterance noun (e.g. *experience that the oppressed have been empowered*) as apposition works well for English, the same analysis does not seem to be as suited for Norwegian and Swedish, where a preposition can be inserted between the deverbal noun and the postmodifying clause. Inserted prepositions are discussed further in section 5.2.4.

5.2.3 Translations with a clause

The most popular non-congruent translation of the type 'deverbal N + of + NP' (e.g. *the construction of the building*) was with a clause: there were 35 clauses in the Norwegian translations and 33 in the Swedish translations (cf. table 5.2.2). This section describes the contexts where a clause was a particularly likely translation. As the grammatical function of the lexical nominalization in the clause is of particular importance, the section is divided into a discussion of the translations of English lexical nominalizations as subjects in 5.2.3.1 and English lexical nominalizations as objects in 5.2.3.2.

In addition I look into translations with clauses with the generic pronoun *man* (lit. *one*), which turned out to be a common translation correspondence.

5.2.3.1 The translation of lexical nominalizations functioning as subjects

As suggested in section 4.2.2, Norwegian and Swedish translators seem particularly prone to turn a lexical nominalization functioning as subject into a clause. Of 42 instances of the type 'deverbal N + *of* + NP' (e.g. *the construction of the building*) as subject, eight were translated into clauses in Norwegian and nine in Swedish. Consider (14), (15) and (16):

(14)

a. **The opening up to the plough of the virgin lands — hitherto uncultivated soil in central Asia whose combined area was larger than the entire agricultural acreage of Canada —** increased the grain harvest from just over 80 million tons in 1953 and 1954 to an average of 120 million tons in the years 1956 to 1958. (ENPC/ESPC MW1)

b. **Samtidig var man begynt å dyrke opp urørt mark i Sentral-Asia** og la større områder enn all dyrket mark i Canada under plogen. (ENPC MW1T)

c. **När man lade de jungfruliga markerna under plogen, dittills obrukad jord i Centralasien med en sammanlagd areal som översteg hela Canadas,** ökade spannmålsskörden från drygt 80 miljoner ton år 1953 och 1954 till i genomsnitt 120 miljoner ton mellan 1956 och 1958. (ESPC MW1T)

(15)

a. But **the ruthless reimposition of party authority** could not prevent the man-made famine that swept the country in 1932-33. (ENPC/ESPC MAWT1)

b. På denne måten klarte Partiet med harde midler **å gjenopprette sin autoritet,** men det klarte ikke å forhindre at en selvforskyldt sultkatastrofe feide over landet i 1932-33. (ENPC MAW1T)

c. Men **det hänsynslösa återinförandet av partiets auktoritet** kunde inte förhindra den självförvållade hungersnöd som härjade landet åren 1932 och 1933. (ESPC MAW1T)

(16)

a. **The worship of a single deity** was an almost unprecedented step: the Egyptian pharaoh Akenaton had attempted to worship the Sun God and to ignore the other traditional deities of Egypt but his policies were immediately reversed by his successor.

b. **Tilbedelsen av en enkelt guddom** var så godt som uten fortilfelle: Den egyptiske farao Akhnaton hadde forsøkt å tilbe solguden og se bort fra Egypts andre tradisjonelle guder, men hans politikk ble øyeblikkelig omgjort av hans etterfølger.

c. **Att tillbedja en enda gudom** var ett steg som närmast saknade motstycke.

In (14b,c), both the Norwegian and the Swedish translator have chosen to restructure the original text (14a), reflecting an aversion to particularly long and complex subjects in both Norwegian and Swedish (cf. 4.4.4), whereas

the slightly less complicated subjects in (15a) and (16a) were translated by a clause in only one of the target languages ((15b) and (16c), respectively).

In some cases even long and complex subjects were kept. However, in most of these cases the complex subject was turned into a clause in one target language, which appeared to be the more successful translation:

(17)

a. Does **the assumption of the close coupling of life and its environment change the nature of the whole system**? (ENPC/ESPC JL1)

b. Blir hele systemets karakter forandret **dersom man antar at livet og forandringene i dets miljø er nært forbundet med hverandre**? (ENPC JL1T)

c. Gör **antagandet att det finns en tät koppling mellan livet och miljön** att hela systemet ändras? (ESPC JL1T)

(18)

a. A scapegoat was killed to cancel the old, dying year; **the public humiliation of the king** and **the enthronement of a carnival king in his place** re-produced the original chaos; a mock-battle re-enacted the struggle of the gods against the forces of destruction. (ENPC/ESPC KA1)

b. En syndebukk ble drept for å gjøre slutt på det gamle, døende året; **den offentlige ydmykelsen av kongen** og **innsettelsen av en karnevalskonge i hans sted** gjenskapte det opprinnelige kaos; et narreslag gjentok gudenes kamp mot ødeleggelsens makter. (ENPC KA1T)

c. Man gjorde slut på det gamla, döende året genom att slakta en syndabock. **Man förödmjukade offentligt kungen**, **satte en karnevalskung på tronen i hans ställe** och återskapade därmed det ursprungliga kaos. (ESPC KA1T)

In (17b) the Norwegian translator has used a clause, while the Swedish translator has opted for a congruent translation (17c), and in (18) the situation is reversed. One reason for the translator chosing a congruent translation in (17c) and (18b) may be that in both cases a translation with a clause alters the thematic structure (cf. 2.4.1) of the original. It is possible that a translator who wishes to remain faithful to the source language considers a clause more unattractive than a congruent translation, even if it

means using a structure that seems somewhat cumbersome in the target language.[62]

5.2.3.2 The translation of lexical nominalizations functioning as objects

If the lexical nominalization was an object, a clausal translation was not as likely as with subjects. Of 110 objects, 15 were turned into clauses in Norwegian and 21 in Swedish. All the clausal translations of a lexical nominalization as object fall into one of the three patterns described below.

First, some lexical nominalizations followed a general verb such as *make* or *have* (e.g. *make a suggestion*). This type is discussed separately as translations of *expanded predicates* in section 5.8.

Second, some lexical nominalizations followed relational verbs, such as for example *cause* or *require* (cf. 2.4.2). In these cases the lexical nominalization was the Rheme in the sentence and the translation correspondence was typically a rank-shifted *at/att*-clause (*that*-clause):

(19)[63]

a. But these discoveries usually require **rigorous mental and physical preparation** and often **the learning of a new language.** (ENPC/ESPC JL1T)

b. Men slike oppdagelser krever som regel **streng mental og fysisk forberedelse**, og ofte også **at man lærer seg et nytt språk.** (ENPC JL1T)

c. Sådana upptäckter kräver emellertid ofta **att man först genomgått genomgripande mentala och fysiska förberedelser**, ofta också **att man dessutom har lärt sig ett nytt språk av något slag.** (ESPC JL1T)

In the Norwegian translation in (19b), there is one congruent translation and one clausal translation with an *at*-clause (*that*-clause). In the Swedish translation, one lexical nominalization is rendered congruently but is inserted in an *att*-clause added by the translator. The second nominalization has been

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[62] This may explain the use of a lexical nominalization by the Norwegian translator in (18b), who used a clause only seven times out of 97 instances of lexical nominalization, whereas the corresponding figures for the Swedish translator was 19 out of 97 instances.

[63] Example (19) is a repetition of example (16) in chapter 2.

turned into a clause. In both translations the thematic and syntactic structure of the clause are unaffected, as the clausal translations are all rank-shifted, nominal clauses.

Third, in many instances where the English lexical nominalization is a postmodifier in a complex NP or follows a preposition, the Norwegian or the Swedish translator has chosen a clause. Consider (20) and (21):

(20)

a. Even if the entire bureaucracy was wholeheartedly behind *Gorbachev's call for* **an extension of the team incentive system on the farms,** the vast administrative machine was simply not flexible enough to cope. (ENPC/ESPC MAW1)

b. Så selv om hele byråkratiet hadde gått helhjertet inn for *Gorbatsjovs planer* **om å innføre kontraktsystemet i stor målestokk på kollektivbrukene**, så var det gigantiske administrative systemet ganske enkelt ikke fleksibelt nok til å klare oppgaven. (ENPC MAW1T)

c. Även om hela byråkratin helhjärtat stödde *Gorbatjovs krav* på **en utvidgning av prestationslönesystemet på jordbruken** var den väldiga förvaltingsapparaten helt enkelt inte tillräckligt smidig för att klara det. (ESPC MAW1T)

(21)

a. The story **begins** *with* **the creation of the gods themselves** - a theme which, as we shall see, would be very important in Jewish and Muslim mysticism. (ENPC/ESPC KA1)

b. Historien begynner ***med*** **skapelsen av gudene selv** - et tema som vi skal se ble meget betydningsfullt i jødisk og muslimsk mystisisme. (ENPC KA1T)

c. Poemet börjar *med* **att gudarna själva skapas** - ett tema som skulle komma att bli mycket betydelsefullt i judisk och muslimsk mysticism, något som vi skall återkomma till. (ESPC KA1T)

In (20b), the Norwegian translator has chosen to render the lexical nominalization as a non-finite clause rather than as a lexical nominalization, and in (21c), the Swedish translator has turned a lexical nominalization after a prepositional verb into a clause. There are at least two likely explanations for the translations in (20b) and (21c). The first is that there may be a lower tolerance towards long and complex NPs in Norwegian and Swedish, not

only in subject position (cf. 4.2.2, 4.7), but more generally. A second explanation is that the clausal translations follow the general tendency that lexical nominalizations after a preposition are rendered by a clause, a tendency which is discussed in section 5.8.

5.2.3.3 Clauses with 'man' or 'vi'

Some of the clausal translations illustrated above use *man* (one) as subject (cf. (14bc), (17b), (18c) and (19bc)). Compared with the overall material, clauses with a generic subject such as *man* or *we* were particularly popular with *the construction of the building type* and are therefore discussed here. In my material nine out of the 35 translations with a clause in Norwegian and 33 translations with a clause in Swedish contained *man* (one) or *vi* (we), whereas the figures for the overall material were 12 instances of 119 translations with a clause in the Norwegian material and 13 out of 130 in the Swedish material.

That 'deverbal N + *of* + NP' constructions are agnate with clauses with *man* is not surprising. Clauses with *man* refer to events carried out by 'people in general' (cf. Altenberg 2004/05: 94), or by a specific group of people whose reference can be understood from the context, referred to as a 'temporally or spatially defined group of people' by Altenberg (2004/05:94). The lexical nominalization in its turn can be used because reference to such a general subject is felt to be redundant. In the words of Koptjevskaja-Tamm (1993:270), lexical nominalizations "allow subjects and objects to be deleted in situations where these are generic or indefinite (…)". Also, research by Altenberg on the pronoun *man* in the translation direction Swedish → English supports the observation that (lexical) nominalizations and clauses are used in the same situations. Altenberg (2004/5) found that (lexical) nominalizations are frequent as translations of Swedish clauses with *man* in English non-fictional texts.

Three tendencies could be found when a clause with a generic subject was chosen as a translation of the type *the construction of the building*. Two of these tendencies are the same as discussed above (cf. 5.2.3.1 and 5.2.3.2), whereas one is specifically related to the translations with a generic subject.

Example (14) above, repeated here as (22), illustrates how a heavy subject can be turned into a clause with *man* in both translations:

(22)

a. **The opening up to the plough of the virgin lands — hitherto uncultivated soil in central Asia** whose combined area was larger than the entire agricultural acreage of Canada — increased the grain harvest from just over 80 million tons in 1953 and 1954 to an average of 120 million tons in the years 1956 to 1958. (ENPC/ESPC MW1)

b. **Samtidig var man begynt å dyrke opp urørt mark i Sentral-Asia** og la større områder enn all dyrket mark i Canada under plogen. (ENPC MW1T)

c. **När man lade de jungfruliga markerna under plogen, dittills obrukad jord i Centralasien med en sammanlagd areal som översteg hela Canadas,** ökade spannmålsskörden från drygt 80 miljoner ton år 1953 och 1954 till i genomsnitt 120 miljoner ton mellan 1956 och 1958. (ESPC MW1T)

In (22a) the lexical nominalization is subject and Theme and sums up previous information (the action of cultivating virgin land is described earlier in the text), a function which is typical of lexical nominalizations in English scientific texts (cf. 2.4.1, Halliday and Martin 1993). Further, example (19) above, repeated here as (23), illustrates how a nominalization as Rheme after a relational verb (23a) is translated by a clause with a generic subject (23b,c):

(23)

a. But these discoveries usually require **rigorous mental and physical preparation** and often **the learning of a new language.** (ENPC/ESPC JL1T)

b. Men slike oppdagelser krever som regel **streng mental og fysisk forberedelse**, og ofte også **at man lærer seg et nytt språk.** (ENPC JL1T)

c. Sådana upptäckter kräver emellertid ofta **att man först genomgått genomgripande mentala och fysiska förberedelser**, ofta också **att man dessutom har lärt sig ett nytt språk av något slag.** (ESPC JL1T)

The lexical nominalizations in (23a) functions as a Rheme related to the Theme *these discoveries* by means of a relational verb *require*. As we have

seen, this is also a typical function of lexical nominalizations in English scientific texts (cf. 2.4.1).[64]

Now consider (24):

(24)

a. I would ask, why have they been torn apart by **the ruthless dissection of science into separate and blinkered disciplines?** (ENPC/ESPC JL1)

b. Da vil jeg heller spørre: Hvorfor er disse vitenskapene blitt revet fra hverandre gjennom **den hensynsløse oppsplittingen av vitenskapen i adskilte disipliner?** (ENPC JL1T)

c. Jag skulle snarare vilja fråga **varför man obarmhärtigt har styckat upp dem i olika trångsynta discipliner?** (ESPC JL1T)

In (24) a lexical nominalization as Agent in a passive construction (24a) is turned into a clause with *man* in the Swedish translation (24c). The reason for using *man* in (24c) can be related to typology. For example, Steiner (2002/2003) and Teich (2003a/2003b) argue that German avoids inanimate Agents whereas English does not and that this typological fact is sometimes reflected in German translations of English texts. One explanation for the translation in (24) may therefore be that Norwegian and Swedish are similar to German in this respect.

5.2.3.4 Concluding remarks

My material suggests two reasons for a clause being chosen as a translation of the lexical nominalization type 'deverbal N + of + NP' (e.g. *the construction of the building)* in the direction English → Norwegian/Swedish.

First, there seem to be different cultural conventions for popular science texts in the three language communities involved (cf. Steiner 2002). Clauses, and particularly clauses with *man* or *vi*, are sometimes used to replace genre-typical uses of lexical nominalizations in English scientific texts. A possible explanation for the clausal translations may be that there is a stronger focus on the accessibility of texts in Norwegian and Swedish

[64] Note that the deverbal noun as Themes are kept in the translations (24b,c) whereas the more information-heavy Rhemes are turned into clauses.

popular science texts (compare discussion in (2.3).[65] Second, the translation with a clause may be due to typological differences between the languages concerning the acceptability of inanimate Agents.

5.2.4 Translations with an inserted N + clause

In some translations a N has been added before a translation with a clause (e.g. *his first revelation of himself → the first **time** he revealed himself*). The translations have the structure 'N + clause', but the nouns are of different types, reflecting different types of *of*-constructions. In this section, I describe the types found in the material and their translations. *Shell nouns + apposition* are described in 5.2.4.1 and *circumstantial N + relative clause* in 5.2.4.2. As the translation of the *of*-construction is of primary interest, I have chosen to describe translations of the form *John's construction of the building* and *the construction of the building* in the same section (cf. 4.2.2).

5.2.4.1 Shell noun + apposition

The first category of inserted nouns can be described as *shell nouns* (cf. Schmid 2000). According to Schmid (2000:4) shell nouns function as "conceptual shells for complex, proposition-like pieces of information" and in chapter 3 (3.6.1) the relation between a shell noun morphologically related to a utterance or mental verb and the following clause was described as one of *experiential identity* corresponding to apposition (Schmid 2000:27f). For this reason translation correspondences where a shell noun was inserted before a clause are described as *shell noun + apposition*. The Norwegian translation in (25b) is an illustration:

(25) *s*-genitive + deverbal N + *of* → Shell Noun + apposition

a. **Their greater absorption of sunlight in the localities where they grew** would have warmed them above 5°C. (ENPC/ESPC JL1)

b. **Deres større evne til å absorbere sollys i områder der de vokste**, ville ha oppvarmet dem til mer enn 5°C. (ENPC JL1)

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[65] Cf. Eriksson (1987:65), who defines popular texts as texts written by professionals for a general public on topics within their profession and with the purpose of transmitting truthful information to the public in a clear and comprehensible manner.

c. **Eftersom de kan absorbera mer värme från solen** blir de ställen där de växer varmare än 5 C. (ESPC JL1T)

In (25), a lexical nominalization is translated with a clause preceded by the general noun *evne* (ability) in the Norwegian translation (25b) and by a clause in the Swedish translation (25c). Schmid (2000:252) describes *ability* as a type of modal shell noun in which "the possibility of an EVENT [author's emphasis] is portrayed as being dependent on qualities attributed to an agent", which agrees with Faarlund et al.'s (1997:273) description of Norwegian *evne* as a noun that can be followed by an appositional *å*-infinitive (*to*-infinitive). Moreover, according to Schmid, modal shell nouns are typically found in constructions such as (25b) with "possessive elements referring to the agents who are credited by the speakers with certain abilities". The function of nouns like *ability* is to highlight the aspect of potentiality.

An interesting observation concerning (25) is that the Norwegian and Swedish translations represent different ways of paraphrasing the long and complex Theme in the source structure. The Swedish translator has chosen a clause while the Norwegian translator has inserted a shell noun that reduces the cognitive effort of interpretation and comprehension. In the words of Schmid (2000:370), a shell noun:

> (…) has the highly beneficial consequence that the amount of attention that has to be devoted to the larger piece of information is diminished. This results is a relief of the short-term memory (Chafe 1994:119) or the short term working buffer (van Dijk and Kintsch 1983:349). Just like a personal pronoun like *he* or *she* is a 'cognitively easier form' (Bolinger 1977:4) than a full noun phrase, a shell-noun phrase is a cognitively more economical linguistic unit than a clause.

The reason for using a shell noun in (25b) can therefore be that it facilitates comprehension. Another example is (26), where the Norwegian translator has chosen a nominal clause (26b) and the Swedish translator has used a shell noun followed by an apposition (26c):

(26)

a. They badly needed reasons to support the cost of a Mars expedition,

and what goal could be more enticing than **the discovery of life there**? (ENPC/ESPC JL1)

b. De trengte sårt til en begrunnelse som kunne gi økonomisk støtte til kostnadene ved en Mars-ekspedisjon. Og ingen målsetting kunne vel være mer besnærende enn **å finne ut om det var liv på planeten**? (ENPC JL1T)

c. De var i stort behov av skäl för sina stora satsningar på Marsexpeditionen och vad kunde väl vara ett bättre skäl än **chansen att finna liv där**? (ESPC JL1T)

Both translation strategies preserve the order of constituents in the original sentence, but due to the insertion of the shell noun before the infinitive clause, the Swedish translation is the more explicit translation of the two. In the Swedish translation, the shell noun *chansen* (lit. the chance) underlines the interpretation of the following infinitive as a possible, future event, i.e. as "a possibility or a proposal rather than something already fulfilled" (Quirk et al. 1985:1062, Schmid 2000:236f). Hence, it seems reasonable to assume that, in addition to the reason *facilitating comprehension*, the insertion of a shell noun can be related to the universal translation strategy *explicitation* (cf. Baker 1992, see also discussion in 1.3.2).

In my material, the translations with a shell N + clause were typically of complex-event nominals with a proposition or fact meaning in the Vendlerian sense (cf. 3.2). In propositions and facts, the focus is on the possibility of an event happening, or the fact that it happened, rather than on the unfolding of the event itself.

One interesting question that arises from the correspondence between facts and propositions and translations with a shell N + clause is whether lexical nominalizations with a fact and proposition meaning can be regarded as grammatical metaphors, to use the terminology for lexical nominalizations from chapter 2. It is clear that lexical nominalizations with a fact and proposition meaning have a clear relation to the clause, i.e. they are agnate to a clause, but as such lexical nominalizations denote abstract things, they do not seem to be "fusion[s], or 'junction[s] of two semantic elemental categories" which is the criterion for grammatical metaphor given by Halliday and Matthiessen (1999:243). Rather, constructions with a shell N + apposition, such as *the knowledge that the experiment had failed* (Halliday and Matthiessen 2004:441) or *the assumption that none of those classified as other nationals will seek to stay in Britain* (Schmid 2000:1999) correspond

to the type of lexical nominalizations that I have defined as metaphenomena in 3.6.1, and described as transcategorized elements. What this shows is that the relation between abstraction and grammatical metaphor remains an important challenge for the further theoretical development of the theory of grammatical metaphor.

5.2.4.2 Circumstantial N + relative clause

In some translations the added N expresses a circumstantial relation between the head noun and the following clause, which has a modifying rather than an appositional function. These nouns are referred to as *circumstantial* nouns (cf. Schmid 2000:275ff). Examples of circumstancial nouns in the material are for instance Norwegian *gang* (lit. time) or Swedish *sätt* (lit. way). According to Schmid (2000:276) circumstantial nouns do not "shell 'circumstances' but events (…). Speakers can either highlight the totality of the circumstances under which an event takes place or single out location, time, manner or condition for special attention."[66]

In (27b), the circumstantial noun *gang* (occurrence) refers to *the time* or *the day* on which the action denoted by the modifiying clause was carried out:

(27) *s*-genitive + deverbal N + *prep* + NP → circumstantial N + relative clause

a. **His first revelation of himself** consists of a command: Abraham is to leave his people and travel to the land of Canaan. (ENPC KA1))

b. **Første gang han åpenbaret seg,** var gjennom en ordre: Abraham skal forlate sitt folk og dra til Kanaans land. (ENPC KA1T)

Not all lexical nominalizations can be translated in this way. Typically, the translation circumstantial noun + relative clause is used for lexical nominalizations with simple-event meaning. For instance, in (27b) the noun *gang* (time/occurrence) underlines the simple-event interpretation of (27a), i.e. that the most likely interpretation of *his first revelation of himself* is as a

[66] As is shown in table 5.2.5.4 both the Norwegian and Swedish translations included one example of an adverb (Norw. *overalt*/ Sw. *överallt* (lit. *everywhere*)) with much the same function as the circumstantial noun.

'whole' event, rather than an event unfolding in time. The simple-event meaning is also clear from the use of the ordinal numeral *first* in the source nominalization (cf. 3.4).

5.2.5 Translations with a N + relative clause

There was an additional type of translation with the N + clause structure, which differed from the types shell N + apposition and circumstantial N + relative clause in that the N was not inserted in the translation. Instead the object of a lexical nominalization was turned into a head noun followed by a relative clause with a verb morphologically related to the deverbal N in the source lexical nominalization. Example (28) is an illustration:

(28) *lexical nominalization* → result N + relative clause

a. If your excretion of entropy is as large or larger than **your internal generation of entropy**, you will continue to live and remain a miraculous, improbable, but still legal avoidance of the second law of the Universe. (ENPC/ESPC JL1)

b. Hvis din utsondring av entropi er like stor som eller større enn **den entropien du skaper innvendig**, vil du fortsette å leve og dermed være et mirakuløst og usannsynlig, men likevel lovlig eksempel på at universets andre lov kan unnvikes. (ENPC JL1T)

c. Om den entropimängd som kommer ut ur din kropp är större än eller lika med **den som alstras inuti den**, då kommer din inre entropi att minska eller hålla sig konstant och du kommer att fortsätta att leva det liv som skenbart strider mot termodynamikens andra lag. (ESPC JL1T)

In the Norwegian translation in (28b), the deverbal noun (*generation*) has been turned into the main verb in a postmodifying relative clause where the possessive pronoun *yours* from the source lexical nominalization is subject: ((som) ***du*** *skaper invendig* ((that) **you** generate internally). The Swedish translation is similar; the only difference is that the object (*of entropy*) is turned into the pronoun *den* rather than a noun, and the relative clause is in the passive voice.

