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**The Nominalization Process in English, Dutch, and Czech**  
Doctoral Dissertation

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**Olomouc, 2020**

## **Dissertation details**

**Title:** The Nominalization Process in English, Dutch, and Czech

**Title in Czech:** Nominalizační proces v angličtině, nizozemštině a češtině

**Type:** Doctoral Dissertation

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**Supervisor:** Prof. Joseph Embley Emonds

**University:** Palacký University, Olomouc

**Study Programme:** 7310V008 English Language (PhD)

**Department:** Department of English and American Studies

**Year:** 2020

**Pages:** 178

**Standard pages of text:** 172

**Characters:** 290,311

## **Declaration of Originality**

I herewith declare that the material contained in my dissertation entitled *The Nominalization Process in English, Dutch, and Czech* is original work performed by me under the guidance and advice of my faculty supervisor. The literature and sources are all properly cited according to the Chicago Manual of Style 2017.

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signature

## **Acknowledgments**

I would like to thank especially my supervisor prof. Joseph E. Emonds for his constant and unwavering support, guidance, encouragement, and great patience, with which he was answering all my questions throughout the whole process of writing this thesis. I am convinced that I would not have been able to finish the dissertation without his help and advice. A great deal of thanks belongs to my family, friends and colleagues for their patience and support in the long hours of writing, when the end seemed unreachable.

## **Annotation**

This dissertation focuses on the nominalizations in three different languages – Dutch, English, and Czech – and compares and contrasts their nominal and verbal properties, showing how these correlate with their internal structures and the processes through which they are formed. The thesis shows that there are two basic types of nominals that exist in all the three studied languages and these are result and complex event nominals as Grimshaw (1990) classified them. While result nominals are already formed in the Lexicon and therefore have mostly nominal properties and are close to regular countable nouns, complex event nominals are formed during syntax, have more verbal properties and behave more like mass nouns. Besides them, there are also Dutch nominal infinitives and English gerunds, which have been difficult to analyze and different linguists have approached them differently. However, I propose that although they are somewhat similar, yet not the same construction, they are generated by the same operation which combines Categorical Switch, described by Panagiotidis and Grohmann (2009), and Merge into a single step. Merge tells us that only one complement or adjunct can enter the tree at a time, and the hypothesis of Categorical Switch together with Phrasal Coherence proposes that at certain point the phrase can be changed from verbal to nominal while remaining internally coherent. This approach provides a systematic and unified analysis of these two constructions.

## Anotace

Tato disertace se zaměřuje na nominalizace ve třech jazycích – nizozemštině, angličtině a češtině – a srovnává jejich nominální a verbální vlastnosti, aby ukázala, jak korelují s jejich vnitřní strukturou a procesem, kterým jsou utvářeny. Práce ukazuje, že existují dva základní typy nominalizací, které se vyskytují ve všech třech jazycích, a to jsou resultativní substantiva (*result nominals*) a komplexní dějová substantiva (*complex event nominals*), jak je klasifikovala ve své monografii Jane Grimshaw (1990). Zatímco resultativní substantiva jsou tvořena už v Lexikonu, mají převážně jmenné vlastnosti a svým charakterem se přibližují běžným počítatelným podstatným jménům, komplexní dějová substantiva jsou syntakticky derivována, mají více verbálních vlastností a svým chováním se spíše podobají podstatným jménům látkovým. Kromě nich se práce také zabývá nominálními infinitivy (*nominal infinitives*), které existují v nizozemštině, a anglickými gerundii (*gerunds*). Obě konstrukce bylo pro lingvisty vždy obtížné analyzovat a různé lingvistické směry k nim přistupovaly rozdílně. Ve své práci ukazují, že ačkoli jsou obě konstrukce do určité míry podobné, nejsou totožné, avšak jsou generovány stejným procesem, který sjednocuje Kategoriální změnu (*Categorial Switch*), popsanou v článku Panagiotidis a Grohmann (2009), a slučování (*Merge*) do jednoho kroku. Tento přístup, podle mého názoru, nabízí ucelenou a systematickou analýzu těchto dvou konstrukcí.

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## **1. Introduction: Outline of Chapter Contents**

This dissertation deals with the nominalization process across languages. It examines the different types of nominals that exist in Dutch, English and Czech to find out whether there are some types of nominals which are the same or similar in all the three languages or whether there are some unique constructions which do not have any parallels in the other two languages. These three languages have been chosen because I am a native speaker of Czech and I majored in English and Dutch at university. The fact that Czech is a Slavic language, while English and Dutch are Germanic languages, also ensures that the data I will analyze will be more balanced and the findings more objective.