What this type of translation suggests is that the *of*-construction in (28a) is a postmodifier rather than an argument. Thus, despite the fact that the English nominalization in (28a) has a structure that is typical of a

complex-event nominal, it has result meaning. This problematizes Grimshaw's analysis (cf. chapter 3) and clearly points out that context can turn lexical nominalizations that have the form of complex-event nominals into result nominals with product meaning.[67]

5.3 Translations of '*s*-genitive + deverbal N'

The structure *s*-genitive + deverbal N (e.g. *its presentation*) is interesting since the genitive can involve different participants, either the subject or the object. For example, Quirk et al. (1985:322) suggest that constructions such as *the family's support* can be interpreted both as (29) and as (30):

(29) **the family supports** (…). (Subject-reading)

(30) (…) **supports the family.** (Object-reading)

In section 3.4.4, I suggested that the *s*-genitive should be regarded as an argument if it corresponds to the object in a clause, but as a modifier if it corresponds to the subject. In this section I discuss *s*-genitives with an object role, and in chapter 6 I discuss the cases where the s-genitive corresponds to the subject of a corresponding clause. I have used context to determine which *s*-genitives are objects.

Example (31) is an illustration of the *s*-genitive as an object:

(31) After a while, I began to realize that Ford Doolittle's criticism could be taken not so much as an attack on Gaia but as a criticism of the inadequacy of **its presentation**. (ENPC/ESPC JL1)

My analysis of the *s*-genitive as an object follows traditional descriptions. Quirk et al. (1985:1289) for example, refer to *s*-genitives such as (31) as 'the objective genitive' related to a 'passive nominalization pattern' (cf. also Teleman et al. 2000:III:33).

My material suggests that although the *s*-genitive can realize an object, it is not common usage. There were only 11 occurrences of the object

[67] The product interpretation is confirmed later in the text, where it is stated that ""Excretion of entropy" is just a fancy way of expressing the dirty words *excrement* and *pollution*" (ENPC JL1).

realized by the *s*-genitive in the material, as opposed to 168 instances where the object was realized by *of*. Ten of the 11 instances were determiners (e.g. *its destruction*), which suggests that the *s*-genitive as object is intimately related to the pronominal form. This finding agrees with Anttila and Fong (2004) who claim that if the object is a pronoun, the *s*-genitive sounds better than the *of*-construction, but if it is not a pronoun, an *of*-construction appears to be the best choice. Antilla and Fong (2004:1257) give the following example to support their view:

(32) ?**the removal of it** ~ **its removal**

(33) **the removal of the tree** ~ **the tree's removal**

Antilla and Fong (2004:1257) further claim that the existence of this pattern is supported cross-linguistically (cf. Giorgi and Longobardi 1991, Cardinaletti and Starke 1999). To judge from the translations all structures with an *s*-genitive as object seem to be disfavored in Norwegian and Swedish, however, where constructions of the type *s*-genitive + deverbal N are avoided in favor of other translations.

The translations in Norwegian and Swedish of the type *s*-genitive + deverbal N are illustrated in table 5.3:

Table 5.3 Translations of the type *s*-genitive + deverbal N in Norwegian and Swedish

Translation correspondence	Norwegian	Swedish
s-genitive → ∅	3	3
N+N compound	1	2
clause or N + clause	7	6
Total	11	11

Omission of the *s*-genitive is described in 5.3.1, translation with a N + N compound in 5.3.2 and translation with a clause or N + clause in 5.3.3.

5.3.1 *s*-genitive → ∅

There were three instances of omission of the *s*-genitive in the Norwegian material, and three in the Swedish. Only determiners were omitted. Example (34) is an illustration:

(34)

a. The amount of petroleum consumed for military purposes (including **its indirect use in producing military goods**) has been estimated at between 5 and 6 percent of total world consumption. (ENPC/ESPC CS1)

b. Forbruket av olje til militære formål (innbefattet **indirekte bruk for å produsere militærutstyr**) er blitt anslått til mellom 5 og 6 pst. av verdens samlede forbruk. (ENPC CS1T)

c. Oljekonsumtionen för militära ändamål (inkl **den indirekt för framställning av militära produkter använda**) har uppskattats till 5 à 6 procent av världens totala oljeförbrukning. (ESPC CS1T)

The fact that the *s*-genitive can be omitted suggests that it is not a proper argument, as argued by Grimshaw (1990:80ff), but it can also be an indication that the *s*-genitive can both be a proper argument and a modifier.

5.3.2 *s*-genitive → N + N compound

In section 4.2.2 and 5.2.2.1 compounds as translations of the *of*-construction were discussed. The *s*-genitive can also be turned into an element in a compound. Consider (35):

(35)

a. As for the non-energy minerals, unfortunately one has to estimate military consumption by extrapolating from US figures to a world total, using several indicators of relative use and also studying the current programs of **weapons' production** throughout the world. (ENPC/ESPC CS1)

b. Hva de ikke-energibærende mineraler angår, må man dessverre ved ekstrapolasjon beregne det militære forbruk ut fra USA-tall for å finne fram til et samlet anslag for hele verden. Dette innebærer bruk av flere indikatorer for relativ bruk og at man studerer de løpende programmer for **våpenproduksjon** rundt om i verden. (ESPC

CS1T)

c. När det gäller icke-energigivande mineraler befinner vi oss tyvärr i det läget att vi endast kan försöka framräkna den militära förbrukningen genom att med utgångspunkt från siffrorna för USA dra vissa slutsatser beträffande hela världen. Vi får då studera de olika programmen världen över för **vapenproduktion** och använda oss av vissa indikatorer rörande den relativa användningen av dessa typer av råvaror inom ramen av de olika programmen. (ESPC CS1T)

Example (35a) is an example of an object realized by the *s*-genitive. The example is primarily interesting because the translations (35b,c) seem to be synthetic compounds i.e. compounds where the first N is the grammatical object of the second N (cf. 3.4.5, 5.2.2.1), indicating that the '*s*-genitive + nouns' can have process meaning (cf. 3.4.4). For example, the aspectual modifier like *frekvent* (frequent) is acceptable. This suggests that the *s*-genitive in (35a) can be an argument (compare Grimshaw's (1990:80) claim that the *s*-genitive cannot realize an argument).

5.3.3 Clause and N+clause

The type '*s*-genitive + deverbal noun' is translated by a clause or N + clause, seven times in the Norwegian translations and six in the Swedish translations. Consider (36):

(36)

a. After a while, I began to realize that Ford Doolittle's criticism could be taken not so much as an attack on Gaia but as a criticism of the inadequacy of **its presentation.**(ENPC/ESPC JL1)

b. Og etter en stund begynte jeg å innse at Ford Doolittles kritikk ikke måtte oppfattes entydig som et angrep på Gaia, men heller som en kritikk av **den mangelfulle måten teorien var presentert på**. (ENPC JL1T)

c. Efter ett tag började jag inse att Ford Doolittles kritik inte i första hand riktade sig mot Gaia, utan snarare mot **hur hypotesen framställdes**. (ESPC JL1T)

The translations in (36b,c) reflect *manner* meaning. The Norwegian translator makes the manner meaning explicit by means of an inserted

'manner noun', i.e. *måten* (way), and the Swedish translator uses a clause with *hur* (how), also reflecting manner meaning. In (37b,c), similarly, both the Norwegian and the Swedish translator have used an inserted N reflecting manner meaning:

(37)

a. In 1785 he said, at a meeting of the Royal Society of Edinburgh, that the Earth was a superorganism and that **its proper study** should be physiology. (ENPC/ESPC JL1)

b. 1785 sa han på et møte i Royal Society i Edinburgh at Jorden var en superorganisme og at fysiologien var **den rette metoden for å studere den**. (ENPC JL1T)

c. Vid ett möte 1785 vid Royal Society i Edinburgh sade han att jorden var en superorganism och att **det rätta sättet att studera den** skulle var(sic) med fysiologiska metoder. (ESPC JL1T)

The Norwegian translator has used the noun *metoden* (the method) followed by an infinitive construction (*for å studere den*) (lit. for to study it) (37b), and the Swedish has used *sättet* (the way) followed by an infinitive construction (*att studera den*) (to study it) (37c). In 5.2.4.2, I classified nouns such as *the way* as a circumstantial noun, following Schmid (2000:285) who suggests that the relation between a manner noun such as *method* or *way* and the *to*-infinitive is similar to structures such as *the time* followed by a *when*-clause because the infinitive clause seems 'to have an inherent meaning of manner'. Similarly to circumstantial nouns followed by clauses, translations with manner nouns indicate simple-event interpretation since focus on one aspect of the action, rather than on its unfolding (cf. 5.2.4.2).

Next, consider the translations in (38) and (39):

(38)

a. Unhesitatingly, confidently, he gave me the planets - their names, **their discovery**, their distance from the sun, their estimated mass, character, and gravity. (ENPC/ESPC JL1)

b. Si meg hvilke planeter vi har," sa jeg, "og fortell meg noe om dem". Uten å nøle, og med god selvtillit, ramset han opp navnet på alle planetene, **når de ble oppdaget**, deres avstand fra solen, antatt masse, beskaffenhet og gravitasjon. (ENPC JL1T)

c. Tveklöst och säkert räknade han upp planeterna — vad de hette, **när de upptäcktes**, deras avstånd från solen, deras beräknade massa, sammansättning och gravitation. (ESPC JL1T)

(39)

a. He was sent to Stavropol as first secretary to await **his eventual retirement**, which finally came in 1970, the year before the twenty-fourth party congress. (ENPC/ESPC MAW1)

b. Han ble sendt til Stavropol som førstesekretær i påvente av **at han kunne pensjoneres**. Det skjedde i 1970, året før den 24. partikongress. (ENPC MAW1T)

c. Han skickades till Stavropol som förstesekreterare för att vänta på **att så småningom bli pensionerad**, vilket slutligen skedde år 1970, året före den 24:e partikongressen. (ESPC MAW1T)

In (38b,c), *når/när* (when) places emphasis on the time of discovery (which could have been further emphasized by means of a circumstantial N like *the time*) and in (39b,c) an *at/att* clause refers to *the time* of retirement rather than *the fact* or *the possibility* that he will retire, which is the usual interpretation of an *att*-clause.

5.3.4 Final remarks

None of the translations of the '*s*-genitive + deverbal N' type (e.g. *its presentation*) were congruent. The most likely reason for the lack of congruent translations is that this construction is hardly used in Norwegian and Swedish. Although a lexical nominalization with the 'objective genitive' is possible in both English and (Norwegian) /Swedish[68] (cf. Koptjevskaja-Tamm 1993), it is common in English only if the genitive is a pronoun and it is avoided altogether in Norwegian and Swedish. The observation concerning (Norwegian) Swedish is supported both by Koptjevskja-Tamm (1993) and Teleman et al. (2000:III:32), who claim that the object of a

[68] *Norwegian* appears in brackets as I have found no descriptions of this area in Norwegian, but it can be expected that Norwegian behaves like Swedish in this respect.

transitive verb rarely appears in the possessive form in Swedish lexical nominalizations.[69]

The analysis of the *s*-genitive is problematic. On the one hand, the structure '*s*-genitive + deverbal N' was normally translated with a synthetic compound or a clause, indicating that the *s*-genitive is a grammatical object. Furthermore, some of the translations with a clause were passives, which supports the analysis by Quirk et al. (1985:1289) that the *s*-genitive is related to passive clauses (cf. also 4.8). On the other hand, in some translations the *s*-genitive was omitted, which suggests that it should be considered as a modifier, as argued by Grimshaw (1990).

5.4 Translations of 'N + deverbal N'

As we have seen, there are two types of compounds consisting of a 'N + deverbal noun', namely synthetic compounds, such as e.g. *bicycle repairing* (Adams 2001:78) where the N is the grammatical object of the deverbal noun, i.e. an argument, and root-compounds, where the N is a modifier, such as in e.g. *arms purchases*. Synthetic compounds are [-count] and denote a process, whereas root-compounds are [+count] and do not have process meaning (cf. 3.4.4, 5.2.3.1, 5.3.2).

Of the 15 'N + deverbal noun' lexical nominalizations in the material, there were 12 synthetic compounds and three root compounds. Example (40) is a synthetic compound with complex-event meaning (i.e. process meaning) and (41) is a root compound with result meaning:

(40)

a. Korsakov's syndrome has been well described only very recently in the so-called Transient Global Amnesia (TGA) which may occur with migraines, head injuries or impaired **blood supply** to the brain. (ENPC/ESPC OS1)

b. Et spesielt interessant kasus med akutt (og heldigvis forbigående) Korsakovs syndrom er blitt godt beskrevet først helt nylig i form av såkalt transient global amnesi (TLA), som kan forekomme sammen med migrene, hodeskader eller svekket **blodtilførsel** til hjernen (ENPC OS1T)

[69] Teleman et al. (2000:III:32) mention *kyrkans restauration* (Norw. *?kirkens restaurering*), *landets pacificering* (Norw. *?landets pasifisering*), *barnens uppfostran* (Norw. barnas oppdragelse), where the object is realized by the possessive.

c. Ett särskilt intressant fall av ett akut (och till all lycka övergående) Korsakovs syndrom som helt nyligen beskrivits mera ingående är så kallad tillfällig global amnesi (TGA), vilken kan uppstå vid migrän, skallskador eller hämmad **blodtillförsel** till hjärnan. (ESPC OS1T)

(41)

a. In regions of the Third World - for example, the Middle East, South America and South Asia - there have been similar 'waves' of **arms purchases** with peaks of expenditure. (ENPC/ESPC CS1)

b. Og i deler av den tredje verden - f.eks. i Midt-Østen, Latin-Amerika og Sør-Asia - har man hatt lignende "bølger" av **våpenkjøp** med utgifts-topper. (ENPC CS1T)

c. I Tredje världen - t ex i Mellersta Östern, Latinamerika och södra Asien - har det förekommit liknande "vågtoppar" i fråga om **vapenköp** med ty åtföljande kostnadsexplosioner. (ESPC CS1T)

In (40a) *blood supply* refers to an action taking place and is [-count], i.e. it is a complex-event nominal, whereas *arms purchases* in (41) is [+count] and refers to an act rather than an ongoing event, i.e. it has simple-event meaning. Most of the synthetic compounds in my material, and all the root-compounds, were translated congruently, as illustrated in (40) and (41), the only difference being that the compound forms one ortographic unit in Norwegian and Swedish.

In (42), however, the Norwegian translation has used a deverbal N followed by an *of*-construction and the Swedish translator has used a deverbal noun followed by a clause.

(42)

a. Stephen Schneider's objection - expressed in his book with Randi Londer, The Coevolution of Climate and Life - was to the implication in the early papers on Gaia that homeostasis was the only means of **climate regulation**.

b. Stephen Schneiders innvending - som han ga uttrykk for i boken han skrev sammen med Randi Londer, The CoEvolution of Climate and Life - gjaldt påstanden som var implisert i de tidligste artiklene om Gaia, nemlig at homeostase var den eneste metode for **regulering av klimaet**.

c. Stephen Schneiders kritik kommer fram i den bok han skrev tillsammans med Randi Londer, The Coevolution of Climate and Life. Den berörde det som tagits upp i de tidiga artiklarna om Gaia,

att homeostasen var **det enda sättet på vilket klimatet reglerades.**

In (42a) the first N is the object and we therefore have a synthetic compound that must be distinguished from root compounds, where the first N is not a grammatical object (cf. 3.4.4). It seems to follow that that synthetic compounds can be regarded as part of a network of agnates associated with complex-event meanings also consisting of *'*deverbal N + *of*-constructions*'* and clauses (cf. 5.2.3.1). The results are not altogether clear-cut, however. In (42c), the inserted N (*sättet*) in the Swedish translation signals *manner*, which I have described as a circumstantial noun signalling simple-event meaning (cf. 5.3.3, 5.3.4).

5.5 Translations of 'deverbal N + *that*-clause'

Almost all of the deverbal nouns followed by *that*-clauses in my material were morphologically related to an utterancec or a mental verb, with the exception of two uncertain cases (cf. 5.6). This agrees with findings by, for example, Bowen (2005) who in a large study of noun complementation found that *that*-clauses only occur after "a specific sub-set of complement-taking nouns" (Bowen 2005:19), the majority of which were morphologically related to an utterance or a mental verb (cf. Bowen 2005:179).

Deverbal nouns morphologically related to an utterance or mental verb followed by a *that*-clause (e.g. *the accusation that the Gaia hypothesis is teleological*) is a type of result nominal that refers to a metaphenomenon rather than a concrete thing (cf. 3.6.1). In these constructions the deverbal noun is a shell noun, specifying the pragmatic meaning of the following *that*-clause placed as an apposition to the shell noun (cf. 3.6.1), as exemplified in (43):

(43)

a. **The view that the organisms that are better able to compete** have come to dominate**.** (ENPC/ESPC JL1T)

b. **Det syn at organismer som er mer konkurransedyktige,** etterhvert er blitt dominerende. (ENPC JL1T)

c. **Synen att det är de organismer som har den största förmågan att konkurrera** som har kommit att dominera. (ESPC JL1T)

However, although the analysis as an apposition works well for English, it is not always appropriate for Norwegian and Swedish, since a preposition is sometimes inserted between the deverbal N and the *at/att*-clause (cf. 5.2.3.4). In (44), the Norwegian translator has inserted a preposition, whereas the Swedish translator has chosen a congruent translation:

(44)

a. This is a definitive rebuttal of **the accusation that the Gaia hypothesis** is teleological, and so far it remains unchallenged. (ENPC/ESPC JL1)

b. Dette er en definitiv gjendrivelse av **beskyldningen *om* at Gaia-hypotesen er teleologisk**, og hittil er det ingen som har påstått noe annet. (ENPC JL1T)

c. Detta är ett definitivt tillbakavisande av **anklagelsen att Gaiahypotesen är teleologisk**. (ESPC JL1T)

The insertion of a preposition between the N and the *at/att*-clause alters the status of the *at/att* clause from appositional to prepositional complement (cf. e.g. Teleman et al. (2000:III:102)). Example (44) illustrates the typical pattern: in translations of deverbal nouns followed by *that*-clauses, a preposition is inserted between the deverbal noun and the *at*-clause in the Norwegian translation (44b) (*om* (lit. about)), whereas the Swedish translation (44c) is congruent.

An exception to this general picture is (45), where both translators have inserted a preposition:

(45)

a. Despite the first of **the assertions that Yahweh is indeed the God of Abraham**, this is clearly a very different kind of deity from the one who had sat and shared a meal with Abraham as his friend. (ENPC/ESPC KA1)

b. Til tross for **den første påstanden *om* at Jahve er Abrahams gud**, er dette tydeligvis en helt annen guddom enn den som hadde satt seg ned og delt et måltid med Abraham som hans venn. (ENPC KA1T)

c. Trots den **första försäkran *om* att Jahve verkligen är Abrahams**

> **Gud** är detta helt klart en gudom av helt annat slag än den som hade suttit ner och ätit tillsammans med Abraham som en vän. (ESPC KA1)

In the Norwegian translation the inserted preposition *om* does not correspond to the preposition in a prepositional verb. That is, the deverbal noun *påstanden* (assertion) cannot be turned into a prepositional verb **påstå om* (assert about). Rather than corresponding to a sentence, the Norwegian translation seems to have result meaning, where the prepositional phrase describes the content of the deverbal noun.

The insertion in the Swedish example, on the other hand, (45c), is not of this kind, since the prepositional verb *forsäkra om* (lit. assure about) has been used. It may therefore be that the possibility of inserting a preposition before a *that/at/att*-clause reflects a formal difference between English/Swedish on the one hand, and Norwegian on the other. According to Teleman et al. (2000:III:123), Swedish nominal clauses are usually not preceded by a preposition if the relation between the noun and the adnominal element is understood as similar to the relation between a subject and a subject-complement, i.e. as appositional.

To test this hypothesis on a somewhat larger set of examples, I searched for the deverbal nouns used in the Swedish and Norwegian translations in monolingual corpora.[70] The patterns 'deverbal N + *prep* + *at/att* clause' (*that*-clause) and 'deverbal N + *at/att*-clause' were investigated. Tables 5.5a and 5.5b give the results of this investigation:

[70] The corpora used were *Språkbanken* for Swedish (date of access: May 18, 2006) and *Oslo-korpuset av taggede norske tekster (bokmålsdelen*) for Norwegian (date of access: May 18, 2006).

Table 5.5a 'Deverbal N + *prep.* + *at*-clause' vs. 'Deverbal N + *at*-clause' in Norwegian

Deverbal N	N + *prep* + *at*-clause	N +*at*-clause
påstand (*om*)	67	0
syn (*på*)	2	17
beskyldning (*om*)	0	0
oppdagelse (*av*)	16	0
forestilling (*om*)	19	0
overbevisning (*om*)	4	0
demonstrasjon (*av*)	0	0
Total	108	17

Table 5.5b 'Deverbal N + *prep.* + *att*-clause' vs. 'Deverbal N + *att*-clause' in Swedish

Deverbal N	N + *prep* + *att*-clause	N + *att*-clause
försäkran (*om*)	7	6
syn (*på*)	2	9
anklagelse (*att*)	6	6
upptäckt (*av*)	3	16
övertygelse (*om*)	8	21
förvissning (*om*)	3	6
demonstration (*av*)	0	0
Total	29	64

This small investigation resulted in 108 examples with an inserted preposition in Norwegian vs. 17 without, and 29 examples with inserted preposition in Swedish vs. 64 without. This indicates that the insertion of a preposition is an optional alternative in Swedish, but not the most common pattern. In Norwegian, on the other hand, the structures with an inserted preposition are preferred in the vast majority of cases. For certain nouns, however, such as *syn* (view), an appositional *at*-clause seems to be the preferred choice in both languages.

The inserted preposition in (45b) is not of the type that signals an argument, such as *av* (of), but is lexically determined. This has an effect on the meaning of the lexical nominalization, which shows result meaning. This view is supported also by Andersen (2007:59) who argues that if the argument-introducing preposition *av* (of) is replaced with a lexically determined preposition in Norwegian, it can be seen as "a process of

degrammaticalization paralleling the change of the deverbal noun from an imperfect noun to a perfect noun in the sense of Vendler (1967:131)".

However, result meaning is only clear if the deverbal noun is morphologically related to an utterance or mental verb. There were two examples of deverbal nouns followed by *that*-clauses where it was uncertain whether the deverbal noun is morphologically related to a mental or a material process verb. Consider (46) and (47):

(46)

a. Unless he were a consummate actor, a fraud simulating an astonishment he did not feel, this was **an utterly convincing demonstration that he was still in the past.** (ENPC/ESPC OS1)

b. Hvis han ikke var en svært så dyktig skuespiller, en bløffmaker som lot som han var forbløffet, så var dette **en ytterst overbevisende demonstrasjon *av* at han fremdeles befant seg i fortiden.** (ENPC OS1T)

c. Såvida han inte var en fulländad skådespelare, en bedragare som simulerade en förvåning han inte kände, var detta **en ytterst övertygande demonstration *av* att han fortfarande befann sig i det förflutna.** (ESPC OS1T)

(47)

a. **The discovery that the outer reaches of the atmosphere are a part of planetary life** in a like manner has defined the edge of our puzzle picture of the Earth. (ENPC/ESPC JL1)

b. Og **oppdagelsen *av* at de ytre lag av atmosfæren er en del av den levende planeten**, har på samme måte definert ytterkanten på vårt puslespillbilde av Jorden. (ENPC JL1T)

c. **Upptäckten att de yttersta gränserna av atmosfären är en del av planetens liv har begränsat vår pusselbild av livet på Jorden** på samma sätt som de rätsidiga pusselbitarna på pusslet definierar gränserna för själva bilden. (ESPC JL1T)

In (46a), *demonstration* seems to be morphologically related to a material verb, i.e. verbs denoting an action such as e.g. *go*, *play*, *give*. *Demonstration* can therefore have a simple-event meaning (i.e. it refers to the act of demonstrating). However, *demonstration* can also refer to the ideas presented in the demonstration, in which case it refers to a set of abstract thoughts, i.e. it is a result noun of the metaphenomenon type. As

demonstration refers back to a series of actions; the simple-event meaning is most likely. In (47a), on the other hand, the deverbal noun *discovery* seems to denote a metaphenomenon (i.e. the abstract content discovered) rather than a simple-event nominal (i.e. the mental act of discovering).