My first aim is to examine what the categorial status of each type of nominalization is, therefore I use several categorial tests that help us to distinguish whether they belong to the category V or N. Then, in order to examine their behavior I have a list of nominal and verbal properties which indicate whether the nominal is still close to the original verb or whether it has acquired mostly nominal properties. The specific combination of these properties tells us something about the internal structure of each nominal.

A lot of these properties are based on Grimshaw's (1990) basic classification and typology of nominals in English and it appears that two main types of nominals, result and complex event nominals, exist in all the three languages. However, apart from them, there are also Dutch nominal infinitives and English gerunds which are constructions that need special attention as they are more difficult to analyze and have caused linguists a great deal of problems. In my approach I offer a different analysis and depart from previous approaches, which allows me to bring them both closer together and to unify their analysis.

The thesis is divided into four chapters. The first chapter provides some historical and theoretical background, summarizes the development of the crucial concept of "argument structure" and focuses on how it applies to nominals. The second chapter deals with three types of Dutch nominalizations. Firstly, it examines the ING- and GE-nominalizations, which have been traditionally classified into two groups according to their affixes, and shows that within Grimshaw's (1990) terminology, they are in fact result and complex event nominals. Secondly, I propose a new treatment of Dutch nominal infinitives, which simplifies the analysis and accounts for their specific behavior. The third chapter discusses English nominalizations, shows that both English and Dutch have the same types of derived nominals

and also unifies the analysis of gerunds with that of Dutch nominal infinitives, although these constructions are not the same. The fourth chapter on Czech nominalizations also demonstrates that two types of nominals which have been analyzed according to their suffixes, the *-ní/tí* and *-ba/ka* nominals, actually are in Grimshaw's (1990) classification result and complex event nominals again. Finally, the last chapter gives us a summary of the main findings and provides an overview of the different types of nominals to show how similar or different these nominals are across languages.

The main contribution of my thesis is that, unlike traditional approaches to nominalizations, I do not merely divide them according to their form and list their nominal and verbal properties, but actually try to draw some formal generalizations based on them. I demonstrate that these properties are not just a random cluster but that they reveal to us what class or type the nominals belongs to, what their internal structures look like and which processes are involved in their formation. I also bring a new proposal for the treatment of Dutch nominal infinitives and English gerunds, which unifies and simplifies their analysis.

## **2. The Terminology of Argument Structure**

### **2.1. Chapter Introduction**

In the first chapter I will provide an overview of the main theoretical concepts and the basic terminology which will be used in the following chapters, with a special focus on the term “argument structure”. The chapter is divided into four sections. Firstly, I will start with the definition of argument structure because it will often be referred to in this thesis and I will look at the historical development of the term. Secondly, I will discuss the argument structure of verbs and nouns and the different approaches towards the analysis of nominalizations. And finally, I will provide a summary of the previously discussed terms with respect to the following chapters.

### **2.2. What Is Argument Structure?**

Firstly, we need to discuss what argument structure is because it relates to the topic of this PhD thesis which deals with nominalizations in Dutch, English and Czech. Language is a creative system with the ability to use a finite number of units and to combine them into an infinite number of grammatically correct structures (Chomsky, 1957). The term argument structure (AS) refers to the potential of lexical items, typically verbs but also nouns (especially nominalizations), to combine with specific arguments, usually phrasal in nature. An encompassing definition was provided by Bresnan (2001, 304), according to whom argument structure is “an interface between the semantics and syntax of predicators (which we may take to be verbs in the general case)... Argument structure encodes lexical information about the number of arguments, their syntactic type, and their hierarchical organization necessary for the mapping to syntactic structure.”

However, to be able to understand this definition fully, we need to look briefly at the historical development of the term. Subcategorization, arguments and argument structure have been discussed in linguistics since the 1960’s, first in the tradition of the transformationalist approach, later as part of the Government and Binding framework (1980s), as a reaction to the concept that had long been known in European linguistics as verbal valence.

The first linguist to use the term was Tesnière (1959), who described verbal valence as the ability of a verb to bind arguments (actants), parallel to binding in chemistry.

One can compare the verb to a sort of atom with bonds, susceptible to exercising attraction on a greater or lesser number of actants. For these actants, the verb has a greater or lesser number of bonds that maintain the actants as dependents. The number of bonds that a verb has constitutes what we will call the valence of the verb. (Tesnière 1959, 128)

Thus verbal valence includes both internal arguments (objects) as well as the external argument (subject).

In Czech linguistics, linguists such as Daneš (1971), Karlík and Nübler (1998), Karlík (2000), Sgall (1998, 2006), Panevová (1999), and Hajič et.al (2003) have dealt with verbal valence. Also the so called Prague Dependency Treebank (PDT) and valence dictionary PDT-Vallex are built around it.