The translations of (46a) and (47a) are interesting. In (46b,c) both the Norwegian and the Swedish translators have inserted the preposition *av* between the deverbal noun and the *at*-clause. The preposition *av* corresponds to English *of* and typically signals the object (as in *the scientific study **of** the relationship between brain and mind → det vitenskapelige studiet **av** forholdet mellom hjerne og bevissthet* (cf. example (5) in chapter 5). Thus, it can be argued that the *av*-constructions in (46b,c) and (47b) are objects. In (47b), however, we see that the Norwegian translator has inserted *av* whereas the Swedish translator has used a congruent translation with an *att*-clause (*that*-clause) (47c), which cannot function as object (cf. 3.6.1). The co-occurrence of these translation alternatives indicates that the *av*-construction in (46b,c) and (47b) is an apposition rather than a grammatical object (cf. the discussion of the *of*-construction as apposition in 4.4.3 and 5.2.3.4).

The exact analysis of the *av+at/att* clause construction after a deverbal N is uncertain. The preposition *av* is used before *that*-clauses after deverbal nouns that are ambiguous between 'material' and 'mental' meanings, whereas other, lexically determined prepositions underlining result meaning are preferred after deverbal nouns morphologically related to verbal and mental processes.

5.6 Translations of 'deverbal N + *to*-infinitive'.

The structure 'deverbal N + *to*-infinitive' can be divided into different types depending on the relation between the head noun and the *to*-infinitive (cf. 3.5.2). There were 17 'deverbal N + *to*-infinitive' constructions in the material. In eight examples the *to*-infinitive was a dependent purpose clause (cf. 3.5.2); in seven instances the *to*-infinitive was part of a nominalized verb phrase complex (nominalized VPC) (cf. 3.5.3), and in two examples the deverbal N + *to*-infinitive was a result nominal of the metaphenomenon type (cf. 3.6.1). This section describes the translations of each of these types. The translation type 'deverbal N + purpose clause' is discussed in 5.6.1, nominalized VPCs in 5.6.2 and 5.6.3 and metaphenomena in 5.6.4.

5.6.1 Translations of 'deverbal N + purpose clause'

In translations of the *to*-infinitive as a purpose clause, the purpose relation was usually made explicit by means of a subordinator such as *for å*/*för att* (for to), or it was signalled in a relative clause. Examples (48) and (49)[71] are illustrations:

(48)

a. German units in the path of XXX Corps' drive for the bridges resisted furiously, assisted by the narrowness of the road, and the impossibility of **cross-country movement to outflank the defenders.** (ENPC/ESPC MH1)

b. Tyske avdelinger som lå i veien for XXX korps' framrykning mot bruene, gjorde rasende motstand. De hadde fordelen av at veien var smal og at det var umulig å foreta **bevegelser i terrenget *for å* omgå forsvarerne**. (ENPC MH1T)

c. Tyska enheter som befann sig på den väg där XXX:e armékårens framträngande mot broarna skedde gjorde ett våldsamt motstånd. De hade hjälp av den smala vägen och av omöjligheten av att göra ***kringgående* rörelser i terrängen vid sidan av vägen**. (ESPC MH1T)

(49)

a. IN THE early hours of 6 June 1944, preceded by **airborne assaults to secure their flanks**, the Allied armies landed on the beaches of Normandy to begin Operation Overlord, the struggle for North-West Europe (ENPC/ESPC MH1).

b. Tidlig om morgenen den 6. juni 1944, etter **flyangrep *som skulle sikre flankene***, ble de allierte styrkene landsatt på strendene i Normandie for å begynne operasjon Overlord, kampen om Nordvest-Europa (ENPC MH1T).

c. Tidigt på morgonen den 6 juni 1944 landsteg de allierades arméer på Normandies kust.Det var inledningen till Operation Overlord, kampen om Nordvästeuropa. Den hade föregåtts av **anfall av fallskärmssoldater *för att* säkra flankerna** (ESPC MH1T).

In (48b), the Norwegian translator has used the subordinator *for å* (lit. for to) to explicitate the purpose meaning, whereas the Swedish translator has used a construction where the *to*-infinitive is omitted and the purpose relation is

[71] Example (49) is a repetition of example (59) in chapter 3.5.2.

implicit in the premodifier *kringgående* (48c). In (49b), the Norwegian translator has used a relative clause reflecting the purpose relation, whereas the Swedish translator has used the subordinator *för att* (49c).

(50)

a. But it must be said from the outset that a disease is never a mere loss or excess - that there is always **a reaction**, on the part of the affected organism or individual, **to restore, to replace, to compensate for and to preserve its identity,** however strange the means may be and to study or influence these means, no less than the primary insult to the nervous system, is an essential part of our role as physicians (ENPC/ESPC OS1).

b. Det foreligger alltid **en reaksjon** fra den rammede organismens eller det rammede individets side **for å gjenopprette, erstatte, kompensere for og bevare identiteten** [lit: a reaction [...] for to restore, replace, compensate for and preserve the identity], hvor merkelige midlene enn kan være, og det å studere eller påvirke disse midlene er et essensielt ledd i vår rolle som leger, ikke mindre essensielt enn å studere eller påvirke den primære skaden i nervesystemet (ENPC OS1T).

c. Men det måste från början sägas att en sjukdom aldrig är blott och bart en förlust eller en excess — det sker alltid **en reaktion** från den angripna organismens eller individens sida **i syfte att återställa, ersätta, kompensera och bevara dess identitet** [lit: a reaction [...] with the intent to restore, replace, compensate and preserve its identity], hur egendomliga medlen för det ändamålet än kan synas vara; och att studera och påverka dessa medel, lika väl som den primära skadan på nervsystemet, är en väsentlig del av vår roll som läkare (ESPC OS1T).

In (50), the purpose relation between the deverbal noun and the *to*-infinitive in the English original is made explicit in both translations. The Norwegian translator uses the subordinator *for å* (for to) (50b), whereas the Swedish translator uses the subordinator *i syfte att* (in purpose to) (50c).

5.6.2 Translations of nominalized verb phrase complexes (VPCs)

A deverbal N + *to*-infinitive construction can be a nominalized verb phrase complex (VPC). As we saw in 3.5.2.2, a VPC realizes one process composed of two parts that represent different subparts, or phases, of the overall process, such as e.g. 'I *attempted to finish* the process', where *attempt* is the

first sub-part and *finish* the second, but the VPC is regarded as one process (cf. Halliday 1994:282, Halliday and Matthiessen 2004:518f). Thus, when a VPC is nominalized, the *to*-infinitive is not regarded as an object or a modifier, but as an extension of the first deverbal N (e.g. *the attempt to finish the process*).

In the Norwegian translations of nominalized VPCs, a preposition is sometimes inserted between the N and the infinitive, but not in the Swedish ones. Examples (51b,c) illustrate this:

(51)

a. The story was not a factual account of the physical origins of life upon earth but was **a deliberately symbolic attempt to suggest a great mystery and to release its sacred power. (ENPC/ESPC**

b. Historien var ingen saklig beretning om den fysiske opprinnelse til livet på jorden; den var **et bevisst symbolsk forsøk *på* å antyde et stort mysterium og frigjøre dets hellige kraft. (ENPC**

c. Historien var inte någon saklig redogörelse för livets uppkomst på jorden i fysisk mening utan **ett medvetet symboliskt försök att frammana ett stort mysterium och frigöra dess heliga kraft. (ESPC**

As was argued in section 4.5, the insertion of a preposition between the N + *å/att*-infinitive (*to*-infinitive) does not result in a change of structure or meaning. Nevertheless, it is interesting that Norwegian translators tend to insert a preposition, whereas Swedish translators do not (cf. also 5.5).

Some nominalized VPCs were turned into clauses: two out of seven in Norwegian and three out of seven in Swedish. In (52), below, both translators have opted for a clause, whereas in (53) a clause is chosen only by the Norwegian translator:

(52)

a. The symbolic stories, cave paintings and carvings were **an attempt to express their wonder** and **to link this pervasive mystery with their own lives**; indeed, poets, artists and musicians are often impelled by a similar desire today.

b. De symbolske fortellingene, hulemaleriene og billedskjærerarbeidene **skulle uttrykke deres undring og knytte dette altgjennomtrengende mysteriet sammen med deres eget liv;** ja, diktere, bildende kunstnere og komponister i vår tid blir ofte

drevet av et lignende ønske.

c. Med symboliska historier, grottmålningar och hällristningar **försökte** hon **uttrycka sin förundran och knyta det undflyende mysteriet till sitt eget liv;** också i våra dagar drivs poeter, konstnärer och musiker av en likartad önskan.

(53)

a. The result was not agricultural disaster but **a failure to profit from the huge investments that had been poured into agriculture.** (ENPC/ESPC MAW1)

b. Resultatet var ikke en jordbrukskatastrofe, men **at man ikke maktet å utnytte de enorme investeringene som var blitt sprøytet inn i næringen.** (ENPC MAW1)

c. Följden blev inte någon jordbrukskatastrof, däremot **uteblivna vinster från de massiva investeringar som hade satsats på jordbruket.** (ESPC MAW1)

In (52b), the Norwegian translator has translated the nominalized VPC with a modal construction (*skulle uttrykke*) whereas the Swedish translator has used a VPC corresponding to the nominalized VPC (52c). In (53b) the Norwegian translator has used an *at*-clause, and the Swedish translator a nominal paraphrase with a different noun than the original (53c).[72] We can conclude that the nominalized VPCs in the material are either translated congruently or turned into a clause.

It is interesting that the nominalized VPC is the only type of deverbal N + *to*-infinitive that was turned into a clause. In order to investigate whether the translations with a clause were the result of translator style, a small study of a typical nominalized VPC, namely the construction *attempt* + *to*-infinitive in the whole of the ENPC and ESPC was carried out.

5.6.3 'Attempt *to* + infinitive' in ENPC and ESPC

A study of the translation correspondences of all the instances of the nominalized VPC *attempt to* in the whole of the ENPC and ESPC confirms

[72] It should be mentioned that in (53b), a congruent translation is also blocked because there is no good lexical correspondence of *failure* in Norwegian and Swedish. Thus, the absence of a congruent translation can be attributed to lexical issues.

that a preposition is inserted in the congruent translations of this structure in Norwegian, but not in Swedish. Table 5.6.3a shows the complete range of translation correspondences of *attempt to* in ENPC, and table 5.6.3b gives the correspondences in ESPC:

Table 5.6.3a Translation of *attempt to* as nominalized VPC in ENPC

Translation correspondence	Fiction	Non-fiction
forsøk på å (attempt on to)	3	12
clause	3	1
forsøk ∅ (attempt ∅)	1	0
other	0	1
Total	7	14

Table 5.6.3b Translation of *attempt to* + *infinitive* as nominalized VPC in ESPC

Translation correspondence	Fiction	Non-fiction
forsök att (attempt to)	3	14
clause	1	4
forsök ∅ (attempt ∅)	1	0
other	0	0
Total	5	18

As shown in the tables, the typical translation of the nominalized VPC *attempt* + *to*-infinitive is *forsök på at*-infinitive (attempt *on to*-infinitive) in Norwegian, and *försök att*-infinitive (attempt *to*-infinitive) in Swedish.

However, there are also four Norwegian and five Swedish clausal translations of the nominalized VPC 'attempt *to* + infinitive'. Three out of the four translations with a clause in Norwegian and two out of the five translations with a clause in Swedish had a lexical nominalization after a preposition as source:

(54)

a. Timmy would spend hours happily banging them together or against the bars or, as now, slobbering against one of the stones *in* **an attempt to get it into his mouth**. (ENPC/ESPC PDJ3)

b. Timmy kunne more seg i timevis med å smelle steinene mot hverandre eller mot stengene, eller han slikket og savla på en av steinene som nå, og **prøvde å få den inn i munnen**. (ENPC PDJ3T)

c. Timmy kunde tillbringa timmar med att förtjust slå dem mot varandra eller mot stängerna eller som nu **försöka få in en av dem i munnen**. (ESPC PDJ3T)

In section 5.7 it will be argued that lexical nominalizations after prepositions are often turned into clauses in Norwegian and Swedish translations, which may also explain the translation with a clause in (54b,c).

Of the five translations with a clause in Swedish, one was based on a lexical nominalization as subject. Consider (55):

(55)

a. The second law is the most fundamental and unchallenged law of the Universe; not surprisingly, **no attempt to understand life** can ignore it. (ENPC/ESPC JL1)

b. Termodynamikkens andre lov er den mest grunnleggende og uimotsagte lov i universet, og det bør ikke være overraskende at **intet forsøk *på* å forstå livet** kan ignorere den. (ENPC JL1T)

c. Termodynamikens andra lag är universums mest grundläggande och mest oemotsagda lag. Det är inte förvånande att man inte heller kan bortse från den **när man vill förstå livet**. (ESPC JL1T)

We have already seen that lexical nominalizations as subjects seem to be less common in Norwegian and Swedish compared to English (cf. 4.2.2, 5.2.3.3, Johansson 2004), which can be one explanation why the Swedish translator has chosen a clause (55c).

To sum up, we have seen that a fair proportion of the VPC *attempt to* + *infinitive* was turned into a clause in the ENPC and ESPC. A possible reason for this is that nominalized VPCs straddle the boundary between complex-event meaning and result meaning. On the one hand, they are [+count] and lack argument structure and are therefore regarded as simple-event nominals, but on the other hand, a nominalized VPC consists of two processes of which the second process is an extension of the first, suggesting that the nominalized VPC has complex-event strucuture and therefore process meaning. This may be the explanation for nominalized VPCs being turned into clauses relatively often.

5.6.4 Translations of deverbal N + apposition

In the third type of 'deverbal N + *to*-infinitive', the *to*-infinitive functions as an apposition and the lexical nominalization shows result meaning of the metaphenomenon type. The construction is composed of a deverbal noun morphologically related to a mental or utterance verb followed by an appositional *to*-infinitive (cf. Halliday and Matthiessen 2004:469). There are only two such examples in the material, both of which are translated with a construction with an inserted preposition in Norwegian, but not in Swedish:

(56)

a. It preceded **any desire to explain the origin of the world or find a basis for ethical behaviour.** (ENPC/ESPC JL1)

b. Den gikk forut **for ethvert ønske *om* å forklare verdens opprinnelse eller finne et grunnlag for etisk adferd.** (ENPC JL1T)

c. Den fanns före **varje längtan att förklara världen eller finna en grundval för etiskt handlande.** (ENPC JL1T)

(57)

a. The lines seem to shift and shimmer as you look at them and before long you have a powerful **desire to look away**, anywhere but at the painfully dazzling pattern in front of you. (ENPC/ESPC MW1)

b. Linjene later til å veksle og flyte over i hverandre mens man ser på dem, og man føler snart **et sterkt behov *for* å flytte blikket** vekk fra det plagsomt flimrende mønsteret foran seg. (ESPC MW1T)

c. Linjerna tycks byta plats och flyta omkring när man tittar på dem och inom kort känner man **en stark önskan att vända bort blicken**, vart som helst bara man slipper titta på det obehagligt bländande mönster man har framför sig. (ESPC MW1T)

In both (56a) and (57a), the source nominal is *desire*. Table 5.6.4a and 5.6.4b give the translation correspondences for *desire to* in the entire ENPC and ESPC:

Table 5.6.4a Translation of *desire to* as metaphenomenon in the ENPC

Translation correspondence	Fiction	Non-fiction
ønske *om å*	6	5
trangen *til å*	1	0
lyst *til å*	1	0
behov *for å*	0	1
begjær *etter å*	0	1
Total	8	7

Table 5.6.4b Translation of desire to as metaphenomenon in the ESPC

Translation correspondence	Fiction	Non-fiction
önskan *att*	1	4
längtan *att*	2	1
lust *att*	1	1
begjäret *att*	1	0
behov *av att*	1	0
vilja *att*	0	1
other	1	1
Total	7	8

Table 5.6.4a and b confirm that a preposition is inserted between the deverbal noun and the *to*-infinitive in proposals in Norwegian, but not in Swedish. The form *behov av att* (in bold), however, suggests that a preposition is possible in Swedish as well.[73]

The translations of *desire to* in this small-scale investigation is not surprising, as this is a tendency in the translations of deverbal N followed by appositional *that*-clauses as well: Norwegian inserts a preposition between the deverbal N and the following clause, whereas Swedish does not (cf. 5.5). As we saw with *that*-clauses, the inserted prepositions turn the following *to*-infinitive into a modifier, underlining result meaning. The real semantic difference between the two constructions, however, is minimal. Teleman et al. (2000:III:124), for example, claim that a preposition is often optional after a deverbal noun followed by a *to*-infinitive (e.g. *kravet på/om att söka medlemskap* (lit. the claim on/about to seek membership)). Although the

[73] A search on Google of *önskan att* (wish that) and *önskan om att* (wish about that) in Swedish rendered approximately 165,000 for the form with a preposition and 402,000 hits for the form without (date of access: November 27, 2006).

semantic relation between the deverbal noun and the *to*-infinitive differs if the preposition is added, this difference is of minor importance.

5.7 Translations of lexical nominalizations after prepositions

In SFL prepositional clauses can be related to a clause on a scale of related constructions forming a network of agnation (cf. Halliday 1994:241, Halliday and Matthiessen 2004:425):

(i)	Finite Clause:	You will reach the monument.
(ii)	Dependent finite clause:	When you reach the monument, …
(iii)	Prepositional phrase:	At the monument…

The construction in (i) is more explicit than the construction in (ii) and the construction in (ii) is more explicit than the construction in (iii).

If a lexical nominalization follows a preposition, there is a tendency to move up the scale ranging from prepositional phrase to finite clause in the Norwegian and Swedish translations. 31 examples out of 131 (24%) lexical nominalizations after a preposition were turned into clauses in the Norwegian material and 33 out of 131 (25%) in the Swedish material. By way of comparison, the proportion of translations as clauses in general was 19% for Norwegian and 20.5% for Swedish.

Consider (58)-(60):

(58)

a. This was all happening half a century ago, *before* **the invention of the aqualung.** (ENPC/ESPC DM1)

b. Alt dette hendte for et halvt århundre siden, *før* **vannlungen var oppfunnet**. (ENPC DM1T)

c. Detta hände för ett halvt sekel sedan, *innan* **dykapparaten uppfanns**. (ESPC DM1T)

(59)

a. Their view showed Mars, like the Moon, to be extensively cratered, and tended to confirm the dismal prediction that Dian Hitchcock and I had made *from* **a study of its atmospheric composition;** that it

was probably lifeless. ENPC/ESPC JL1T)

b. Det viste seg at Mars på samme måte som månen i stor utstrekning var dekket av kratere, og dette styrket den dystre forutsigelsen som Dian Hitchcock og jeg hadde kommet med *etter* **å ha studert de atmosfæriske forholdene** - nemlig at planeten sannsynligvis var livløs. (ENPC JL1T)

c. Bilderna man fick visade att Mars, i likhet med månen, var täckt av kratrar. Detta verkade bekräfta den otrevliga förutsägelse som Dian Hitchcock och jag hade gjort *efter* **studier av atmosfären**, att planeten var livlös. (ESPC JL1T)

(60)

a. There are two principal objections to Gaia, first that it is teleological, and that *for* **the regulation of the climate**, the chemical composition on a planetary scale, a kind of forecasting, a clairvoyance, would be needed. (ENPC/ESPC JL1)

b. Innvendingene mot Gaia er av to hovedtyper: Den første går ut på at teorien er teleologisk og at det ville vært behov for en slags forutseenhet eller clairvoyance med hensyn *til* **reguleringen av klimaet og den kjemiske sammensetning i planetarisk målestokk.** (ENPC JL1T)

c. Det finns alltså två principiella invändningar mot Gaiahypotesen. Den första att den är teleologisk, *för att* **reglera klimat och kemisk sammansättning på planetskala** skulle det behövas någon form av förutseende eller klärvoajans. (ESPC JL1T)

In (58b,c) both translators have used a clause, whereas in (59) and (60) one of the translators has used a lexical nominalization and the other a clause. In many of the examples a clausal paraphrase comes across as the most natural choice in Norwegian and Swedish, as in (58b,c), where a translation with a clause seems particularly called for, and a congruent translation would seem cumbersome, if not impossible.

There are a number of possible reasons why Norwegian and Swedish translators sometimes prefer a clause to a construction with a preposition followed by a lexical nominalization. First, we can hypothesize that lexical nominalizations after prepositions are common in English, Norwegian and Swedish scientific prose, but that they come across as awkward in a more informal style. Where there are differences between the languages the reason for a clausal translation may be that popular science generally uses a more

informal style in Norwegian and Swedish compared with English.[74] Secondly, is possible that lexical nominalizations are more frequent overall in English and therefore more unmarked. Thirdly, the clausal translations may be regarded as more accessible than a lexical nominalization (cf. 2.3). Fourthly, the translations with a clause can be caused by the translation process itself. Translation studies have shown that translators tend to choose a more explicit structure than the original (cf. e.g. Baker 1992, discussion in 1.3.2).

The latter hypothesis can be tested. If it is a general strategy to turn lexical nominalizations after prepositions into clauses, we should get a similar pattern of explicitation in the direction Norwegian to English.

A test of the English translations of the five Norwegian deverbal nouns *erkjennelse* (acknowledgement), *forskning* (research), *frigjøring* (liberation), *kontroll* (control) and *utvikling* (development) was carried out in the whole of the ENPC. The test rendered a total of 62 hits in the Norwegian source texts, of which 60 were translated congruently, and two with clauses (i.e. 3.2%). Example (61b) and (62b) illustrate three congruent translations of lexical nominalizations with the deverbal noun *utvikling*:

(61)

a. Samisk teater er av ny dato og forventes å få betydning *for* **utvikling av språket** (ENPC BAA1)

b. Sami theatres are relatively new and are expected to play a part *in* **the development of the language**. (ENPC BAA1T)

(62)

a. Dessverre bygget Freud på feil oversettelse av den italienske teksten, da han ut fra denne drømmen og det faktum at Leonardo ble skilt fra sin mor, mente å kunne slutte at den ukjente Catarina "på utilfredsstilte mødres vis" måtte ha kjærtegnet sin lille sønn så heftig at dette, sammen med det plutselige brudd i kontakten mellom mor og sønn, ble bestemmende *for* **Leonardos utvikling,** for hans kunst, og *for* **utvikling av latent homoseksualitet**. (ENPC ANR1)

b. So much indeed that the dream and the fact that Leonardo was separated from his mother led Freud to the conclusion that the unfamiliar Catarina "in the way of an unsatisfied mother" must have

[74] Mackenzie (2007:226) e.g. argues that 'nominalized and non-nominalized versions after temporal conjunctions' such as *before* in (58) are "little more than stylistic variants".

caressed her little son so strongly that this, combined with the sudden loss of contact between mother and son, became a decisive factor *in* **Leonardo's development**, his art, and **the emergence of latent homosexuality**. (ENPC ANR1)

As shown by the examples the translation of lexical nominalizations after a preposition followed by a clause is unlikely to be a general translation strategy. A more likely explanation for the many translations with a clause from English to Norwegian/Swedish seems to be different preferences in style in the three languages.

The many translations with a clause can also be related to a typological difference between the languages. Many of clausal translations in Norwegian and Swedish are *at/att*-clauses, which, unlike English *that*-clauses, can follow prepositions (cf. chapter 2). In (63c), for instance, the Swedish translator has replaced a lexical nominalization as complement of a preposition with an *att*-clause, whereas a corresponding *that*-clause would be impossible in the English original (63a) (preposition in italics, lexical nominalization in bold):

(63)

a. The story begins *with* **the creation of the gods themselves** - a theme which, as we shall see, would be very important in Jewish and Muslim mysticism. (ENPC/ESPC KA1)

b. Historien begynner *med* **skapelsen av gudene selv** - et tema som vi skal se ble meget betydningsfullt i jødisk og muslimsk mystisisme. (ENPC KA1T)

c. Poemet börjar *med* **att gudarna själva skapas** - ett tema som skulle komma att bli mycket betydelsefullt i judisk och muslimsk mysticism, något som vi skall återkomma till. (ESPC KA1T)

The fact that an *at/att*-clause can follow a preposition in Norwegian and Swedish is an indication that *at/att*-clauses have a higher degree of nouniness than English *that*-clauses, and are therefore more versatile than their English counterparts.

5.8 Translations of expanded predicates

Many examples of lexical nominalizations following a 'light' or 'general' verb (such as *make* or *have*) were turned into a clause in both target languages. Example (64)-(66) illustrate translations of *make* + lexical nominalization and example (67) -(68) *have* + lexical nominalization:

(64)

a. Gorbachev's success could be attributed partly to the fact that Soviet fertiliser production was finally coming on stream and the Stavropol region was able to *make* **excellent use of it.** (ENPC MAW1T)

b. Gorbatsjovs suksess kunne delvis tilskrives det forhold at det endelig var begynt å bli fart på den sovjetiske produksjonen av kunstgjødsel og at man i Stavropol-distriktet var fullt ut istand til **å utnytte dette**. (ENPC MAW1T)

c. Gorbatjovs framgångar kunde delvis tillskrivas den omständigheten att den sovjetiska produktionen av konstgödsel började flyta jämnt och **att Stavropolregionen effektivt kunde utnyttja den**, men den huvudsakliga anledningen var hans beredskap att begagna djärva metoder som prestationslönesystem för att uppmuntra jordbruken att överträffa planerna. (ESPC MAW1T)

(65)

a. For anyone who had lived under Stalin, or who had tried to administer the country while Khrushchev was *making* **sudden calls for every peasant to plant maize**, **or for all the tractors to be given to the farmers, or for all the ministries to be relocated far from Moscow, or some such harebrained scheme**, there was a lot to be said for stability. (ENPC/ESPC MAW1)

b. Enhver som hadde levd under Stalin, eller som hadde forsøkt å styre landet mens **Khrusjtsjov en dag beordret alle bøndene til å plante mais, en annen dag bestemte at alle traktorer skulle overlates kollektivbrukene**, en tredje dag fant ut at ministeriene skulle flyttes ut av Moskva og en fjerde dag kom på nok et hårreisende innfall, visste å sette pris på stabilitet. (ENPC MAW1T)

c. För var och en som hade levt under Stalins tid eller försökt förvalta landet medan Chrusjtjov *utfärdade* **plötsliga och oöverlagda påbud om att alla bönder skulle odla majs, att alla traktorer skulle överlåtas åt jordbruken eller att alla ministerier skulle utlokaliseras långt från Moskva**, fanns det mycket som talade för stabilitet. (ESPC MAW1T)

(66)

a. Even as late as 1983, the monumental Earth's Earliest Biosphere,

edited by geologist J. W. Schopf and including contributions from twenty of the most distinguished American and European Earth scientists, *made* **no mention of either Hutton or Vernadsky.** (ENPC/ESPC JL1)

b. Selv det monumentale verket Earth's Earliest Biosphere, som kom så sent som i 1983 med geologen J. W. Schopf som redaktør og omfattet bidrag fra tyve av de mest fremstående Jordenvitenskapsmenn i Amerika og Europa, **omtalte hverken Hutton eller Vernadsky.** (ENPC JL1T)

c. Inte ens så sent som 1983, då monumentalverket Earth's Earliest Biosphere med J.W. Schopf som redaktör kom ut, inte ens då **nämndes något om varken Hutton eller Vernadsky,** trots att verket omfattade bidrag från ett tjugotal av de mest framstående amerikanska och europeiska geovetarna. (ESPC JL1T)

(67)

a. I repeated the test, this time getting him to write down the names of the three objects; again he forgot, and when I showed him the paper with his writing on it he was astounded, and said he **had no recollection of writing anything down**, though he acknowledged that it was his own writing, and then got a faint "echo" of the fact that he had written them down. (ENPC/ESPC OS1)

b. Nok en gang glemte han dem. Da jeg viste ham lappen med hans skrift på, var han forbløffet. Han sa **at han ikke kunne huske at han hadde skrevet noe**, men han erkjente at det var hans håndskrift, og så fikk han et svakt "ekko" av at han hadde skrevet dem ned. (ENPC OS1T)

c. Jag upprepade testet och lät honom den här gången skriva upp vilka saker det var; återigen glömde han det hela och när jag visade honom papperet med hans skrift på blev han storligen förvånad och **sade att han inte hade något minne av att ha skrivit upp något**, fast han kände igen sin egen handstil och därpå fick ett svagt "eko" av att ha skrivit upp det. (ESPC OS1T)

(68)

a. Questioning and testing showed, beyond doubt, that not only was he centrally or "cortically" blind, but he had lost all visual images and memories, lost them totally - yet *had* **no sense of any loss**. (ENPC/ESPC OS1T)

b. Utspørring og undersøkelser viste at han uten tvil ikke bare var sentralt eller "kortikalt" blind, men at han hadde mistet al.le visuelle bilder og minner, mistet dem fullstendig men likefullt ikke *hadde* **noen fornemmelse av tap.** (ENPC OS1T)

c. Utfrågning och test visade utan skuggan av ett tvivel att han inte bara hade en skada i hjärnans synregioner utan också hade förlorat

alla visuella bilder och minnen helt och hållet — men ändå inte **kände av något bortfall.** (ESPC OS1T)

In all of the examples above, one or both of the translators have chosen a clause.

Schmid (2000:25) refers to constructions with a general action verb, such as *make* or *do* + lexical nominalization and *have* + lexical nominalizations as *expanded predicates*, a term taken from Algeo (1993), and notes that such constructions can normally be replaced by simple verbs. As Schmid (2000:196) puts it, the nominalizations in expanded predicates have largely lost their nominal effects.

Schmid (2000:25) claims that the reason for using expanded predicates is primarily stylistic (cf. Koptjevskaja-Tamm 1993:269). Compare also style guides (Vinje 2002:98, Blamires 2000:226ff), where expanded predicates are frowned upon and described as a prototypical example of how nominalizations are used in written language in order to make things sound more complicated than necessary. The reason for using expanded predicates rather than simple verbs could therefore be different style conventions in English and Norwegian/Swedish popular science. Whereas they are quite natural in English, they may be stigmatized in Norwegian and Swedish.

On the other hand, Platzack (1977:14) has claimed that expanded predicates in Swedish can be easier to remember than a clause, mainly due to the fact that the structure and meaning of an expanded predicate can be recognized at an early stage of processing, i.e. already at the stage of the general verb (cf. also the discussion in Koptjevskaja-Tamm 1993:269). Thus, if expanded predicates make a text difficult to access, it is probably due to the complexity and lexical content of the nominalization rather than the fact that it is part of an expanded predicate. We must therefore be careful in drawing any conclusions regarding the use of expanded predicates in English, Norwegian and Swedish.

5.9 Summary

In this chapter I have considered the translations of English lexical nominalizations morphologically related to a transitive verb and with an adnominal element that could be related to the direct object of that transitive

verb. The different forms considered are listed in 5.1 and repeated here for convenience:

A deverbal N + *prep*+NP

the accumulation and transport of thousands of tons of stores

B *s*-genitive + deverbal N

its presentation

C N + deverbal N (compound)

land use

D deverbal N + *that*-clause

the accusation that the Gaia hypothesis is teleological

E deverbal N + *to*-infinitive

any desire to explain the origin of the world

It has been shown that there are Norwegian and Swedish congruent correspondences of all the types of transitive nominalizations with an object, and that most types are translated congruently more often than non-congruently. The many congruent translations indicate that English, Norwegian and Swedish to a large extent share the same structural possibilities for lexical nominalization, with the possible exception of structures where the *s*-genitive realizes an object-relation, which are unlikely in Norwegian and Swedish (e.g. **its** presentation - how someone presented **it)**.

If a non-congruent translation was chosen, the translation choice could usually be explained by one or a combination of factors. Language typology can be used to explain that lexical nominalizations after prepositions were particularly likely to be translated with a clause, as the clause often was an *at/att*-clause (*that*-clause) which cannot follow a preposition in English. Another factor has to do with register. For instance, many lexical nominalizations as Themes were turned into clauses, in particular into clauses with the generic subject *man* (lit. *one*) (cf. also 4.7). This indicates that the use of lexical nominalizations as Themes with the function of summing up given information, which is typical of English scientific prose (cf. discussion in chapter 2), seems to be less common in Norwegian and Swedish popular science. The meaning of the lexical nominalization can also

have an impact on the choice of translation. Lexical nominalizations with complex-event meanings were translated by a clause more often than simple-event and result nominals. Complex-event nominals referring to a fact or a proposition in the Vendlerian sense were often turned into nominal, rank-shifted clauses. As rank-shifted clauses have a higher degree of nouniness than ranking clauses, this translation correspondence suggests that complex-event nominals with fact and proposition meanings have a higher degree of nouniness than other complex-event nominals. Moreover, the nominal qualities of a rank-shifted clause were sometimes further enhanced by means of an inserted shell N (e.g. *the promise that he would be the father of a great nation*). Simple–event nominals were also turned into a structure with an inserted N + clause, but the inserted noun was of a circumstantial type, explicitating the part of the event in focus, i.e. what time the event was carried out or how it was carried out. Result nominals, lastly, were rarely turned into clauses.

The *of*-construction was analysed in different ways depending on the translations. When the *of*-construction was translated congruently, into the object in a clause or as the first N in a synthetic compound, it was an argument, but when it was turned into an *at/att*-clause, a lexically determined PP or the first N in a root-compound, it was a postmodifier. This seems to be the case even if it goes against Grimshaw's observation that constructions with the form *the construction of the building* always are complex-event nominals (i.e. have process meaning).

Finally, there were differences not only between the source language and the target languages, but between the target languages as well. We have seen that in structures with a 'deverbal N + clause', such as e.g. *a demonstration that he was still in the past*, Norwegian strongly favors an inserted preposition (e.g. *en demonstrasjon* ***av*** *at han fortsatt var i fortiden* (lit. a demonstration of that he still was in the past)), while constructions with a preposition are less frequent in Swedish.

6 TRANSLATIONS OF TRANSITIVE LEXICAL NOMINALIZATIONS WITH A SUBJECT MODIFIER

6.1 Introduction

As we have seen in the previous chapters, lexical nominalizations can include some correspondence of both the subject and the object as adnominal elements, or they can include only one argument. This chapter considers lexical nominalizations where the subject of a corresponding transitive verb is kept, but the object is omitted, as e.g. in *John's construction* (*of the building*). Lexical nominalizations with a deverbal noun morphologically related to an intransitive verb as head (e.g. *the persistence of the Archean biota*) and lexical nominalizations with a deverbal noun morphologically related to an ergative verb as head (e.g. *the movement of water*) fall outside this definition, and are discussed in chapter 7.

As in chapters 4 and 5, the main aim of this chapter is to explain the choice of translation in the Norwegian and Swedish texts and to describe the paradigmatic relations that exist between different structures. Types A-D illustrate the types that are addressed, with reference to the section in which they are discussed:

A *s*-genitive + deverbal N (6.2)
our study

B deverbal N + *of*-construction (6.3)
the continuing pressure of anomaly and contradiction

C deverbal N + *prep* + NP (6.4)
reports from the Navy

D adjective + deverbal N (6.5)
natural selection.

All the types above are examples of result nominals, meaning that the subjects are modifiers rather than arguments. I regard only the internal argument of a noun, i.e. the direct object (e.g. *the construction* ***of the building***) or the ergative Medium (e.g. *the evolution* ***of the planet***) as potentially required by argument structure (cf. chapter 3). The subjects in

types A-D can therefore not be considered as syntactically required arguments and are sometimes referred to as *subject modifiers*.

The translation picture for the types discussed in this chapter differs from that of the types discussed in the previous two chapters. Table 6.1 presents the figures for congruent and non-congruent translation:

Table 6.1 Translations of transitive nominalizations with a subject but no object

Translation correspondence	Norwegian		Swedish	
congruent	58	(61.0%)	54	(57.0%)
paraphrase	25	(26.0%)	31	(32.5%)
clause	8	(8.5%)	7	(7.5%)
other	4	(4.5%)	3	(3.0%)
Total	95	(100%)	95	(100%)

The proportion of translations with a clause for transitive nominalizations with a subject and an object was 24% for Norwegian and 26% for Swedish and 20% and 26% respectively for those with only an object. However, table 6.1 shows that 8.5% of the deverbal nouns with a subject were translated with a clause in Norwegian, and 7.5% in Swedish. That so few lexical nominalizations in this category were turned into a clause can perhaps be explained by the fact that the category consists of only simple-event and result nominals, i.e. lexical nominalizations that are more like 'regular' NPs because of the lack of the verbal properties aspect and argument structure. Moreover, they have the nominal quality [+count] (cf. Grimshaw 1990, 3.4.1). The lexical nominalizations discussed in chapters 4 and 5, in contrast, included lexical nominalizations both with complex-event meaning as well as those with simple-event or result meaning.

Nevertheless, there were some translations with a clause, and the study of these can hopefully broaden our insight into what contexts give rise to a translation with a clause. Moreover, when a nominal paraphrase is used, interesting contrastive information about how a subject modifier is realized in English, Norwegian and Swedish can be revealed.

6.2 Congruent translations of '*s*-genitive + deverbal N'

The translations of '*s*-genitive + deverbal N' nominalizations (e.g. *John's construction*) are given in table 6.2:

Table 6.2 Translations of '*s*-genitive + deverbal N' in Norwegian and Swedish

Translation correspondence	Norwegian		Swedish	
congruent	31	(74.0%)	32	(76.0%)
clause	6	(14.0%)	3	(7.0%)
postmodifying clause	0	(0.0%)	1	(2.5%)
s-genitive →∅	4	(9.5%)	4	(9.5%)
other	1	(2.5%)	2	(5.0%)
Total	42	(100.0%)	42	(100.0%)

As can be seen, most of the '*s*-genitive + deverbal N' nominalizations were translated congruently (74% in the Norwegian material and 76% in the Swedish). Example (1) is an illustration:

(1)

a. After a while, I began to realize that **Ford Doolittle's criticism** could be taken not so much as an attack on Gaia but as a criticism of the inadequacy of its presentation. (ENPC/ESPC JL1)

b. Og etter en stund begynte jeg å innse at **Ford Doolittles kritikk** ikke måtte oppfattes entydig som et angrep på Gaia, men heller som en kritikk av den mangelfulle måten. (ENPC JL1T)

c. Efter ett tag började jag inse att **Ford Doolittles kritik** inte i första hand riktade sig mot Gaia, utan snarare mot hur hypotesen framställdes. (ESPC JL1T)

Both the original nominalization *Ford Doolittle's criticism* (1a) and the corresponding congruent translations (1b and c) refer to the product rather than the process of criticizing, and a nominal translation is therefore natural.

Most of the congruent translations of the *s*-genitive are associated with an animate, Agent-like entity that resembles the subject of a corresponding clause (cf. Quirk et al. 1985:1281ff, Koptjevskaja-Tamm 1993, Teleman et al. 2000:35).

(2)

a. He struck a bargain: in return for **El's special protection**, Jacob would make him his the only god who counted. (ENPC/ESPC Ka1)

b. Han sluttet en pakt med ham: Til gjengjeld for **Els spesielle beskyttelse** ville Jakob gjøre ham til sin elohim, den eneste gud som tellet. (ENPC KA1T)

c. Han träffar ett avtal: I utbyte mot **Els särskilda beskydd** skall han göra honom till sin 'elohim, den ende gud som räknas. (ESPC KA1T)

However, the *s*-genitive cannot be regarded as a real Agent without the presence of a grammatical object. In the words of Grimshaw (1990:51): "Poss is construed as a possessive modifier, as just somehow associated with the noun" and is not the subject of the nominalization. We can observe, however, that the fact that so many *s*-genitive + deverbal N are translated congruently indicates that the *s*-genitive is a common way of realizing an animate, Agent-like modifier in English, Norwegian and Swedish.

6.3 Non-congruent translations of '*s*-genitive + deverbal N'

Although there is a strong tendency for the type '*s*-genitive + deverbal N' (e.g. *John's construction*) to be translated congruently, there were some non-congruent translations. The translators have predominantly embraced two translation strategies, namely *omission of the s-genitive*, described in section 6.3.1 and *translation with a clause,* described in section 6.3.2 (cf. table 6.2 above).

6.3.1 *S*-genitive →∅

Example (3) illustrates how the *s*-genitive is sometimes omitted in the translations:

(3)

a. I resumed **my examination**. (ENPC/ESPC OS1)

b. Jeg gjenopptok **undersøkelsen**. (ENPC OS1T)

c. Jag fortsatte **undersökningen**. (ESPC OS1T)

The translations in (3) can be explained by the tendency discussed in section 4.2.2, that in clauses where the subject and the *s*-genitive are co-referential, the English *s*-genitive sometimes corresponds to a definite form in Norwegian/Swedish.

This explanation, however, does not apply to example (4):

(4)

a. But **his drinking** grew heavier in 1970. (ENPC/ESPC OS1)

b. Men **drikkingen** ble tettere i 1970. (ENPC OS1T)

c. Men s**upandet** tilltog år 1970. (ESPC OS1T)

In (4) it is difficult to explain why both the Norwegian and the Swedish translators have opted for a definite NP rather than a congruent translation (e.g. (Norw.) *drikkingen hans*) (lit. drinking his). One possible explanation, however, is the fact that the referent of the pronoun *his* is well established in the context preceding (4a) and may have been considered redundant by the Norwegian and Swedish translators. Example (4) is therefore a good illustration of the need for taking context into account.

6.3.2 Translation with a clause

The few translations with a clause appeared in situations that have already been described as favoring a translation with a clause (cf. 4.7, 5.9). For instance, there were two examples where a lexical nominalization after a preposition was turned into a clause (cf. 5.8). The Norwegian translation in (5b) is a case in point:

(5)

a. Something of a mystery emerges here: the official biography states only that his father "had fought at the front in the Great Patriotic War;" but in conversations in Britain *during* **his official visit in December 1984**, Gorbachev said that his father had died in the war, and that he had been brought up mainly by his grandparents. (ENPC/ESPC MAW1)

b. Det er likevel en uklarhet her: I den offisielle biografien står det bare at hans far hadde "kjempet ved fronten i Den store

fedrelandskrigen". **Da Gorbatsjov besøkte England i desember 1984**, sa han imidlertid at faren døde i krigen og at han selv i hovedsak hadde vokst opp hos besteforeldrene. (ENPC MAW1T)

c. Här framträder något av ett mysterium: den officiella levnadsförteckningen uppger bara att fadern "hade kämpat vid fronten under Stora fosterländska kriget", dvs. andra världskriget, men i samtal *under* **sitt officiella Englandsbesök i december 1984** sade Gorbatjov att hans far hade stupat i kriget och att farföräldrarna hade haft huvudansvaret för hans uppfostran. (ESPC MAW1T)

Another reason for turning the lexical nominalization in (5a) into a subordinate clause may be the complexity of the original nominalization (cf.4.2.2, 4.7, 5.3).

In one example the lexical nominalization functioned as an object of *begin* and both the Norwegian and the Swedish translators have chosen a clause as translation:

(6)

a. It distinguished him from his fellow students at Moscow University when he *began* **his studies** there in September 1950.

b. Den skilte ham ut fra hans medstudenter ved Moskva-universitetet **da han begynte å studere der** i september 1950.

c. Den gjorde honom unik bland studiekamraterna på Moskva-universitetet **där han började läsa** i september 1950.

As we have seen in 5.6.2 and 5.6.3 nominalized VPCs are quite often translated into clauses in both Norwegian and Swedish. The lexical nominalization in (6a) corresponds to the second half of the complex verb phrase *begin to study*, where *begin to study* realizes one process composed of an aspectual verb, *begin*, and a 'main process' *study* (cf. 3.5.2.2, 5.6.2).

6.4 Translations of 'deverbal N + *of* + NP'

There were 29 examples of deverbal nouns morphologically related to a transitive verb with a subject modifier realized in an *of*-construction. When the *of*-construction is used in this way it is paradigmatically related to the *s*-genitive. It has been argued, however, that whereas the *s*-genitive realizes animate, Agent-like entities (cf. e.g. Quirk et al. 1985:1281ff), the *of*-

construction is favored with inanimate NPs and elaborate NPs (cf. Quirk et al. 1985:1281ff, Davidse 1992:112). In example (7) the *of*-construction realizes an elaborate NP and in (8) an inanimate NP:

(7)

a. Yuri Moshkov, the Soviet historian of collectivisation, recounts that "Some kolkhozes in the north Caucasus [of which the Stavropol region is part] and the Ukraine ceased to come under **the organising influence of the party and the state**" — a euphemism for outright rebellion. (ENPC/ESPC MAW1)

b. Jurij Mosjkov, en sovjetisk historiker som har skrevet om kollektiviseringen, bemerket at "noen kollektivbruk i Nord-Kaukasus (det vil blant annet si Stavropol-regionen) og Ukraina stod ikke lenger under **partiets og statens organisatoriske ledelse**.". (ENPC MAW1T)

c. Historikern Jurij Mosjkov som skrivit om kollektiviseringen uppger att "En del kolchoser i norra Kaukasus [dit Stavropolregionen hör] och Ukraina hamnade utanför **partiets och statens styrande inflytande**" — en omskrivning för öppen revolt. (ESPC MAW1T)

(8)

a. The conditions are only constant in the short term and evolve in synchrony with **the changing needs of the biota** as it evolves. (ENPC/ESPC JL1)

b. Disse betingelsene er konstante bare på kort sikt, og utvikler seg synkront med **de skiftende behov hos biotaen** etterhvert som den utvikler seg. (ENPC JL1T)

c. Detta tillstånd förändras emellertid och utvecklas i takt med organismerna och **deras förändrade behov**. (ESPC JL1T)

In Swedish and Norwegian, on the other hand, there is no obvious counterpart to *of*-constructions that introduce a subject modifier or a grammatical subject. Koptjevskaja-Tamm (1993:177) argues that this is because the *of*-construction is a genitive construction in English and therefore is interchangeble with the *s*-genitive in “the vast majority of cases”.

This raises the interesting question of how the *of*-constructions realizing subject modifiers are translated into Norwegian and Swedish. Let us first consider the translation correspondences in terms of congruent and

non-congruent examples. The translations of the 'deverbal N + of + NP' type are given in table 6.4:

Table 6.4 The translation of 'deverbal N + *of* + NP' into Norwegian and Swedish

Translation correspondence	Norwegian		Swedish	
congruent	15	(52%)	5	(17.5%)
of →*s*-genitive	7	(24.5%)	9	(31.0%)
relative clause	1	(3.5%)	5	(17.5%)
of →∅	3	(10.0%)	3	(10.0%)
of →premodifying adjective	0	(0.0%)	2	(6.5%)
clause	3	(10.0%)	4	(14.0%)
other	0	(0.0%)	1	(3.5%)
Total	29	(100.0%)	29	(100%)

Table 6.4 shows that the proportion of congruent translations is far lower in the Swedish material compared with the Norwegian material (17.5% and 52% respectively), indicating that Swedish has no clear correspondence of the *of*-construction as a subject modifier whereas Norwegian does.

However, the congruent translations in Norwegian do not provide us with a clear one-to-one correspondence of *of*. Instead, *of* corresponds to a range of different prepositions. For instance: in example (8) above, the Norwegian translator has translated *of* with *hos* (with/at[75]), whereas the Swedish translator has used a freer translation, including restructuring and omission of information (*as it evolves*). For further examples, see below.