In the 1960s transformational grammar started to refer to the subcategorization frame of verbs (Chomsky, 1965). This means that each verb has one or more arguments. An intransitive verb will require one argument (1a), a monotransitive verb two arguments (1b), and a ditransitive verb three arguments (1c) for the clause to be grammatical. Compare the following examples:

1. a [NP *Maigret*<sub>A1</sub>] *stumbled*.
- b [NP *Maigret*<sub>A1</sub>] *killed* [NP *the burglar*<sub>A2</sub>].
- c [NP *Maigret*<sub>A1</sub>] *gave* [NP *his pipe*<sub>A2</sub>] [PP *to Janvier*<sub>A3</sub>].

However, since Chomsky (1964) the syntactic structure has been separated from the interpretation. He pointed out that the subject (or the external argument) is a position/function/relation in the structure and it cannot be derived from a semantic role in a concrete sentence (e.g. consider expletives where the subject has no semantic role).

In the late 1960's, Fillmore (1968, 1977) came up with Frame Semantics, which means that each verb selects a certain number of deep structure cases (= semantic roles) which form its case frame, and these semantic roles are hierarchically organized according to their prominence. This organization expresses a language independent generalization about semantic/thematic/theta roles (2).<sup>1</sup>

2. Agent > Instrument > Theme/Patient

---

<sup>1</sup> Fillmore calls thematic roles *cases*.

The subject selection rule (Fillmore 1968, 33) then states that the argument of a verb bearing the highest-ranked semantic role becomes the subject. If there is an A [= Agent], it becomes the subject (3a); otherwise, if there is an I [= Instrument], it becomes the subject (3b); otherwise, the subject is the O [= Objective, i.e., Theme/Patient] (3c), as is illustrated in the examples below:

3. a *Dana opened the door.*
- b. *The chisel opened the door.*
- c. *The door opened.*
- d. *Dana opened the door with a chisel.*
- e. \* *The door opened by Dana.*
- f. \* *The chisel opened the door by Dana.*

If the subject selection rule is violated (3e,f), the sentence becomes ungrammatical. As mentioned before, different frameworks generally agree that semantic roles are also related to grammatical relations in such a way that “higher” semantic roles are mapped onto “higher” syntactic relations as in (4):

4. Agent .....Subject
- Patient/Goal .....Direct Object
- Recipient/Beneficiary.....Indirect Object

However, there is no such a rule that a given semantic role always maps onto a given grammatical relation, as the mapping also depends on the type of construction. We can illustrate this by an active versus a passive sentence. In the active sentence under (5a) the highest semantic role of an agent is mapped onto the highest grammatical relation of the subject of the sentence, which is its “canonical” realization. Yet, in the passive sentence (5b) the semantic role of a patient is mapped to the subject of the sentence:

5. a [<sub>Subj</sub> *John*] *wrote many letters to Jill.*
- b [<sub>Subj</sub> *Many letters*] *were written to Jill by John.*

In the 1980's within the Government and Binding Theory, the lexicalist approach to generative grammar (Chomsky 1981-1986), structure was no longer considered to be generated through transformations, but in the Lexicon through subcategorization. This means that each verb selects its obligatory internal arguments to complete the minimal VP. Every predicate also has its argument structure, i.e. it is specified for the number of arguments it requires. "The arguments are the participants minimally involved in the activity or state expressed by the predicate" (Haegeman 1991, 36). The argument structure of the verb determines which elements of the sentence are obligatory. The process in which verbs select the semantic/theta roles of their arguments is called s(semantic)-selection as opposed to c(categorial)-selection, which is the selection of the syntactic categories (e.g. NP, PP, AP, etc.) of these arguments. Thus for example the verb *kill* s-selects agent and patient and it c-selects the NP category for both of these arguments.

Selection of arguments is also distinguished from subcategorization. The verb *kill* subcategorizes for one NP complement (the internal argument) to complete the minimal VP, but the NP subject is an external argument outside of the minimal VP so it is not subcategorized for. The internal and external arguments are contrasted with adjuncts which are optional constituents that are neither subcategorized for nor selected by the V.

"Theta Theory" then dealt with s-selection, with the assignment of semantic or theta roles to arguments. Below is the list of the main theta roles a verb can assign (Haegeman 1991, 49-50):

6. AGENT/ACTOR: the one who intentionally initiates the action expressed by the predicate
- PATIENT: the person or thing undergoing the action expressed by the predicate
- THEME: the person or thing moved by the action expressed by the predicate
- EXPERIENCER: the entity that experiences some (psychological) state expressed by the predicate
- BENEFACTIVE/BENEFICIARY: the entity that benefits from the action expressed by the predicate
- GOAL: the entity towards which the activity expressed by the predicate is directed
- SOURCE: the entity from which something is moved as a result of the activity expressed by the predicate

LOCATION: the place in which the action or state expressed by the predicate is situated

The information about how many arguments with which semantic roles each predicate requires is part of the lexical knowledge of a native speaker. In the Government and Binding Theory this is represented by means of a theta grid (Haegeman 1991, 51). The theta grid for e.g. *kill* specifies that the verb assigns two thematic roles – agent and patient.