As the Norwegian translators have chosen a congruent translation in many cases where the Swedish translators have chosen a different translation strategy involving restructuring, this section is particulary concerned with discussing differences in the translations into Norwegian and Swedish. Section 6.4.1 considers examples where the Norwegian translator has translated the *of*-construction with a PP and the Swedish translator has used a relative clause. Section 6.4.2 looks into translations where both translators have used an *s*-genitive, and section 6.4.3 is devoted to translations where the Norwegian translator has used a congruent translation and the Swedish

[75] *With* and *at* are not totally satisfactory as translations of *hos*, as there are no good correspondences of *hos* in English. Correspondences can be found in other languages, however, e.g. German *bei* and French *chez*.

translator has used the *s*-genitive. Section 6.4.4 discusses translations where both translators have used a congruent translation, but used an alternative preposition to *of*, and section 6.4.5, finally, addresses translations with a clause.

6.4.1 Prepositional phrases /relative clauses

In (9) and (10) the Norwegian translator has used a postmodifying PP whereas the Swedish translator has opted for a relative clause:

(9)

a. Indeed, it is probably more accurate to call these early Hebrews pagans who shared many of **the religious beliefs of their neighbours in Canaan**. (ENPC/ESPC KA1)

b. Ja, etter all sannsynlighet er det riktigere å kalle disse gamle hebreerne hedninger som delte mange av **de religiøse anskuelsene *til* sine naboer i Kanaan**. (ENPC KA1T)

c. I själva verket är det troligen mera korrekt att beteckna dem som hedningar med i mångt och mycket **samma religiösa uppfattningar som deras samtida i Kanaan**. (ESPC KA1T)

(10)

a. When he went closer to investigate, Yahweh had called to him by name and Moses had cried: "Here I am!", **the response of every prophet of Israel** when he encountered the God that demanded total attention and loyalty: Come no nearer" [God] said, "Take off your shoes for the place on which you stand is holy ground. (ENPC/ESPC KA1)

b. Da han gikk nærmere for å undersøke saken, hadde Jahve kalt ham ved hans navn, og Moses hadde ropt: "Her er jeg!" (hinneni!) - **svaret *til* alle Israels profeter** når de møtte sin gud som forlangte fullstendig oppmerksomhet og lojalitet: (ENPC KA1T)

c. När han gick närmare för att undersöka saken ropade Jahve hans namn och Mose svarade: "Här är jag! (hinenni!)", **samma svar som varje Israels profet ger** när han möter den Gud som kräver total uppmärksamhet och lojalitet: (ESPC KA1T)

In both (9a) and (10a) the *of*-construction has an Agent-like role, a role we have seen is typically related to the *s*-genitive in English, Norwegian and

Swedish alike. In this example, however, neither of the translators use the *s*-genitive. The Norwegian translator uses the preposition *til* (lit. *to*) (9b), (10b), which can have a possessive function in Norwegian (Faarlund et al. 1997:263), but not in Swedish (cf. Teleman et al. 2000:III:34,97), and the Swedish translator has chosen a relative clause expressing agency (9c), (10c).

The reason for both translators choosing postposed constructions can probably be attributed to *information structure* and *focus* as well as the complexity of the subject modifier. Quirk et al. (1985:1282) argue that there is a tendency to "place more complex and communicatively more important constituents towards the end of the superordinate NP". This means that the *s*-genitive is favored when the deverbal noun has high communicative value and the *of*-construction is preferred if the situation is reversed, when the focus is on the subject modifier, or if the subject modifier is complex. For example, *every prophet of Israel's response* would be used if the deverbal N *response* is in focus, but *the response of every prophet of Israel* is more likely because of the complexity of the subject modifier (*every prophet of Israel*). It can be assumed that the Norwegian and Swedish postposed constructions as subject modifiers are used for much the same reasons as the *of*-construction, namely that the modifier is complex or has a higher communicative value compared with the deverbal N.

In (11) and (12) the Norwegian translator has used a postmodifying PP with *i* (in), and the Swedish translator has used a relative clause:

(11)

a. If Jimmie was briefly "held" by a task or puzzle or game or calculation, held in **the purely mental challenge of these**, he would fall apart as soon as they were done, into the abyss of his nothingness, his amnesia. (ENPC/ESPC OS1T)

b. Hvis Jimmie for kort tid ble "holdt" av en oppgave, en gåte, et spill eller en beregning, holdt i **den rent mentale utfordringen i dem**, ville han falle fra hverandre så snart de var utført, falle i den avgrunnen som hans intethet, hans amnesi, utgjorde. (ENPC OS1T)

c. Om Jimmie "hölls kvar" för en kort tid av en uppgift eller ett spel eller en beräkning, fångad av **den rent mentala utmaning dessa innebar**, föll han i bitar så snart han blev färdig, ned i sin intighets, sin amnesis avgrund. (ESPC OS1T)

(12)

a. Jimmie soon did recover his old skill and came to type very quickly - he could not do it slowly - and found in this **some of the challenge and satisfaction of a job.** (ENPC/ESPC OS1)

b. Jimmie gjenopptok faktisk sine gamle ferdigheter raskt og skrev svært fort — han var ikke i stand til å gjøre det langsomt — og i dette fant han **noe av utfordringen og tilfredsstillelsen i et arbeid.** (ENPC OS1T)

c. Jimmie hade snart övat upp sin gamla förmåga och kom att skriva väldigt snabbt — han kunde inte göra det långsamt — och i detta fann han **en del av den utmaning och tillfredsställelse ett arbete erbjuder.**

The reason for the Norwegian translator using the preposition *i* rather than *til* (11b), (12b) can probably be related to the semantic role of the PP in (11a) and (12a), which seems to express (partial) composition (cf. Huddleston and Pullum 2002:477) rather than agency, i.e. that the puzzle and game consisted partly of mental challenge (11a) and that the job consists (partly) of challenge and satisfaction (12a). According to Faarlund et al. (1997:444), a relation of compositionality is usually realized by *av* (of) or *i* (in) in Norwegian as in *et servise av/i porselen* (china of/in porcelain). This relation is underlined also in the Swedish translation in (11c), *den mentala utmaning som dessa innebar* (the mental change that these involved) and (12c) *den utmaning och tillfredsställelse ett arbete erbjuder* (the challenge and satisfaction a job offers).

6.4.2 *Of* → *s*-genitive

Example (13) illustrates how the *of*-construction was sometimes turned into the *s*-genitive in both Norwegian and Swedish:

(13)

a. Doubtless with **the distant support of Kulakov**, he moved steadily up the party ladder, becoming first secretary of Stavropol city in 1966 and, two years later, second secretary of the region and Yefremov's deputy. (ENPC/ESPC MAW1)

b. Godt hjulpet av **Kulakovs støtte** i hovedstaden, klatret han jevnt og trutt oppover partistigen. (ENPC MAW1T)

c. Säkert var det med **Kulakovs stöd** i bakgrunden som han oavbrutet klättrade uppför partistegen, år 1966 blev förstesekreterare i staden Stavropol och två år senare andresekreterare i regionen och Jefremovs närmaste man. (ESPC MAW1T)

As expected all translations with the *s*-genitive realize an animate Agent-like entity. Note also that the premodifying adjective *distant* (13a) has been turned into a postmodifying PP in both the Norwegian and the Swedish translation (13b,c).

6.4.3 *Of* → *s*-genitive/prepositional phrase

As already pointed out (cf. 6.4), there are some examples where the Norwegian translator has used a postmodifying PP and the Swedish translator has used the *s*-genitive (e.g. example (8)). Example (14) is a further illustration:

(14)

a. Yet this political stability could only endure in so far as it participated *in* the more enduring and **effective government of the gods**, who had brought order out of primordial chaos when they had created the world. (ENPC/ESPC KA1)

b. Men den politiske stabiliteten kunne bare vare ved i den utstrekning den var en del av **det varigere og mektigere styret til gudene** som hadde skapt orden ut av urkaoset den gangen de skapte verden. (ENPC KA1T)

c. Men den politiska stabiliteten fortfor bara i den mån den var delaktig i **gudarnas mera bestående och dugliga styre**, eftersom gudarna när de skapade världen hade frambragt ordning ur ett ursprungligt kaos. (ESPC KA1T)

A possible explanation for the difference between Norwegian and Swedish is that postmodifying PPs seem to be more common and versatile in Norwegian than in Swedish, in particular in the subject role. This is partly due to the fact that Norwegian has the prepositional construction *til* (to) for marking possessive relationships in postmodifying PPs (Faarlund et al. 1997:442). In Swedish, on the other hand, the low number of postmodifying PPs could be expected from the fact that postmodifying PPs are only rarely used to realize a subject-relation in Swedish (cf. Teleman et al. 2000:97).

6.4.4 *Of* → prepositional phrase

In the examples where both translators used a postmodifying PP, the key to the translation seems to be the semantic role of the postmodifying PP. Consider (15):

(15)

a. The new science of brain/mind which Freud envisaged came into being in the Second World War, in Russia, as **the joint creation of A. R. Luria (and his father R. A. Luria), Leontev, Anokhin, Bernstein** and others, and was called by them "neuropsychology". (ENPC/ESPC OS1)

b. Den nye hjerne- og bevissthetsvitenskapen som Freud så for seg, oppsto under Den andre verdenskrigen i Sovjet, som **felles verk av Aleksandr R. Luria (og hans far, R. A. Luria), Leontjev, Anokhin, Bernstein og andre.** De kalte den "nevropsykologi". (ENPC OS1T)

c. Den nya vetenskapen om hjärnan/medvetandet som Freud förutsåg uppstod under andra världskriget, i Sovjetunionen, som den samfällda **skapelsen av A.R. Luria (och hans far R.A. Luria), Leontiev, Anochin, Bernstein och andra, och de gav den namnet "neuropsykologi".** (ESPC OS1T)

In (15a), the head deverbal noun *creation* refers to the new science of the brain/mind that was created by A.R Luria, Leontev, Anokhin, Bernstein and others. The use of *av* in both translations (15b,c) is thus not very surprising, since *av* is commonly used to introduce what Teleman et al. refer to as 'the source of a spiritual product' (Teleman et al. (2000:III:101). Moreover, this use of *av* resembles the Agent-marker used in Swedish and Norwegian passives (cf. Faarlund et al. 1997:444).

Another postmodifying PP used in both languages is *fra*/*från* (from), which realizes a relation where the deverbal noun is interpreted as 'originating from' the person or thing referred to in the PP (cf. Teleman et al. 2000:III:98, Faarlund et al. 1997:444):

(16)

a. The only feasible explanation for the persistence of this unstable atmosphere at a constant composition, and for periods vastly longer than the reaction times of its gases, is **the influence of a control system, Gaia**. (ENPC/ESPC JL1)

b. Den eneste mulige forklaring på at denne ustabile atmosfæren kan beholde en konstant sammensetning, og det i perioder som er uhyre mye lengre enn reaksjonstiden hos gassene den består av, er **innflydelsen fra et kontrollsystem - nemlig Gaia**. (ENPC JL1T)

c. Den enda rimliga förklaringen till att en så instabil atmosfär skulle kunna hållas vid konstant sammansättning under lång tid är **påverkan från ett reglersystem**, Gaia. (ESPC JL1T)

In (16), the relation captured in the Norwegian and Swedish translations (16b,c) is that *influence* emanates from *the control system*.

6.4.5 Clause

In (17) both the Norwegian and the Swedish translators have chosen a clause as translation:

(17)

a. A mere trace of carbon dioxide is present, far below **the expectation of planetary chemistry**. (ENPC/ESPC JL1)

b. Den har bare sporforekomster av karbondioksyd, langt mindre enn **man skulle vente ut fra planetarisk kjemi.** (ENPC JL1T)

c. Det finns bara spår av koldioxid där, långt mindre än vad **man skulle kunna vänta sig med kännedom om planetens allmänna sammansättning.** (ESPC JL1T)

In (17a) the *of*-construction *of planetary chemistry* seemingly realizes an Agent-like role. However, it is understood that planetary chemistry has an instrumental rather than an Agent role, the real Agent being a human being

using planetary chemistry to develop expectations about likely levels of carbon dioxide. The translations in Norwegian and Swedish (17b,c) turn the semantically incongruent source structure into a semantically congruent construction where the generic pronoun *man* (one) is Agent. Example (17) suggests a reluctance towards inanimate Agent-like subjects of the type in (17a) in Norwegian and Swedish (cf. 5.2.3.3).

Example (18) is another example where both translators have chosen a clause:

(18)

a. It would have been an extraordinary experience of **the empowerment of the oppressed against the powerful and the mighty.** (ENPC/ESPC KA1T)

b. Det ville ha vært et helt enestående eksempel på **at de undertrykte tiltok seg makt og satte seg opp mot de sterke og mektige.** (ENPC KA1T)

c. Det rörde sig då om en unik upplevelse av **att de förtryckta satte sig upp mot dem som hade makt och myndighet.** (ESPC KA1T)

The lexical nominalization in (18a) is a fairly elaborate structure with an adjunct in addition to the subject, which in itself is part of an elaborate NP. This may explain why a clause is chosen in the translations (18b,c) (cf. 4.7). Note also that in both (17a) and (18a) the English lexical nominalization follows a preposition, which I have described as a pattern often giving rise to a clause as translation (cf. 5.8). A more likely reason for the clausal translation in this case, however, is that *empowerment* has no established equivalent in Norwegian and Swedish. In the Norwegian and Swedish translation, the lexical nominalization is translated with a rank-shifted *at*/*att*-clause (*that*-clause), a strategy that makes the original NP more explicit, but does not rearrange the order of constituents in the original sentence.

6.5 Translations of ‘deverbal N + *prep* + NP’

The only examples where a preposition other than *of* was used to realize a subject-like relation were two instances of *from*, although an adverbial analysis is perhaps more likely. One of these is illustrated below:

(19)

a. We received **reports from the navy** indicating that he had remained in the navy until 1965, and that he was perfectly competent at that time. (ENPC/ESPC OS1)

b. Vi mottok **rapporter fra marinen** som tydet på at han hadde fortsatt der frem til 1965, og at han var fullt kapabel da. (EN

c. Vi fick **rapporter från flottan** som visade att han varit kvar i flottan fram till år 1965 och att han vid den tiden varit fullt arbetsför.

The relation realized by *from* is as described regarding *fra/från* (from) (cf. 6.4.4.), namely that the deverbal noun is interpreted as 'originating from' the person or thing realized in the PP (cf. Teleman et al. 2000:III:98). Both of the examples with *from* were translated congruently.

6.6 Translations of 'adjective + deverbal N'

There were some examples in the material where a premodifying adjective had a subject-like role. Consider (20):

(20)

a. **Military research** has produced civilian benefits for many years, whether it is the turbine engine, or the concept of an assembly line for industrial production. (ENPC/ESPC CS1)

b. **Militær forskning** har i mange år frembrakt sivile "biprodukter", hva enten det gjaldt turbinmotoren eller ideen om samlebånd for industriell produksjon. (ENPC CS1T)

c. **Militär forskning** har också sedan många år gett impulser och resultat (s k "spin-offs') som kommit den civila produktionen tillgodo, det må ha varit fråga om t ex turbomotorer eller idén till det löpande bandet för industriell produktion. (ESPC CS1T)

The majority of these premodifiers can be described as 'group adjectives' (cf. 3.4.4, Grimshaw 1990:81). Group adjectives express nationality, as in example (21a) below, or some other group to which humans may belong, such as *military* in example (20a) above:

(21)

a. He rose to become a member of the Czech Politburo in 1967, was a passionate supporter of the Prague Spring under Dubcek, and was expelled from the party after **the Russian occupation in 1968**. (ENPC/ESPC MAW1)

b. Han ble medlem av det tsjekkiske Politbyrå i 1967 og var en lidenskapelig forsvarer av Praha-våren under Dubceandecaron;k. Etter den **russiske okkupasjonen i 1968**, ble han ekskludert fra partiet. (ENPC MAW1T)

c. Han blev så småningom medlem av tjeckiska politbyrån år 1967, stödde energiskt Dubcek under Pragvåren och uteslöts ur partiet efter **den sovjetiska ockupationen 1968**. (ESPC MAW1T)[76]

Table 6.6 gives the translations of the type 'premodifier + deverbal N', e.g. *military research*:

Table 6.6 The translation of 'premodifier + deverbal N' into Norwegian and Swedish

Translation correspondence	Norwegian		Swedish	
congruent	15	(75%)	15	(75%)
adjective → *s*-genitive	4	(20%)	4	(20%)
clause	1	(5%)	1	(5%)
Total	20	(100%)	20	(100%)

It can be noted that most of the examples in this category were translated congruently.[77] By comparison, the premodifying adjectives in lexical nominalizations with a subject and an object (e.g. *Soviet transformation of the rural areas)* were predominantly translated with the *s*-genitive or with the subject in a clausal translation (cf. 4.3). However, the adjective in such lexical nominalizations is a subject and not just a premodifier, since the object is present (cf. 3.4.4). The conclusion we can draw from this is that a translation with a clause is more likely in lexical nominalizations with an adjective as grammatical subject than in lexical nominalizations where the

[76] As pointed out to me by Mall Stålhammar (PC), the translation in (22c) is an improvement of the original (22a). It should be *the **Soviet** occupation* rather than *the **Russian** occupation*.

[77] Coincidentially, the figures in table 6.6 are identical for the Norwegian and Swedish translations. However, different examples sort under the three translation categories.

premodifying adjective is a subject modifier, as in the lexical nominalizations discussed in this section (e.g. *the Russian occupation*).

Nevertheless, there are some examples where the translator has chosen non-congruent translations, even for subject modifiers. Apart from one translation with a clause in each language, the non-congruent translations were nominal paraphrases which seemed to reflect the Agent-like nature of the 'group adjective'. Consider (22):

(22)

a. Officials were kept secure in their jobs and their privileges; while Brezhnev was given **party support**, made the subject of lavish speeches of gross flattery and awarded endless medals testifying to his wartime exploits. (ENPC/ESPC MAW1)

b. Partitjenestemenn visste at de satt sikkert i sine stillinger og med sine privilegier. På den annen side fikk Bresjnev **støtte fra Partiet**, ble stadig hyllet i smigrende taler og overdynget med medaljer for sine fortjenester under krigen. (ENPC MAW!T)

c. Funktionärerna kände sig säkra på att få behålla sina befattningar och förmåner, medan Brezjnev fick **partiets stöd**, överhöljdes med långa grovt smickrande tal och tilldelades otaliga medaljer som vittnesbörd om hans bedrifter under kriget. (ESPC MAWT)

The Swedish translator has used (22c) the *s*-genitive, which has been discussed earlier as closely related to the Agent role (cf. 4.3, 4.6), whereas the Norwegian has used another strategy also reflecting Agent-like meaning, namely a postmodifying PP with *fra* (from), realizing a relation where the deverbal noun is interpreted as 'originating from' the person or thing referred to in the PP (cf. Teleman et al. 2000:III:98, Faarlund et al. 1997:444). In the case of (22b), *support* emanates from *the party*. Postmodifying PPs with *fra* (Norw.)*/från* (Sw.) */from* were discussed as Agent-like in section 6.4.4.

6.7 Summary

This chapter has discussed the translations of English lexical nominalizations morphologically related to a transitive verb and with a subject modifier overtly realized, e.g. *John's construction*.

It was found that clauses are more rare as translations of transitive lexical nominalizations with a subject modifier than for lexical nominalizations with one or two arguments. The most likely explanation for this is that the former have result meaning and the latter have complex-event meaning (cf. 4.7, 5.9).

When a clause was used as translation, the source lexical nominalization typically functioned as an elaborate subject or it followed a preposition. This supports the hypothesis forwarded in chapter 4 and 5 that lexical nominalizations are used more rarely as complex subjects and as complements of prepositions in Norwegian and Swedish than in English popular science texts.

There were some differences between Norwegian and Swedish. The most important difference was that postmodifying PPs seem to be used more in Norwegian than in Swedish to realize a subject modifier, particularly if the subject modifier was complex.

7. TRANSLATIONS OF INTRANSITIVE AND ERGATIVE LEXICAL NOMINALIZATIONS

7.1 Introduction

This chapter considers the translations of *intransitive lexical nominalizations* and *ergative lexical nominalizations*. Intransitive lexical nominalizations are nominalizations with a deverbal noun morphologically related to an intransitive verb, such as *run*, and ergative lexical nominalizations are nominalizations with a deverbal noun morphologically related to an ergative verb, such as *melt* (cf. 3.4.3).

Example (1) illustrates an ergative lexical nominalization, and example (2) an intransitive one:

(1) The reflection of sunlight by snow cover can provide a powerful positive feedback on cooling, and a system for regulating the climate could be based on **the melting** or formation **of snow**. (ENPC/ESPC JL1)

(2) Everything has a reason, every piece of behaviour functions in some way to improve the chances of **survival of the animal concerned.**

At first glance the lexical nominalizations in (1) and (2) appear very similar. Both seem to be intransitive structures, requiring only one argument, the subject, which is realized by an *of*-construction. Despite these similarities, however, there is a difference between the ergative nominalizations in (1) and the intransitive nominalization in (2). Examples (3) and (4) relate ergative and intransitive lexical nominalizations to their corresponding clauses:

(3) Ergative structure

a. **the melting of snow**

b. **The snow melts.**

(4) Intransitive structures

a. **the survival of the animal**

b. **The animal survives.**

Here too, both structures appear similar. Both lexical nominalizations are turned into a clause that requires only a subject. As illustrated in chapter 3 (3.4.3), however, it is possible to add an Instigator such as for instance *the sun* to clauses such as (3b), shifting the syntactic function of *the snow* from subject to object, a relation which as been referred to as 'ergative alteration' (Davidse and Geyskens 1998:157ff). This is illustrated in (5):

(5)

a. **The snow melts.**

b. **The sun melts the snow.**

The intransitive verb in (4b), on the other hand, realizes a 'non-instigatable' event (Davidse and Geyskens 1998:161), i.e. an event that has only one possible energy source, namely the subject. In other words, in a clause like *the animal survived*, *the animal* is the Agent of the process and not the Medium, and there is therefore no room for an additional argument: the Agent has "an autonomous relation to the process" (Davidse and Geyskens 1998:161, cf. also the discussion in 3.4.3).

In the ergative model applied in SFL (cf. Halliday 1994:163ff, Halliday and Matthiessen 2004:280ff, Davidse 1992, Davidse and Geyskens 1998), the identical role of *snow* in (5a) and (5b) is captured by focusing on the semantic role of *snow* rather than its syntactic function. The subject in one-place constructions such as (5a) and the object in two-place constructions such as (5b) are both described as the Medium (cf. section 3.4.3). In the words of Davidse and Geyskens (1998:160): ergative constructions such as (3) "evoke a scene in which only one participant is explicitly profiled, viz. the Medium, but at the same time, [ergative constructions] convey that the Medium is probably not the sole energy source and that some second, instigative, energy source may be involved."

The difference between the intransitive and ergative lexical nominalizations in (3b) and (4b) has an impact on the analysis of their corresponding lexical nominalizations in (3a) and (4a). That is, although

superficially similar, the *of*-constructions in (3a) and (4a) must be regarded differently. In (3a), the *of*-construction realizes the internal argument of *melt* (i.e. it is licensed by argument structure), whereas the *of*-construction in (4a) is a postmodifier. This also reflects a semantic difference. As ergative lexical nominalizations have argument structure (cf. discussion in 3.4.1, 3.4.2, 3.4.3 and also Alexiadou 2001:41f) they are complex-event nominals, whereas intransitive lexical nominalizations do not have argument structure and are therefore simple-event nominals or result nominals.

The chapter is split into two main sections. Section 7.2 deals with the translations of intransitive lexical nominalizations, while section 7.3 considers the translations of ergative lexical nominalizations.

7.2 Intransitive lexical nominalizations

This section considers the three forms of intransitive lexical nominalizations that were found in my material, and discusses their translations into Norwegian and Swedish. The types are exemplified in A, B and C:

A	*s*-genitive + deverbal N
	Stalin's death
B	deverbal N + *of* + NP
	the existence of constraints
C	premodifying adjective + deverbal N
	the Russian collapse

Type A is discussed in section 7.2.1, type B in section 7.2.2 and type C in 7.2.3.

Intransitive lexical nominalizations do not have internal arguments and the adnominal elements in A, B and C are therefore subject modifiers rather than syntactically required subjects. Semantically, the lack of argument structure means that intransitive lexical nominalizations can never be complex-event nominals, but fall into the two types: simple-event nominals or result nominals.

Table 7.2 presents the major categories of translation choices for all types of intransitive lexical nominalizations:

Table 7.2 Congruent and non-congruent translations of intransitive lexical nominalizations

Translation correspondence	Norwegian		Swedish	
congruent	38	(49.0%)	42	(54.0%)
nominal paraphrase	16	(20.5%)	16	(20.5%)
clause	22	(28.0%)	19	(24.5%)
other	2	(2.5%)	1	(1.0%)
Total	78	(100.0%)	78	(100.0%)

The table shows that there is an almost even split between congruent and non-congruent translations (paraphrases, clauses and other). This means that although there are congruent correspondences in the target languages, there are many circumstances in which a non-congruent translation is the favored choice. This section discusses the type of translation and what factors can explain the choice of translation.

7.2.1 Translations of '*s*-genitive + deverbal N'

Table 7.2.1 shows the distribution of translation correspondences for the structure *s*-genitive + deverbal N (e.g. *Stalin's death*):

Table 7.2.1 Translations of '*s*-genitive + deverbal N' into Norwegian and Swedish

Translation correspondence	Norwegian		Swedish	
congruent	22	(59.5%)	27	(73.0%)
clause	10	(27.0%)	7	(19.0%)
s-genitive → ∅	4	(11.0%)	3	(8.0%)
other	1	(2.5%)	0	(0.0%)
Total	37	(100.0%)	37	(100%)

Table 7.2.1 shows that apart from one example in Norwegian, the translations fall into the categories *congruent*, *clause* and *omission of s-genitive*. The congruent translations are discussed in (7.2.1.1), omission of *s*-genitive in (7.2.1.2) and translations with a clause in (7.2.1.3).

7.2.1.1 Congruent translations

We have seen that the *s*-genitives in transitive lexical nominalizations (e.g. *John's construction of the building* or *John's construction*) often have animate reference, particularly in Norwegian and Swedish (cf. 4.3, 6.4.2, 6.6). This applies to the *s*-genitive in intransitive constructions as well. Regarding the type *Stalin's death*, 36 of 37 examples included an *s*-genitive with animate reference, which is one explanation for the many congruent Norwegian and Swedish translations. Example (6) and (7) are two cases in point:

(6)

a. In the five years after **Stalin's death**, the amount of money available for the collective farms to pay their workforce increased fourfold — although, as much of the pay was in kind, this was less of a startling rise than it seemed. (ENPC/ESPC MW1)

b. I de fem årene som var gått siden **Stalins død** var kollektivbøndenes lønninger blitt firedoblet. (ENPC MW1T)

c. Under de första fem åren efter **Stalins död** fyrdubblades de ekonomiska medel som kollektivjordbruken hade till sitt förfogande för att avlöna arbetarna, men eftersom en stor del av lönen betalades in natura var detta lönelyft mindre anmärkningsvärt än det verkade. (ESPC MW1T)

(7)

a. The speed with which Kulakov moved to a top job in the central committee secretariat after **Khrushchev's fall st**rongly implies that he was privy to the party coup which toppled Khrushchev in October. (ENPC/ESPC MAW1)

b. Etter **Khrusjtsjovs fall** avanserte Kulakov med toppfart til en ledende stilling i Sentralkomiteens sekretariat, et sikkert tegn på at han må ha vært innblandet i de intriger som styrtet Khrusjtsjov. (ENPC MAW1T)

c. Kulakovs snabba avancemang till en hög post i centralkommitténs sekretariat efter **Chrusjtjovs fall** ger tydligt vid handen att han var invigd i den partikupp som i oktober störtade Chrusjtjov. (ESPC MAW1T)

It is evident that intransitive nominalizations where the *s*-genitive has animate reference are most likely to be translated congruently in both

Norwegian and Swedish, indicating that short lexical nominalizations with animate Agents realized by the *s*-genitive are natural in Norwegian and Swedish.

7.2.1.2 *S*-genitive →∅

In transitive lexical nominalizations with both a subject and an object (e.g. *his massacre of the prophets*), there were some examples where the *s*-genitive was omitted and the deverbal noun received the definite article (cf. 4.2.1). This happens in intransitive lexical nominalizations as well. Examples (8b,c) illustrate an omitted *s*-genitive in both target languages whereas in example (9), the *s*-genitive has been omitted in the Norwegian translation (9b), but not in the Swedish one (9c):

(8)

a. For the first eighteen months after their absolute defeat in France in May 1940, followed by **their retreat from Dunkirk,** the British were entirely preoccupied with their own struggle for survival. (ENPC/ESPC MH1)

b. de første 18 månedene etter det fullstendige nederlaget i Frankrike i mai 1940 og **tilbaketrekkingen fra Dunkerque**, var britene utelukkende opptatt av sin egen kamp for å overleve. (ENPC MH1T)

c. De första arton månaderna efter engelsmännens totala nederlag i Frankrike och **evakueringen från Dunkerque** var dessa fullt sysselsatta med sin egen kamp för överlevnad. (ESPC MH1T)

(9)

a. The speed of **his rise** doubtless owed much to his family connections and to what must have seemed, in the sleepy steppes of Stavropol at the time, the awesome qualification of a Moscow University diploma. (ENPC/ESPC MAW1)

b. **Det raske avansementet** skyldtes uten tvil hans familieforbindelser. (ENPC MAW1T)

c. **Hans snabba karriär** berodde utan tvivel till stor del på hans familjeförbindelser och på något som vid den tiden på Stavropols enformiga stäpper måste ha verkat som en aktningsvärd merit: en akademisk examen från Moskvauniversitetet. (ESPC MAW1T)

The Norwegian material had one more example with an omitted *s*-genitive than the Swedish material, which might be a small indication that the *s*-genitive is more likely to be omitted in Norwegian than Swedish (cf. 4.2.1). However, both translators have considerably altered the source structure in (9a) and there may therefore be other reasons for the Norwegian translator omitting the *s*-genitive, whereas the Swedish translator has not.

7.2.1.3 Translation with a clause

As shown in table 7.2.1 there were relatively many translations with a clause in both the Norwegian and the Swedish material. Example (10a), (11a) and (12a) illustrate three types of contexts where a clause was used as translation:

(10)

a. His portfolio, which included overseeing the economy, ideology and senior party appointments, made him in effect the second most influential man in the country, after Chernenko. But **his eventual succession** was not guaranteed. (ENPC/ESPC MAW1)

b. Men han hadde ingen sikker garanti for **at han kom til å bli Tsjernenkos etterfølger.** (ENPC MAW1T)

c. Hans ministerportfölj som innehöll överinseendet över ekonomin, ideologin och utnämningar till högre partiposter gjorde honom i praktiken till den näst mäktigaste mannen i landet efter Tjernenko, men **att han så småningom skulle efterträda ledaren** *var* inte säkerställt. (ENPC MAW1T)

(11)

a. *On* **his return to Stavropol,** Gorbachev was pitchforked into a campaign to recruit Komsomol volunteers for the huge Bratsk dam and power station in central Siberia. (ENPC/ESPC MAW1)

b. **Da Gorbatsjov vendte tilbake til Stavropol***,* ble han kastet inn i en kampanje for å rekruttere frivillige fra Komsomol til byggingen av den store demningen og kraftanlegget ved Bratsk i Midt-Sibir. (ENPC MAW1T)

c. **När Gorbatjov kom tillbaka till Stavropol** kastades han in i en kampanj för att skaffa fram frivilliga Komsomolmedlemmar till bygget av den stora dammen och kraftverket i Bratsk i centrala Sibirien. (ESPC MAW1T)

(12)

a. Vyshinsky later rose to be foreign minister, and died, possibly by his own hand, in 1955, the year of **Gorbachev's graduation**.(ENPC/ESPC MAW1)

b. Vysjinskij hadde senere steget til utenriksminister, og døde, muligens for egen hånd, i 1955, samme år som **Gorbatsjov avsluttet sine studie**r. (ENPC MAW1T)

c. Vysjinskij upphöjdes senare till utrikesminister och avled år 1955, troligen för egen hand, samma år som **Gorbatjov tog sin akademiska examen**.(ESPC MAW1T)

All the contexts above have been commented on in earlier chapters. In chapter 4 and chapter 5 it was argued that Norwegian and Swedish are less likely than English to have a lexical nominalization as subject, which also applies to (10b, c); in chapter 5 and 6 it was noted that lexical nominalizations after prepositions are also likely to be paraphrased with a clause, which may explain the translation with a clause in (11b,c) and (12b,c) (cf. 5.7). Finally, an additional explanation for (12b,c) is the complexity of the original NP in (14a) (*the year of Gorbachev's graduation*) (cf. 4.2.2).

In addition to the contexts mentioned above, it can be observed that almost all of the intransitive nominalizations that were translated with a clause are morphologically related to a material verb, and that the majority of examples translated with a clause had simple-event meaning (e.g. *Stalin's death*), as illustrated in (13) and (14):

(13)

a. Under Andropov, **Vorotnikov's rise** had been dramatic in its speed, but his career was unlikely to prosper under Chernenko. (ENPC/ESPC MAW1)

b. Under Andropov **hadde lykken smilt til Vorotnikov**, men han kunne neppe vente like gode tider under Tsjernenko. (ENPC MAW1T)

c. Under Andropovs tid hade **Vorotnikov stigit oerhört snabbt i graderna**, men under Tjernenko skulle han säkert inte ha samma framgång. (ESPC MAW1T)

(14)

a. Leonid Yefremov had been appointed a candidate (non-voting) member of the Politburo by Khrushchev two years earlier, and **Khrushchev's fall** meant that another, lesser post had to be found for him. (ENPC/ESPC MAW1T)

b. Leonid Jevfremov var blitt innsatt som kandidat-medlem av Politbyrået (dvs. uten stemmerett) av Khrusjtsjov to år tidligere. **Da Khrusjtsjov falt**, måtte man finne en annen og mindre betydningsfull stilling til ham. (ENPC MAW1T)

c. Två år tidigare hade Chrusjtjov utnämnt Leonid Jefremov till kandidatmedlem av politbyrån (utan rösträtt), och **Chrusjtjovs fall** innebar att man måste hitta en annan mindre betydande post åt Jefremov. (ESPC MAW1T)

The deverbal nouns in both (13a) and (14a) are morphologically related to a material verb, *rise* and *fall* respectively. In (13b,c) both translators have chosen a clausal paraphrase, whereas in (14b,c), the Norwegian translator has chosen a clause and the Swedish translator a congruent translation.

7.2.2 Translations of 'deverbal N + *of* + NP'

The translations of the structure 'deverbal N + *of* + NP', e.g. *the existence of constraints* are shown in table 7.2.2:

Table 7.2.2 The translations of 'deverbal N + *of* + NP'

Translation correspondence	Norwegian		Swedish	
congruent	12	(40.0%)	10	(33.5%)
clause	8	(27.0%)	10	(33.5%)
of → *s*-genitive	6	(20.0%)	6	(20.0%)
of →∅	2	(6.5%)	1	(3.5%)
of → premodifying adjective	0	(0.0%)	2	(6.0%)
other	2	(6.5%)	1	(3.5%)
Total	30	(100.0%)	30	(100%)

This section discusses the various translation correspondences in table 7.2.2. Congruent translations are described in 7.2.2.1, translations where the *of*-construction is turned into an *s*-genitive in 7.2.2.2 and translations with a clause in 7.2.2.3.

As the Norwegian and Swedish translators often used different translation strategies, there is some overlap of comments in the sub-sections.

7.2.2.1 Congruent translations

In (15) both the Swedish and the Norwegian translator have used a congruent translation with *av*:

(15)

a. This insistence may preserve **the distant echoes of a very early debate about the identity of the God of Moses.** (ENPC/ESPC KA1)

b. Denne understrekningen kan kanskje inneholde **en fjern gjenklang av en meget gammel strid om hvem Moses' gud egentlig var.** (ENPC KA1T)

c. Detta kan eventuellt vara avlägsna **ekon av en mycket gammal dispyt om Moses Guds identitet**.(ESPC KA1T)

The choice of an *av*-construction in (15b,c) is interesting, as we have seen that the *av*-construction is rarely used to realize subjects and subject modifiers in transitive nominalizations (cf. 4.7, 6.4). Does this mean that *av*-constructions can signal a subject-like meaning in Norwegian/Swedish intransitive nominalizations, but not in transitive ones?

The translations with *av* in my data can be related to meaning: if an *av*-construction is used as a translation of an *of*-construction, the source nominal is not an intransitive lexical nominalization of the simple-event type, but a result nominal where the *av*-construction functions as a 'regular' postmodifier specifying the content of the head deverbal noun and consequently showing no similarities to a subject. Put differently, though it is possible to view the *of*-construction in (15a) as a subject-like modifier (*the echoes of a very early debate (...) ~ A very early debate (...) echoed*), the translations with an *av*-construction do not support this analysis, but rather suggest that the *of*-construction refers to the content of the echoes. According to this analysis, questions of Agency are not relevant, and the preposition *(av)* is lexically determined.

Example (16c) and (17b) are further examples where *av* suggests result meaning:

(16)

a. And in a sense this is correct: the left hemisphere is more sophisticated and specialised, **a very late outgrowth of the primate, and especially hominid, brain.** (ENPC/ESPC OS1)

b. Venstre hjernehalvdel er mer sofistikert og spesialisert, en meget **sen utvekst i primatets (og særlig det hominoide primatets) hjerne.** (ENPC OS1T)

c. Och det är på ett sätt riktigt: vänster hjärnhalva är mer förfinad och specialiserad, en mycket sen **utväxt av primaternas och i synnerhet hominidernas hjärna**. (ESPC OS1T)

(17)

a. They had their own New Year Festival in the autumn, beginning with the scapegoat ceremony on the Day of Atonement, followed five days later by the harvestfestival of the Feast of Tabernacles, which celebrated **the beginning of the agricultural year.** (ENPC/ESPC KA1)

b. De hadde sin egen nyttårshøytid om høsten; den ble innledet med syndebukk-seremonien på soningsdagen og ble etterfulgt fire dager etter av løvhyttefestens høsthøytid som feiret **begynnelsen av jordbruksåret.** (ENPC KA1T)

c. På hösten firade de sin egen nyårsfest som inleddes med syndabocksceremonin på försoningsdagen, och fem dagar senare följde lövhyddohögtiden som var en skördefest och markerade **upptakten till odlingsåret.** (ESPC KA1T)

In fact, all the prepositions in the target languages can signal a part-whole relation between the head noun and the postmodifier (*till* (to)*, i* (in) and *av* (of)) (Faarlund et al. 1997:440). The translations in (16b,c) and (17b,c) therefore mirror the partitive use of the *of*-construction as a modifier rather than an argument.

On the other hand, similarly to the transitive type (e.g. *the beliefs of their neighbors*), some postmodifying PPs as translation of *of*-constructions had a subject-like meaning. However, in these cases the postmodifying PP in the Norwegian translation had a correspondence in the Swedish translation where the subject-like meaning was more obvious:

(18)

a. He was curious about biology and wondered if **the behavior of the fundamental molecules of life** could be explained by physics and biology. (ENPC/ESPC JL1T)

b. Han var nysgjerrig på biologien og undret seg på om **adferden til livets grunnleggende molekyler** kunne forklares ut fra fysikken og biologien. (ENPC JL1T)

c. Han var nyfiken på biologiska aspekter och undrade om **det sätt som livets grundmolekyler uppförde sig** kunde förklaras med hjälp av fysiken och kemin. (ESPC JL1T)

In (18b), the Norwegian translator has used a postmodifying PP with *til* (*to*), whereas the Swedish translator (18c) has used a strategy with an inserted manner N followed by a relative clause in order to preserve the subject-like function of the *of*-construction (*of the fundamental molecules of life*). Both these translations are compatible with simple-event meaning, where the *of*-construction has a subject-like meaning.

In sum, translations with *av* and other postmodifying PPs suggest that the *of*-construction is a postmodifier in a result nominalization (i.e. a concrete or abstract object). In those cases where a postmodifying PP seemed to have a more subject-like meaning, it corresponded to a translation preserving the subject-like function of the *of*-construction (e.g. a relative clause).

7.2.2.2 *Of* → *s*-genitive

Many of the *of*-constructions in intransitive lexical nominalizations of the type 'deverbal N + *of* + NP' e.g. *the existence of constraints* were turned into *s*-genitives. In (19) and (20), an *s*-genitive has been chosen in at least one of the target languages:

(19)

a. The Gaia hypothesis, when we introduced it in the 1970s, supposed that the atmosphere, the oceans, the climate, and the crust of the Earth are regulated at a state comfortable for life because of **the behavior of living organisms.** (ENPC/ESPC JL1T)

b. Da vi lanserte Gaia-hypotesen i 1970-årene, gikk den ut fra at atmosfæren, havene, klimaet og jordskorpen blir regulert så det

opprettholdes en tilstand som er behagelig for livet, og at det skjer på grunn av **atferden til de levende organismene.** (ENPC JL1T)

c. Gaiahypotesen, som introducerades på 1970-talet, föreslog att genom **de levande organismernas gemensamma beteende** regleras atmosfären, oceanerna, klimatet och jordskorpan så att ett tillstånd som är gynnsamt för livets fortbestånd uppkommer. (ESPC JL1T)

(20)

a. It has been pointed out that **the behaviour of zebras** simply does not match with this picture of them standing very still in broken cover. (ENPC/ESPC DM1)

b. Det er blitt påpekt at **sebraens atferd** rett og slett ikke stemmer med dette bildet av at de skulle stå stille i krattet. (ENPC DM1T)

c. Det påpekades då att **sebrans beteende** helt enkelt inte stämmer med bilden av den stående stilla i buskmark. (ESPC DM1T)

In (19a) and (20a), we have two examples of a lexical nominalization with the deverbal noun *behavior* followed by an *of*-construction. In the Norwegian translations, the *of*-construction has been translated into a postmodifying PP with *til* (to) in (19b), and into the *s*-genitive in (20b). As noted in 6.4.1, *til* (to) can have possessive meaning in Norwegian but not in Swedish (cf. Faarlund et al. 1997:263, Teleman et al. 2000:III:34,97). Consequently, as both the *s*-genitive and the *of*-construction can have a possessive meaning, the Norwegian possessive *til* (to) is a good translation alternative of both the *s*-genitive and the *of*-construction in English (cf. Quirk et al. 1985:321ff).[78]

It is also interesting that the Norwegian translator has used the *s*-genitive to translate the animate *of*-construction in (20a), whereas *til* has been used to translate the more complex *of*-construction in (19a). The same tendency could be noted for the transitive 'deverbal N + *of*+ Np' type (cf. 6.4.1 and 6.4.2): in Norwegian long and complex and/or inanimate NPs appeared as postmodifying PPs, whereas animate Agent-like 'subjects' were

[78] In (21b) and (22b), The Norwegian translator has chosen to translate *behavior* by the non-derived noun *adferd*, which can be described as an abstract, technical term for how someone behaves. Therefore, although *adferd* is not directly related to a verb, I would nevertheless argue that the *til*-constructions and *s*-genitive modifying *adferd* has a subject-like meaning.

more likely to be realized by an *s*-genitive. On the other hand, Swedish used a postmodifying relative clause if the NP was heavy, and an *s*-genitive if not (cf. 6.4.2). Moreover, in (19c), the Swedish translator has used an inserted N and a postmodifying relative clause, preserving the subject function of the *of*-construction, whereas the comparatively less complex *of*-constructions in (19a) and (20a) have been turned into *s*-genitives. Compare also (21) and (22):

(21)

a. **The death of a god,** the quest of the goddess and the triumphant return to the divine sphere were constant *religious themes* in many cultures and would recur in the very different religion of the One God worshipped by Jews, Christians and Muslims. (ENPC/ESPC KA)

b. **En guds død,** gudinnens leting og den seierrike tilbakevenden til den guddommelige verden var gjennomgående religiøse temaer i mange kulturer og dukket opp igjen i den meget annerledes religionen til den ene gud som blir tilbedt av jøder, kristne og muslimer. (ENPC KA1T)

c. **En guds död**, gudinnans sökande och den triumferande återkomsten till den gudomliga sfären var ständigt återkommande religiösa teman i många kulturer och skulle dyka upp i den annorlunda religion i vilken Den ende Guden tillbads av judar, kristna och muslimer. (ESPC KA1T)

(22)

a. **The death of Stalin in 1953** came as a traumatic shock to a country that had been drilled into his worship. (ENPC/ESPC MAW1)

b. **Stalins død i 1953** kom som et traumatisk sjokk for et land som var blitt opplært til å forgude ham. (ENPC MAW1T)

c. **Stalins död 1953** blev en svår chock för ett land som hade drillats att dyrka honom. (ESPC MAW1T)

To sum up, there was a tendency to turn relatively short *of*-constructions with animate reference into *s*-genitives in both languages, reflecting the tendency observed in earlier chapters that Norwegian and Swedish favor the *s*-genitive to denote subjects and subject-like modifiers. However, if the *of*-construction was long and complex, a postmodifying PP with possessive

meaning was sometimes used in Norwegian, whereas the Swedish translator would choose a postmodifying relative clause.

7.2.2.3 Translations with a clause

A comparison of the intransitive 'deverbal N + *of* + NP' type (e.g. *the existence of constraints*) with its transitive twin (e.g. *the beliefs of their neighbours*) reveals that a translation with a clause is much more likely in the intransitive than in the transitive case. Table 7.2.2.3 repeats the frequencies of the translations with a clause from table 6.4. and 7.2.2:

Table 7.2.2.3 Translation with a clause of the intransitive and transitive 'deverbal N + *of* + NP' type

Lexical Nominalization	Clauses in Norwegian	Clauses in Swedish
transitive 'deverbal N + *of* + NP'	10%	14%
intransitive 'deverbal N + *of* + NP'	26.5%	33.5%

Why were so many intransitive nominalizations turned into clauses? In some cases the reason seemed to be that the subject modifier was long and complex, and a lexical nominalization would have sounded awkward in Norwegian and Swedish:

(23)

a. Thus, in one patient under my care, a sudden thrombosis in the posterior circulation of the brain caused **the immediate death of the visual parts of the brain.** (ENPC/ESPC OS1)

b. Hos en av pasientene mine førte for eksempel en **p**lutselig *trombose* i blodårene bakerst i hjernen til **at de delene av hjernen som har med synet å gjøre, døde umiddelbart.** (ENPC OS1T)

c. Hos en patient jag hade hand om orsakade en plötslig blodpropp i hjärnans bakre blodcirkulation **att synregionerna i hjärnan omedelbart slogs ut.** (ESPC OS1T)

(24)

a. They would certainly have believed in **the existence of such deities as Marduk, Baal and Anat**. (ENPC/ESPC KA1)

b. De har ganske sikkert trodd på **guddommer som Marduk, Ba'al og Anat**. (ENPC KA1T)

c. De trodde säkerligen **att gudar som Marduk, Baal och Anat existerade**. (ESPC KA1T)

In (23b) the deverbal noun *death* in the original is turned into the verb *døde* in the Norwegian translation. The Swedish translator has used a freer translation, where the perspective of the action is changed to the passive: 'the visual parts of the brain' (*synregionerna i hjärnan*) 'are knocked out' (Sw. *slogs ut*) (23c). In (24b) the Norwegian translator has chosen to omit the deverbal N rather than turn the lexical nominalization into a clause, which similarly to a clausal translation is a strategy to avoid a long and cumbersome expression. The Swedish translator has used a projected *att*-clause (*that*-clause) headed by the Swedish verbal correspondence of *existence* (eksisterade) (24c).

In other cases, there seemed to be another reason for the clausal translation than along and complex subject modifier. Consider (25):

(25)

a. Even the Ten Commandments delivered on Mount Sinai take **the existence of other gods** for granted: "There shall be no strange gods for you before my face." (ENPC/ESPC KA1)

b. Selv de ti bud som ble gitt på Sinai-fjellet, forutsetter **at det finnes andre guder:** "Du skal ikke ha andre guder enn meg." (ENPC KA1T)

c. Till och med de tio budorden som överlämnas på Sinai berg utgår från **att det finns andra gudar:** "Du skall inga andra gudar ha vid sidan av mig." (ESPC KA1T)

The reasons for the translations with a clause in (25b,c) seem to be that the Norwegian and Swedish correspondences of *existence*, i.e. (Sw.) *existens* and (Norw.) *eksistens* seem somewhat awkward in this context, perhaps reflecting a general tendency to avoid lexical nominalizations in Norwegian and Swedish.

The translation with a clause in (26b,c) and (27b,c), on the other hand, can be explained by the lack of a good lexical correspondence:

(26)

a. Geologists interested in the evolution of the rocks, ocean, and atmosphere are beginning to ponder about **the persistence of the oceans on Earth** when Mars and Venus are so dry. (ENPC/ESPC JL1T)

b. Geologer som er interessert i utviklingen av bergarter, hav og atmosfære har begynt å spekulere på hvorfor **havene på Jorden er så bestandige** når Mars og Venus er så tørre. (ENPC JL1T)

c. Geologer som intresserar sig för bergens, oceanernas och atmosfärens utveckling har börjar fundera på varför **det finns oceaner på Jorden** när Mars och Venus är så torra. (ESPC JL1T)

(27)

a. The arbitrariness of even a chronological division is underlined by **the persistence of the Archean biota;** their world has never ended, but lives on in our guts. (ENPC/ESPC JL1T)

b. Tilfeldigheten i en kronologisk inndeling blir understreket ved **at livsformene fra arkeikum stadig varer ved.** Deres verden har aldri opphørt, men lever videre i våre innvoller. (ENPC JL1T)

c. Att även en kronologisk indelning har stora svagheter visas av **att grupper av organismer som levde under arkeozooikum fortfarande finns kvar**. Deras värld har inte försvunnit utan finns kvar i våra inälvor.. (ESPC JL1T)

In (26c) and (27b,c) the Norwegian and Swedish translator have turned a lexical nominalization headed by the verb *persistence* into clauses headed by 'exist verbs' (cf. Levin 1993:249) ((Sw.) *finns* (exist) and (Norw.) *varer ved* (endure)), and in (26b), the Norwegian translator has used a the relational verb *er* (is), linking *havene* (oceans) to the the adjective *bestandige* (persisting).

In addition to the observations above, the clausal translations in (23-27) can perhaps be related to the type of head noun. The deverbal nouns *persistence* (26a-27a) and *existence* (24a-25a) differ semantically from the deverbal noun *death* (23a). The two former nouns are morphologically related to the durative state verbs *persist* and *exist*, whereas *death* is related to the non-durative *die*.

7.2.3 Translations of 'adjective+deverbal N'

There were seven intransitive lexical nominalizations headed by a deverbal N preceded by a group adjective, i.e. an adjective expressing nationality or some other group belonging (e.g. *human existence*) (cf. 3.4.4). Of these, there were two congruent translations in Norwegian and four in Swedish. A congruent translation is illustrated in (28b,c):

(28)

a. Washington was also haunted by fear of **an imminent Russian collapse** unless the Anglo-American armies could mount at least a diversion in the West. (ENPC/ESPC MAW1)

b. Washington var også hjemsøkt av frykt for **et forestående russisk sammenbrudd** med mindre de engelsk-amerikanske styrkene kunne sette i gang i det minste en avledningsmanøver i Vest. (ENPC MAW1T)

c. Washington plågades också av farhågor om **ett förestående ryskt sammanbrott** om inte de anglo-amerikanska styrkorna åtminstone åstadkom en avledningsmanöver i väster. (ESPC MAW1T)

The group adjectives that were not translated congruently were rendered as an *s*-genitive. In example (29), the Norwegian translator has used a congruent translation (29b) and the Swedish translator has used the *s*-genitive (29c):

(29)

a. The sacred world of the gods - as recounted in myth - was not just an ideal towards which men and women should aspire but was the prototype of **human existence**; it was the original pattern or the archetype on which our life here below had been modelled. (ENPC/ESPC KA1T)

b. Slik den blir skildret i myten, var gudenes hellige verden ikke bare et ideal som kvinner og menn kunne strebe etter; den var prototypen for **den menneskelige eksistens;** den var det opprinnelige mønster eller arketypen som vårt liv på jorden var blitt modellert etter. (ENPC KA1T)

c. Gudarnas heliga värld - sådan den skildrades i myten - var inte bara ett ideal som människan skulle eftersträva utan prototypen för **människornas tillvaro**; den var ursprungsmönstret eller arketypen efter vilka livet på jorden hade danats. (ESPC KA1T)

In (30) both translators have used the *s*-genitive (30b,c):

(30)

a. The serious student of **animal behaviour** starts out with a basic premise, namely that every spot of colour, every strange posture, every tiny movement that an animal makes, has some special meaning. (ENPC/ESPC DM1)

b. Enhver som seriøst studerer **dyrenes atferd,** går ut fra en grunnleggende forutsetning, nemlig at hver fargeflekk, hver stilling, hver minste bevegelse hos et dyr har en bestemt mening. (ENPC DM1T)

c. Den som på allvar vill studera **djurens beteende** börjar med en grundläggande förutsättning, nämligen att varje färgfläck, varje egendomlig kroppshållning, varje liten rörelse och varje handling går att förstå om man bara studerar den tillräckligt. (ESPC DM1T)

The *s*-genitive is strongly associated with subject-meaning in Norwegian and Swedish (cf. 4.7) and we find different patterns in complex-event nominals, simple-event nominals and result nominals. We have seen that premodifying adjectives as subjects in complex-event nominals were almost exclusively turned into the *s*-genitive in the Norwegian and Swedish translations (cf. 4.3), whereas premodifying adjectives as modifiers in simple-event nominals and result nominals tended to be kept (cf. 6.6). The tendency with intransitive lexical nominalizations was that the *s*-genitive only appeared as a translation of premodifying adjectives with a simple-event meaning, where it had a more subject-like meaning, and not with result nominals.

7.2.4 Concluding remarks

The study of intransitive nominalizations has further demonstrated some ways in which translations can be used to reflect the meaning of source structures. For example, in the structure 'deverbal N + *of* + NP' the translation of the *of*-construction with an *av*-construction indicated that the *of*-construction is a postmodifier in a result nominal, whereas the translation of an *of*-construction into an *s*-genitive suggests that it has a more subject-like role in a simple-event nominalization.

The translations also provided some additional evidence for the observation in chapter 6 (cf. 6.7) that postmodifying PPs seem to be used more in Norwegian than in Swedish to realize a subject-like relation.

Another interesting result was the fact that many intransitive nominalizations were turned into clauses. First, it could be noted that all intransitive lexical nominalizations that were turned into clauses were simple-event nominals, implying that simple-event nominals are related to the clause. Second, some of the lexical nominalizations that were turned into clauses were headed by a deverbal N related to a stative verb.

7.3 Ergative lexical nominalizations

This section considers the types of ergative lexical nominalizations that were found in the material and their translations into Norwegian and Swedish. The following ergative forms were found:

A deverbal N + *of*+ NP
the circulation of the blood

B premodifying adjective + deverbal N
volcanic eruption

C deverbal N + *of* + NP + *prep* + NP
the progressive increase in heat flux from its star

Types A and B include only the Medium, whereas Type C is an example of an ergative construction with both an Instigator and a Medium. Type A is discussed in section 7.3.1, type B in section 7.3.2 and Type C in section 7.3.3.[79]

Table 7.3 shows the number of congruent and non-congruent translations of ergative nominalizations in each target language:

[79] My material includes two examples with an Instigator as subject, but no object (e.g. evolution by natural selection). These two examples are discussed in section 7.4.3.

Table 7.3 Congruent and non-congruent translations of ergative nominalizations

Translation correspondence	Norwegian		Swedish	
congruent	48	(58.0%)	23	(28.0%)
paraphrase	22	(26.5%)	40	(48.0%)
clause	8	(9.5%)	15	(18.0%)
other	5	(6.0%)	5	(6.0%)
Total	83	(100.0%)	83	(100.0%)

To begin with, it is necessary to comment on the relatively high proportion of ergative lexical nominalizations in the overall material. Of the 633 nominalizations in this study, 83 (i.e. 13%) were ergatives. To compare, Arús Hita (2004:114) found that only four of his 72 (i.e. 6%) instances of lexical nominalizations in newspaper headlines were ergatives.[80]

The reason for there being so many ergative constructions in my material can perhaps be related to text topic. A large proportion of the ergative nominalizations occurred in the text *The Ages of Gaia* by James Lovelock (51 of 83 tokens). In *the Ages of Gaia*, James Lovelock advances his theory on how the earth, the atmosphere and everything in and on earth, such as the oceans, the biota, the rocks etc. function as one gigantic self-regulating organism, a theory referred to as *the Gaia theory*. Due to the dual role of the Medium as Affected and Agent, the ergative paradigm is particularly suitable to describe natural processes from the theoretical stance of the Gaia theory. Take, for instance, a sentence like *the earth evolves*, where *the earth* functions as the Medium. In this sentence the earth regulates its own evolution, but is also affected by it, and this is captured in the role of the Medium. The transitive system, on the other hand, as argued by Goatly (1996), is less suited to describe the Gaia theory because the transitive subject is unaffected by the process described in the verb.

It is possible that the ergative system may have been developed in order to describe processes according to the view of modern science. In the words of Goatly (1996:552) "it may be that the emergence of some of these patterns [i.e. ergative patterns] is some kind of adaptive response to the

[80] On the other hand, drawing on Matthiessen (1999), Arús Hita (2003:114) argues that "the propotion of ergative processes should have been expected to be significantly higher than just 6%", which suggests that the proportion of ergative lexical nominalizations in my material is closer to 'normal'.

insights of modern scientific thinking which, though not entirely consonant with it, at least pave one way for consonant grammar."[81] The fact that *the Ages of Gaia* text included by far the highest proportion of ergative lexical nominalizations is one indication that Goatly may be correct.

Returning to the figures in table 7.3, we can see that there is a discrepancy between the Norwegian and Swedish material: congruent translations seem to be disfavored in Swedish, but not in Norwegian. In this section I aim to explain this discrepancy as well as point to other factors that may explain particular translation strategies.

7.3.1 Translations of 'deverbal N + *of* + NP'

Table 7.3.1 presents the translation correspondences of the ergative 'deverbal N + *of* + NP' type (e.g. *the circulation of the blood)*.

Table 7.3.1 Norwegian and Swedish translations of 'deverbal N + of + NP'

Translation correspondence	Norwegian		Swedish	
congruent	43	(73.0%)	18	(30.5%)
clause	4	(7.0%)	11	(18.5%)
of → *s*-genitive	10	(17.0%)	21	(35.5%)
of → first N in N + N compound	1	(1.5%)	4	(7.0%)
other	1	(1.5%)	5	(8.5%)
Sum	59	(100.0%)	59	(100.0%)

The most obvious result in table 7.3.1 is that the Norwegian and Swedish translators have chosen partly different translations for the type 'the circulation of the blood': the translation correspondences *clause* and *s*-genitive are roughly twice as popular in the Swedish material as in the Norwegian material, where congruent translations are preferred. It follows that there will be some discussion of non-congruent translations in the section on congruent translations and the other way around. For example, the discussion of translations with the *s*-genitive takes place both in section

[81] Cf. also Halliday and Matthiessen (2004:288): "the coming of this pattern [i.e. the ergative pattern] to predominanance in the system of modern English is one of a number of related developments that have been taking place in the language over the past 500 years or more, together amounting to a far-reaching and complex process of semantic change."

7.3.1.1 on congruent translations, and in section 7.3.1.2 dealing with translations with a clause. Section 7.3.1.3 describes translations with a compound.

7.3.1.1 Congruent translations

As already indicated, congruent translations were more common in the Norwegian than in the Swedish material (cf. table 7.3.1). In some examples the Norwegian translator has turned the *of*-construction into an *av*-construction, whereas the Swedish translator opted for an *s*-genitive:

(31)

a. Then **the evolution of the organisms** and **the evolution of the rocks** need no longer be regarded as separate sciences to be studied in separate buildings of the university.(ENPC/ESPC JL1)

b. Da trenger vi ikke lenger å betrakte **utviklingen av organismen** og **utviklingen av steinene** som adskilte vitenskaper som må bedrives i adskilte bygninger ved universitetet. (ENPC JL1T)

c. Då behöver man inte längre tänka sig **jordskorpans utveckling** och **livets utveckling** som separata företeelser som skall studeras i skilda byggnader på universiteten. (ESPC JL1T)

(32)

a. Figure 2.1 shows the evolution of the temperature and **the growth of daisies** during the progressive increase in heat flux from its star according to the conventional wisdom of physics and biology, and according to geophysiology. (ENPC/ESPC JL1T)

b. llustrasjon 2.1 viser utviklingen av temperaturen og **veksten av tusenfryd** under den progressive økning av varmetilførsel fra stjernen, i samsvar med den konvensjonelle viten innen fysikk og biologi og i samsvar med geofysiologien. (ENPC JL1T)

c. Figur 2.1 visar hur temperaturen och **tusenskönornas tillväxt** utvecklas när den stjärna som lyser över planeten successivt ökar sin ljusstyrka. (ESPC JL1T)

Both the *of*-constructions in (31a) and (32a) contain an inanimate noun. The translations in (31b,c) and (32b,c) may therefore reflect the pattern observed earlier for transitive and intransitive 'subjects', namely that inanimate and complex *of*-constructions are relatively often turned into postmodifying PPs

in Norwegian, whereas an *s*-genitive or a relative clause is preferred in Swedish (cf. 6.4). However, the Norwegian translator has used an *av*-construction, which I have suggested is avoided both in intransitive lexical nominalizations (cf. 7.2.4) and in transitive lexical nominalizations without an object (cf. 6.4). This indicates that ergative lexical nominalizations are different from intransitive structures.

In (33)-(34), on the other hand, the Norwegian translator has used a PP with a preposition other than *av* as translation:

(33)

a. The story was not a factual account of the **physical origins of life upon earth** but was a deliberately symbolic attempt to suggest a great mystery and to release its sacred power. (ENPC/ESPC JL1)

b. Historien var ingen saklig beretning om den **fysiske opprinnelse *til* livet på jorden**; den var et bevisst symbolsk forsøk på å antyde et stort mysterium og frigjøre dets hellige kraft. (ENPC JL1T)

c. Historien var inte någon saklig redogörelse f**ör livets uppkomst på jorden** i fysisk mening utan ett medvetet symboliskt försök att frammana ett stort mysterium och frigöra dess heliga kraft. (ESPC JL1T)

(34)

a. Without **the decay of the Universe** there could have been no Sun, and without the superabundant consumption of its energy store the Sun could never have provided the light that let us be. (ENPC/ESPC JL1T)

b. Uten dette **forfall *i* universet,** ville det ikke vært noen sol, og hvis ikke solen i gigantisk omfang forbrukte sitt energilager, kunne den aldri ha gitt oss lyset som er en forutsetning for vår eksistens. (ENPC JL1T)

c. Utan **universums gradvisa sönderfall** skulle vi inte ha haft någon sol, och utan den våldsamma förbrukningen av dess energilager skulle vi inte ha fått det ljus som gör det möjligt för oss att finnas till. (ESPC JL1T)

In (33b), the Norwegian translator has used a PP with *til* (to), which we have seen can have a possessive meaning in Norwegian (but not in Swedish) (cf. 6.4.1), and can therefore be regarded as an alternative to the *s*-genitive in the Swedish translation. In (34b), on the other hand, the PPs with *i* (in) cause

subtle changes in meaning, and are therefore less clear examples of how the *of*-construction in ergative lexical nominalizations can be translated.

Examples (35b,c) and (36b,c) illustrate two different translations of *the evolution of the species*:

(35)

a. **The evolution of the species** and the evolution of their environment are tightly coupled together as a single and inseparable process. (ENPC/ESPC JL1)

b. **Artenes utvikling** og utviklingen av deres miljø er tett sammenknyttet i en eneste, uadskillelig prosess. (ENPC JL1T)

c. **Utvecklingen av arterna** och deras miljö är så hårt kopplade till varandra att det kan betraktas som ett enda fenomen och en oskiljaktig process. (ESPC JL1T)

(36)

a. The counterpart of this geological apartheid is the failure of most biologists to recognize that **the evolution of the species** is strongly coupled with the evolution of their environment. (ENPC/ESPC JL1)

b. Motstykket til denne geologiske "apartheid" er at de fleste biologer ikke vil erkjenne at **artenes utvikling** er nært knyttet til utviklingen av miljøet. (ENPC JL1T)

c. Motsvarigheten till denna geologiska apartheid finner man hos de biologer som inte kunnat inse att **arternas utveckling** är starkt kopplad till hur deras miljö utvecklas. (ESPC JL1T)

The reason for an *av*-construction being chosen in (35c) may be to avoid repeating *utveckling* (development) and thereby reduce a long and complex subject. In (36b,c) both translators have used the *s*-genitive.

Of-constructions as Mediums are translated both with *av*-constructions and the *s*-genitive in both target languages.[82] The fact that there was a choice between the *av*-construction and the *s*-genitive is interesting in light of the

[82] There were no examples of the *s*-genitive as Medium in the English original text. However, as the material is limited, this does not mean that the *s*-genitive is not used to realize Mediums in English nominalizations. On the other hand, it does indicate that the *of*-construction is far more common. For example, Google rendered 12,800 hits on the search string *the earth's evolution*, and 65,500 on *the evolution of the earth* (date of access: January 18, 2007).

patterns found for subjects and objects in transitive and intransitive lexical nominalizations. In transitive and intransitive structures it was shown that *av*-constructions were used as translations of *of*-constructions as objects (cf. 5.2.1), but avoided as translations of subjects, where the *s*-genitive was preferred (cf. 4.7, 6.4, 7.3.1). An explanation for the fact that both *av*-constructions and the *s*-genitive were used as translations of *of*-constructions realizing the ergative Medium can be that the Medium shows a likeness both to the transitive object (i.e. it is usually affected) and to the transitive subject (i.e. it shows some degree of agency).

The increased tendency for an *av*-construction in the Norwegian translations in comparison to the Swedish may be due to differences between the languages. However, the discrepancy can also be attributed to the particular preferences of one specific translator, as most of the ergative examples were from one text. For example, using Google I found only eight instances of *utvikling(en) av organismen* in Norwegian, but 123 of *organismens utvikling*, indicating that the Norwegian translator of *the Ages of Gaia* text may have overused the *av*-construction in ergative lexical nominalizations. As the *av*-construction is prototypically used with the transitive object rather than with the subject in lexical nominalizations, it is possible that the *av*-construction obscures the agentive qualities of the Medium. That is, that more focus is placed on 'affected' than 'agentive' meaning (e.g. *det vitenskaplige studiet av forholdet mellom hjerne og bevissthet* (Norw.)/*det vetenskapliga studiet av förhållandet mellan hjärna och medvetande* (Sw.) (cf. 5.2.1)).

7.3.1.2 Translations with a clause

There were four translations with a clause of the type 'the circulation of the blood' in the Norwegian material and 11 in the Swedish. In some cases, the Norwegian translator has used a congruent translation where the Swedish translator has used a clause:

(37)

a. **The increase of the Sun's brightness** as it ages **is** a general and undoubted property of stars. (ENPC/ESPC JL1)

b. **Økningen av solens lysstyrke** etterhvert som den blir eldre, er en generell og uomtvistet egenskap hos stjernene. (ENPC JL1T)

c. **Att ljusstyrkan hos en stjärna ökar** vartefter den åldras är allmänt och välkänt. (ESPC JL1T

All the examples of this type were taken from *The Ages of Gaia* (JL1T), where we have seen that the Norwegian translator has used many congruent translations (cf. 7.3.1.1), whereas the Swedish translator has used freer translations, as illustrated not only in the clausal translation in (37c), but also in the lexical choice: in (38a) *the Sun* in the original is turned into *en stjärna* (a star) in the translation. It is therefore possible that the different choices in (37b) and (37c) can be attributed to the individual translators.

Of the 11 translations with a clause in the Swedish material, five were in the passive, or possibly, the middle voice, the middle being difficult to distinguish from the passive.

According to Heyvaert (2003:126ff) there are two approaches to the middle in the literature: one which "ha[s] stressed the active, one-participant nature of the construction and have claimed agentive status for its Subject," and one which "ha[s] ascribed passive value to the construction, emphasizing that its Subject is affected and that an Agent is implied". Heyvaert (2003:126) refers to the two approaches as the 'ergative' and 'passive' approach to middles.[83] She also points out that the scholars arguing for the 'passive' approach stress that whereas passives allow an overtly expressed Agent, the middles do not (cf. Heyvaert 2003:127).

Thus, it seems that one way to distinguish passives from middles is to look for the possibility of overt agency in the clause: if there may be an overt Agent the clause is in the passive voice, if not it is in the middle voice. Now consider (38a), (39a), (40a) and (41a):

(38)

a. The new wealth led to intellectual and cultural florescence and also **to the development of the individual conscience.** (ENPC/ESPC JL1T)

b. Den nye velstanden førte til intellektuell og kulturell blomstring, og

[83] Heyvaert, however, argues for a third approach: one that recognizes that rather than assign Agent-like or affected value to its Subject, "the Subject has properties that make it *conducive* to a particular process: by being construed as Subject of a middle construction, a non-agentive entity is presented as having the necessary properties or potential to *let* a process be carried out" (Heyvaert 2003:140).

også ***til*** **utviklingen av den individuelle bevissthet.** (ENPC JL1T)

c. De goda tiderna ledde till intellektuell och kulturell blomstring och likaså till **att den enskildes moraliska medvetenhet utvecklades.** (ESPC JL1T)

(39)

a. Figure 2.1 shows **the evolution of the temperature and the growth of daisies** during the progressive increase in heat flux from its star according to the conventional wisdom of physics and biology, and according to geophysiology. (ENPC/ESPC JL1T)

b. Illustrasjon 2,1 viser **utviklingen av temperaturen og veksten av tusenfryd** under den progressive økning av varmetilførsel fra stjernen, i samsvar med den konvensjonelle viten innen fysikk og biologi og i samsvar med geofysiologien. (ENPC JL1T)

c. Figur 2.1 visar **hur temperaturen och tusenskönornas tillväxt utvecklas** när den stjärna som lyser över planeten successivt ökar sin ljusstyrka. (ESPC JL1T)

(40)

a. The counterpart of this geological apartheid is the failure of most biologists to recognize that the evolution of the species is strongly coupled with **the evolution of their environment.** (ENPC/ESPC JL1T)

b. Motstykket til denne geologiske "apartheid" er at de fleste biologer ikke vil erkjenne at artenes utvikling er nært knyttet til **utviklingen av miljøet.** (ENPC JL1T)

c. Motsvarigheten till denna geologiska apartheid finner man hos de biologer som inte kunnat inse att arternas utveckling är starkt kopplad till **hur deras miljö utvecklas.** (ESPC JL1T)

(41)

a. *With* **this rise of temperature**, the rate of growth, the length of the warm season, and the spread of dark daisies would all exert a positive feedback and lead to the colonization of most of the planet by dark daisies. (ENPC/ESPC JL1T)

b. Og på grunn av **temperaturstigningen,** veksttempoet og lengden av den varme årstiden, ville utbredelsen av de mørke tusenfrydene føre til en positiv feedback som ville gi som resultat at mesteparten av planeten ble befolket av mørke tusenfryder. (ENPC JL1T)

c. Genom **att temperaturen höjs**, växer de mörka tusenskönorna också fortare och deras växtsäsong blir längre. Det bildas en positiv

återkoppling som gör att mörka tusenskönor kan kolonisera en stor del av planeten. (ESPC JL1T)

Example (38a) resembles the passive, since overt agency is expressed in the clause (*the new wealth led to (...)* ***the development of*** *(...)*). In examples (39a) and (40a), on the other hand, agency is less clear, and in (43a) it is completely absent. Examples (39a) and (40a) are thus unclear examples, whereas (38a) is a relatively clear passive and (41a) a relatively clear middle.

What is important, however, is that all original lexical nominalizations lack the overt expression of agency in the lexical nominalization itself, as do all the translations with a clause (38c, 39c, 40c, and 41c). According to Árus Hita (2003:118), the vagueness of agency is typical of ergative lexical nominalizations: "the unavoidable vagueness in agency in ergative nominalizations will restrict their occurrence to those cases in which either the context renders the Agent clear or such Agent is irrelevant." As vagueness concerning agency is a property shared by all three constructions (the ergative lexical nominalization, the middle and the passive), passive and middle clauses seem particularly good translations, as well as agnates of, ergative lexical nominalizations.

7.3.1.3 Compound

In some examples the *of*-construction was rendered as the first N in an N + N compound. Consider (42c):

(42)

a. One experienced game tracker claimed that it was possible to get to within 40 or 50 yards before spotting a zebra under these conditions, and even then it only gave itself away by a small movement such as **the swish of its tail** or **the sudden turn of its head**. (ENPC/ESPC DM1)

b. En erfaren jeger har hevdet at det er mulig å komme på 35-40 meters avstand før man oppdager en sebra under slike forhold, og selv da avslører den seg bare ved å gjøre en liten bevegelse, som **å vifte med halen** eller **snu hodet**. (ENPC DM1T)

c. En erfaren spårare hävdade att man kunde komma sebran så nära som 40 till 50 meter innan man upptäckte den under dessa förhållanden, och då avslöjade den sig bara genom små rörelser som

svansviftningar eller en plötsligt **huvudvändning**. (ESPC DM1T)

The lexical nominalizations in (42a) could be analysed as transitive lexical nominalizations where *of its tail* and *of its head* are objects, corresponding to the objects in *the zebra swished his head* and *the zebra turned his head*, or as ergative Mediums, in which case the actions were instigated by the zebra but performed by the tail and the head. I have chosen to regard them as ergative structures, but the analysis is not clear.[84]

The lexical nominalizations in (42a) have been turned into infinitives by the Norwegian translator (42b) and into compounds by the Swedish translator (42c). As we have seen earlier in this thesis, compounds are problematic with regard to their argument-status (cf. 3.4.4). Sometimes the first N is a modifier in a root-compound, in which case the compound is a simple-event nominal or result nominal, whereas in other cases, the first N is the object in a synthetic compound, in which case the compound is a complex-event nominal. In (42c) the first compound (*svansviftningar* (lit. tailswishings) seems to be a synthetic compound even though the verb denotes an event of little or no duration and is [+ count] (cf. Quirk et al. 1985:208f). The reason for this is that in this case the plural form indicates a process meaning, reflecting the fact that the punctual event was repeated (cf. Quirk et al. 1985:208, Langacker 2000: 249ff)).

7.3.2 Translations of 'adjective + deverbal N'

There were seven examples of the construction premodifying adjective + deverbal N (e.g. *volcanic eruption*). The translations of these are illustrated in table 7.3.2:

[84] Compare Andersen (2007:76) who refers to Norwegian deverbal nouns such as those in (46a) as zero-suffix noun corresponding to transitive verbs.

Table 7.3.2 Norwegian and Swedish translations of 'premodifier + deverbal N'

Translation correspondence	Norwegian	Swedish
congruent	5	5
clause	1	0
the *s*-genitive	0	1
av-construction	1	1
Total	7	7

Most of these examples were translated congruently, as in (43b,c):

(43)

a. On Mount Sinai, for example, he would appear to Moses in the midst of **an awe-inspiring volcanic eruption** and the Israelites had to keep their distance. (ENPC/ESPC KA1T)

b. På Sinai-fjellet skulle han for eksempel åpenbare seg for Moses midt i et **fryktinngytende vulkansk utbrudd,** og israelittene måtte holde seg på avstand. (ENPC KA1T)

c. På berget Sinai uppenbarade han sig till exempel för Moses **i ett skrämmande vulkanutbrott** och israeliterna måste hålla sig på avstånd. (ESPC KA1T)

All of the ergative lexical nominalizations were [+count], indicating that premodifying adjectives are not arguments in ergative constructions, which may explain the many congruent translations. However, the translations of the Medium show that both the *s*-genitive and an *av*-construction are possible, once again reflecting the intermediate status of the Medium as somewhere between the transitive subject and object. In (43b,c) the congruent translation of the premodifying adjective as Medium can be compared to the translation of transitive subjects and intransitive subjects, which could be turned into an *s*-genitive but not into an *av*-construction (cf. 4.3, 7.2.3).

7.3.3 Translations of ergative constructions with an Instigator

There were only seven examples of ergative constructions with an Instigator. Of these, five had two arguments. Ergative two-argument structures resemble transitive structures in that they have an affected participant (the

Medium) and an agentive participant (the Instigator), as exemplified by the examples in (44):

(44) [85]

a. **The boy** (Agent) **kicked** (transitive verb) **the ball** (Goal).

b. **The cat** (Instigator) **broke** (ergative verb) **the glass** (Medium).

The transitive and ergative clauses in (44) have the same structure. However, there is a crucial semantic difference between the two as the Medium in the ergative constructions always undergoes the process in question, and therefore is associated with a certain type of agency, whereas the Goal in the transitive construction has no agency associated with it. With regard to the examples in (44b,c), we can describe the difference thus: the glass breaks, but the ball does not kick.

If we nominalize the structures in (44), the result is the two-argument lexical nominalizations in (45):

(45)

a. **The boy's kicking of the ball/The kicking of the ball by the boy.**

b. **The cat's breaking of the glass/the breaking of the glass by the cat.**

The transitive lexical nominalizations and ergative lexical nominalizations in (45) have the same structure: the transitive subject and the ergative Instigator are realized by the *s*-genitive or in a *by*-construction. This poses the question whether the same applies to the ergative lexical nominalizations in my material.

In three cases (two in the Norwegian material and one in the Swedish) a PP headed by *from* as Instigator were turned into the subject of a clause, as in (46):

[85] Note that Halliday and Matthiessen (2004:289) use the term *Actor* about the role I refer to as *Agent*, and *Agent* about the role I refer to as *Instigator* (cf. 3.4.3, n38)

(46)

a. Figure 2.1 shows the evolution of the temperature and the growth of daisies during the progressive increase in **heat flux from its star** according to the conventional wisdom of physics and biology, and according to geophysiology. (ENPC/ESPC JL1)

b. llustrasjon 2,1 viser utviklingen av temperaturen og veksten av tusenfryd under den progressive økning av **varmetilførsel fra stjernen**, i samsvar med den konvensjonelle viten innen fysikk og biologi og i samsvar med geofysiologien. (ENPC JL1T)

c. Figur 2.1 visar hur temperaturen och **t**usenskönornas tillväxt utvecklas **när den stjärna som lyser över planeten successivt ökar sin ljusstyrka.** Två synsätt redovisas, dels det konventionella syn sättet inom fysik och biologi, dels ett geofysiologiskt synsätt. (ESPC JL1T)

The translations with a clause of the examples with a Medium and Instigator support my analysis that the Instigator can be related to the subject of a clause. The nominal translations, on the other hand, suggest that the Instigator should not be confused with a transitive subject. In (46b) the Instigator was realized by *fra* (from) in the Norwegian translation, and in (47), an Instigator realized by a *by*-phrase has been turned into a PP with (Norw.) *gjennom/* (Sw.) *genom* (through) (47b,c):

(47)

a. To Ford Doolittle, from his world of molecular biology, it was equally obvious that **evolution by natural selection** could never lead to "altruism" on a global scale. (ENPC/ESPC JL1)

b. For Ford Doolittle, som befant seg i molekylærbiologien, var det like opplagt at **utvikling gjennom naturlig utvalg** aldri kunne føre til "altruisme" i global målestokk. (ENPC JL1T)

c. För Ford Doolittle, som såg världen ur molekylärbiologins synvinkel, var det lika självklart att **evolution genom naturligt urval** aldrig kunde leda till "altruism" på global nivå. (ESPC JL1T)

The examples show that the Instigator is normally realized in a PP with a preposition other than *of*/*av* in all three languages. Also, there were no instances of an *s*-genitive in the originals or in the translations. The lack of the *s*-genitive as a translation of ergative Instigators can be explained by the fact that in ergative nominalizations, the *s*-genitive is associated with the Medium rather than the Instigator (cf. 7.3.1).

7.3.4 Concluding remarks

Relatively many ergative constructions were translated with a clause. The clausal translations can perhaps be explained by the fact that ergative constructions prototypically have complex-event meaning, which we have seen results in a higher proportion of clausal translations compared to other meanings (cf. 4.7, 5.9).

In the English examples the Medium was predominantly realized by an *of*-construction, whereas there was a choice between the *av*-construction and the *s*-genitive in Swedish and Norwegian. There is a parallel in the translations of transitive and intransitive structures. For the transitive object the *av*-construction was largely preferred over the *s*-genitive (except in a few ergative-like cases, cf. 5.2.2.2), whereas the *s*-genitive was the prototypical choice for the transitive and intransitive 'subject' (cf. 4.7, 6.7).

7.4 Summary

Although lexical nominalizations such as *the survival of the animal* and *the melting of the snow* both appear to be intransitive structures, there is a difference between the two types that shows up in translations.

The translations of the intransitive and ergative types differed both in the frequency of clausal translations and in how adnominal elements were realized. Ergative nominalizations were translated more often by clauses than intransitive nominalizations. Furthermore, there were many instances where one translator chose a clause and the other a congruent translation. This pattern can be related to a particular network of agnation. Many of the ergative nominalizations were complex-event nominals whereas intransitive nominals have simple-event or result meanings. Due to their process meaning, complex-event nominals have restricted possibilities for nominal paraphrases and translators therefore tend to choose either a congruent translation or a translation with a clause (cf. 4.7, 5.9, 7.3.4). Lexical nominalizations with simple-event and result meaning, on the other hand, are related to a wider repertoaire of nominal paraphrases.

With regard to the translation of adnominal elements, most of the ergative Mediums were realized by *of*-constructions in English, whereas there was a choice between the *s*-gentitive and the *of*-construction in Norwegian and Swedish. Variations in the translation of the ergative

Medium seem to reflect the semantic status of the Medium as a conflation of the transitive subject and object. In English, the *of*-construction is well suited for the mixed nature of the Medium, since it can be used for both subjects and objects (e.g. *the running of John*/ *the construction of the building*), whereas there seems to be no equally versatile adnominal element in Norwegian and Swedish. The tendency in the material was that the *s*-genitive is the most appropriate option since it can be used for both subjects and objects in both Norwegian and Swedish. The *av*-construction is less suited as it is avoided with both subjects and subject-like modifiers in transitive and intransitive nominalizations. The intransitive lexical nominalizations, on the other hand, can be compared with the transitive structures: there was a tendency to choose *s*-genitives as translations of both *of*-constructions, premodifiers and *s*-genitives, particularly if the *s*-genitive had an Agent-like role.

8. CONCLUSION

8.1 Introduction

This chapter provides a brief summary of the thesis and its most important findings in 8.2. Section 8.3 discusses some issues related to genre conventions that have not been discussed in the thesis so far. Section 8.4, finally, points to some interesting topics for future research.

8.2 Summary

The focus of this study has been to investigate lexical nominalizations in English popular science texts in the light of Norwegian and Swedish translations. The general theoretical orientation is systemic functional linguistics, from which the central notions *grammatical metaphor*, *network of agnation and rank-shift* have been taken.

Lexical nominalizations are viewed as grammatical metaphors turning 'processes', prototypically realized by a verb, into nouns, which prototypically realize 'things'. The notion grammatical metaphor has the advantage that it explains why lexical nominalizations are regarded as less accessible than their corresponding clauses. However, there is no simple dichotomy between NPs and clauses. Typological studies have shown that there there is a continuum from the deverbal noun to the clause, including structures that are more or less clause-like or verb-like. This means that clauses and lexical nominalizations differ in their degree of nouniness. The notion *network of agnation* is useful in this context because it describes how lexical nominalizations are paradigmatically related to other structures such as a clause, and it therefore combines readily with a translation approach: translation choices can point to structures that are part of a particular network of agnation, and the structures in that network of agnation can then be considered in terms of their degree of nouniness. The SFL notion rank-shift, lastly, explains how nominalized clauses have a higher degree of *nouniness* compared to the (ranking) clause.

In order to study lexical nominalizations in their own right, and not just as reduced clauses, it is important to consider whether or not deverbal nouns take obligatory arguments. In this thesis, I have used Grimshaw's theory of

argument structure to gain more information about relationships of form and meaning in lexical nominalizations. Essential to this theory is the division of lexical nominalizations into three types of meaning: complex-event nominals, simple-event nominals and result nominals. Basic to the division between the three types are the properties [+/-argument structure] and [+/-count]. Differences in argument structure correlate with aspectual meanings. Complex-event nominals (e.g. *John's construction of the building*) focus on the sub-events of a complex event and highlight process meaning. They have argument structure and are typically [-count]. As a result, they have a more obvious relation to the clause than other lexical nominalizations. Simple-event nominals (e.g. *airborne assaults to secure their flanks*) do not have argument structure and are [+count], which means that they do not have process meaning and are less likely be paraphrased with a clause. Result nominals (e.g. *the promise that he would be the father of a great nation*) are the most nominal type of the three: they denote abstract or concrete things and are therefore clear examples of transcategorized elements. In other words, they are not grammatical metaphors.

In the contrastive analysis (chapters 4-7), the translations of lexical nominalizations in English were discussed. The starting point for the discussion was the form of the lexical nominalization, i.e. whether the source lexical nominalization included one or two arguments, or argument-like, elements. Translations were categorized as either congruent or non-congruent. The non-congruent translations were further divided into the two main sub-categories: clausal translations and nominal paraphrases.

One of the major results is that lexical nominalizations were used more extensively in the English source texts than in their Norwegian and Swedish translations: approximately 1/5 of the source lexical nominalizations were turned into clauses. The following factors involving the lexical nominalization favored a clausal translation:

- it included many adnominal elements;
- it was the subject in the sentence;
- it had a postmodifying function;
- it followed a preposition, or
- it was part of an expanded predicate.

Various explanations could be given for the translation with a clause. Sometimes the differences could be explained as typological. For example, *that*-clauses cannot follow a preposition in English whereas Norwegian and Swedish *at/att*-clauses (*that*-clauses) can. Many lexical nominalizations after a preposition were translated into an *at/att*-clause in the target languages. Another reason related to typology was the lack of a good lexical correspondence of the source deverbal noun in the target languages.

At other times, the differences seemed to be related to genre conventions. Many lexical nominalizations functioning as Themes summing up Given information were turned into clauses in Norwegian and Swedish. This tendency was especially strong for complex Themes, which suggests that there is a more restrictive attitude towards placing lexical nominalizations and complex NPs as Themes in Norwegian and Swedish compared to English. The use of lexical nominalization realizing Theme/Given information is typical of English scientific texts (cf. Halliday and Martin 1993). If there are differences between the languages we can therefore assume that these are due to different genre conventions in the three language communities (cf. further discussion in 8.3).

The meaning of the lexical nominalization also plays a role. Many of the lexical nominalizations translated with a clause were complex-event nominals. This could be expected from the fact that complex-event nominals have argument structure and are [-count] and therefore have an obvious relation to the clause, a higher degree of nouniness and a higher degree of grammatical metaphor. Furthermore, complex-event nominals can have several different meanings in terms of the Vendlerian categories *events*, *facts* and *propositions* (cf. 3.2), which could explain some translation choices. Complex-event nominals with event meanings were typically turned into ranking clauses, whereas lexical nominalizations with fact and proposition meanings were typically turned into a rank-shifted clause that was sometimes preceded by a shell noun such as *fact*, *idea* or *ability*. In the cases with a shell noun, the clause functions as an apposition, and the shell noun sums up or specifies the information in the clause in a noun. The translations with a rank-shifted clause or a shell noun followed by a clause indicate that propositions and facts have a higher degree of nouniness than other complex-event nominals.

Simple-event nominals showed a less clear relation to the clause and were not turned into clauses as often as complex-event nominals. An

exception to the general picture was nominalized VPCs (e.g. *the attempt to finish the process*), a construction which straddles the boundary between complex-event and simple-event meanings. Simple-events were sometimes translated by a clause preceded by an inserted noun, but the inserted noun was a circumstantial noun such as *time* or *day* or a manner noun, such as *way,* rather than a shell noun*,* indicating that some part of the event was focused rather than its dynamic unfolding.

Result nominals, lastly, were rarely turned into clauses and they were not translated into structures with inserted nouns.

The thesis has also shown that translations can be used to throw light on the syntactic and semantic function of adnominal elements in the source lexical nominalizations. This was particularly useful for the postnominal *of*-construction in lexical nominalizations.

The *of*-construction can correspond to almost any function in the clause, which also showed up in the translations. If the *of*-construction was a direct object with an argument function, it was typically translated congruently, turned into the object in a clause, or translated into the first noun in a synthetic compound. If the *of*-construction was a postmodifier, on the other hand, it was turned into a lexically determined PP or the first N in a root-compound. *Of*-constructions as appositions were sometimes turned into appositional *at/att*-clauses.

When the *of*-construction had a subject role, we need to distinguish between transitive/intransitive constructions and ergative constructions. When the *s*-gentive had a subject role in transitive and intransitive lexical nominalizations, it was typically turned into an *s*-genitive. In ergative constructions, in contrast, there was a choice between a PP with *av* (*of*) and the *s*-genitive. A likely explanation for the different translation choices is that the languages behave differently. In English the *of*-construction is suitable to express the ergative Medium, because the Medium is a conflation of the transitive subject and object, and the *of*-construction is used for both subjects and objects in English (e.g. *the running of John*/ *the construction of the building*). In Norwegian and Swedish, contrastively, there is a clearer relation between the *s*-genitive and the subject role on the one hand and a PP with *av* with the object role on the other. The languages can therefore choose between the *s*-genitive and a prepositional phrase with *av* to express the ergative Medium. The choice, we can assume, depends on whether the

Medium is associated with an Agentive subject role or an Affected object role.

Finally, parallel Norwegian and Swedish translations can also contribute to our knowledge of the differences between Norwegian and Swedish. One difference between the target languages is that *that*-clauses and *to*-clauses after mental and utterance nouns were translated congruently in Swedish, whereas a paraphrase with an inserted preposition + *at/att* clause was used in the majority of the Norwegian examples. Another difference was that there was a wider selection of postmodifying PP to realize subject-modifiers in the Norwegian translations than in the Swedish ones. In particular, Norwegian includes a possessive postmodifying PP, the *til*-construction.

8.3 Lexical nominalization and genre conventions

Approximately one fourth of the lexical nominalizations in the English source texts were turned into clauses in the Norwegian and Swedish translations. This suggests that Norwegian and Swedish prefer clauses where English uses lexical nominalizations. We therefore need to consider the possible impact of normative language and language policy on the use of lexical nominalizations in the three speech communities.

The idea that nominal style is less accessible than verbal style can be found in style guides in numerous languages. For example, in a survey of language recommendations issued to EU officials, Ehrenberg-Sundin (2000:165) found that recommendations to use an active verb rather than the passive or a 'heavy' nominalization were common to all EU languages and considered a prerequisite for so-called 'plain language'. Moreover, in *The Penguin Guide to Plain English*, Harry Blamires (2000:227) urges 'the good writer' to restrain his or her 'appetite for nouns'.

However, many scholars have pointed out that there is a particularly strong and well-established prescriptive norm in Norway and Sweden favoring a 'verbal' or 'oral' style with many finite clauses and short noun phrases, over a 'nominal' or 'written' style with a high number of complex phrases and an abundance of nouns. Regarding Norwegian, Solfjeld (1997:38) and Maagerø (1997) refer to the Norwegian 'oral tradition', which advocates that written texts should copy the style of oral language to make

them more accessible.[86] According to Maagerø (1997) this advice concerns all texts, in particular academic texts, and it is referred to in different teaching contexts. The situation in Swedish is similar. For example, Melander (2000) claims that the tradition towards a 'simpler' and more 'oral' language in official documents and legal texts has a stronger and longer tradition in Sweden than in other EU countries.

In both Norway and Sweden the strong normative traditions in favor of an 'oral style' are linked to official language institutions: *Norsk språkråd* (the Norwegian Language Council) and *Språkrådet* (The Swedish Language Council) and other official institutions.[87] For example, Omdal and Vikør (1996:24) argue that language planning and normative language issues are more deeply connected with governmental organizations in Norway than in other countries and that there is a similar situation, if slightly weaker, in Sweden (and Finland).

In Norway a public warning is for instance found on a home page of the University of Oslo, where it says that nominalizations should be avoided to stay clear of the 'noun disease'. [88] In Sweden, it is possible to test whether your text is written in 'plain language' ('klarspråk') on a governmental website. One of the questions in the plain-language test is if your text is 'free of nominalization that burdens the text [my translation]'. Thus, based on the language recommendations issued in Sweden and Norway, we can assume that lexical nominalizations are more controversial in Norwegian and Swedish popular science texts than in English popular science texts which

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[86] Solfjeld (1997:38) believes that the oral tradition in the Norwegian language community originated in the establishment of a Norwegian written language (*Nynorsk*) based on Norwegian dialects at the end of the 19th century. Up till the end of the 19th century Danish was the only written language in Norway, and when Norwegians strove to build a new nation it became important to move away from the Danish norm. Thus, two written languages emerged, one based on Danish, *Bokmål*, and one entirely new, *Nynorsk*. This resulted in a language battle in Norway, which is still going on. Initially, Nynorsk was in many ways the language of the common Norwegian, and it is claimed that as such it has a strong oral tradition. Bokmål, on the other hand, was the choice of most of the learned élite, who were familiar with the Danish language. Today, the users of Bokmål by far outnumber the users of Nynorsk. Nevertheless, Solfjeld (1997:38) claims that the orality at the core of Nynorsk is responsible for an oral tradition in the Norwegian language community.

[87] Prior to July 1st 2006, *Språkrådet* was *Svenska språknämnden*.

[88] http://www.usit.uio.no/it/forfatterstotte/skrive-for-web/skriveregler.html (date of access: July 5, 2007)

may explain why many lexical nominalizations were turned into clauses in this material. [89]

8.4 Suggestions for future research

When style guides advice us to use more verbs than nouns to keep our language simple, lexical nominalizations are often regarded as a category that should be avoided. However, whereas some lexical nominalizations are difficult to understand and relatively easy to paraphrase with a clause, others may not be. This work has shown that if the argument structure of deverbal nouns are analysed in more detail, we can determine types of lexical nominalizations characterized by their different degrees of grammatical metaphor. A question that has not been solved, however, is how lexical nominalizations showing the Vendlerian meaning categories fact and proposition should be considered in terms of grammatical metaphor.

The investigation has considered English lexical nominalizations in popular science texts through their translations in Norwegian and Swedish. However, the use of lexical nominalization in Norwegian and Swedish original texts has not been considered. One interesting topic for future research would therefore be to study lexical nominalizations in original Norwegian and Swedish texts.

If there are contrastive differences between the languages, it is likely that these show up in texts written by Norwegian and Swedish learners. A further interesting topic for future research is therefore the use of lexical nominalizations by Norwegian and Swedish learners. This work has shown that some textual functions typical of English lexical nominalizations are not used to the same extent in Swedish and Norwegian. It can therefore be expected that Norwegian and Swedish learners fail to use lexical nominalizations according to English genre-conventions. Also, research on argumentative texts written by Swedish advanced learners of English have indicated that Swedish advanced learners use an informal style compared to students with English as their native language (Ädel 2006, Boström-Aronson 2005, Herriman 2007). As lexical nom-inalizations are often described as one of the prime indicators of a detached formal style (cf. e.g. Biber 1986:396 for a pioneering account), the research on Swedish advanced

[89] http://regeringen.se/sb/d/2984 (date of access: July 5, 2007)

learner's style is further indication that lexical nominalizations are interesting from the point of view of learner texts.

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Oslo-korpuset av taggede norske tekster (bokmålsdelen)
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