7. *kill*: verb

AGENT	PATIENT

If the thematic roles can be assigned to arguments, they are “saturated” and this is marked by checking off the thematic role in the theta grid of the predicate. The requirement that each thematic role of a predicate must be assigned and that there must be no NPs that lack a thematic role is summed up in the Theta Criterion (8) defined by Chomsky (1981, 36):

8. **Theta criterion:** Each argument is assigned one and only one theta role. Each theta role is assigned to one and only one argument.

Argument structure and selection is also related to the notion of case, normally seen as the inflectional forms of nouns due to their different syntactic functions. Let’s take the following sentences as an example:

9. a *Mary / she killed John / him.*  
b *Mary / \*her killed John / \*he.*

In (9a) the internal argument of *kill* takes the form *him* or in traditional linguistics the ACC(usative) case and the external argument takes the form *she* or the NOM(inative) case. Since overt morphological case is not normally visible on English NPs (except for the genitive and the distinct forms of English pronouns) and varies cross-linguistically, Government and Binding theory introduced the requirement that all overt NPs must be

assigned Abstract Case (Chomsky 1981, 49), which is either structural (connected with position) or inherent (connected with theta roles) and it is a universal property.

10. **Case filter:** Every overt NP must be assigned Abstract Case.

This states that every overt NP must be assigned a specific Case regardless of whether this Case manifests at the surface level as morphological case. Since the subject position of finite verbs assigns NOM and the object position ACC, the pronouns in (9b) are ruled out.

The latter development brought in the Universal Theta Assignment Hypothesis = U.T.A.H. (Baker, 1988) and General Correspondence Rule (Jackendoff, 1990).

11. **U.T.A.H.:** identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.

According to this hypothesis the D-structure of both sentences in (12) is the same and the S-structure of (12b) is derived by invisibly incorporating *to* in the verb and moving *Mary* to the left of *a book*.

12. a *John gave a book to Mary.*

b *John gave Mary a book.*

The General Correspondence Rule (Jackendoff 1990, 44) suggested that there is a correspondence between syntax and conceptual structure, which is a property of the Lexicon.

13. **The General Correspondence Rule:** Every content-bearing major phrasal constituent of a sentence (S, NP, AP, PP, etc.) corresponds to a conceptual constituent (Thing, Event, State, Action, Place, Path, Property) of some major category.

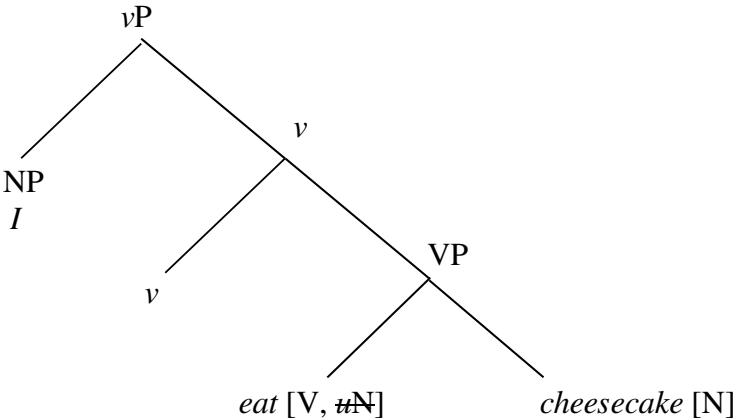
In this semantic approach it may be only part of the meaning of a verb which is responsible for assigning a particular thematic role to a given argument.

Finally, the Minimalist Program (Chomsky, 1995) pointed out several problems in the Government and Binding framework by reducing the number of rules which went against the principles of economy. Its feature checking mechanism ensured that the right number of



arguments would be inserted because theta roles are in Minimalism features on the V that need to be checked. A transitive V has an uninterpretable feature [*u*N], which must be saturated by MERGE with some nominal category [N]. And the Extended Projection Principle (EPP) (Chomsky, 1981), which is the idea that clauses must contain an NP or a DP in the subject position, ensured that the verb would have a subject (14).

14.



So far we have looked at the development of the theory of argument structure and explained the basic concepts. In the next section I will examine argument structure of nouns as opposed to verbs and I will look at how these theoretical concepts have been applied to them.

**2.3. Argument Structure of Nominals**

As we have seen so far, verbs have argument structure (Tesnière, 1959; Chomsky, 1964; Fillmore, 1968; etc.), but we should also consider nouns and examine how the previously discussed concepts apply to them. Generally speaking, unlike verbs, most nouns do not have argument structure and do not assign thematic roles except in nominalizations, which are nouns formed from verbs e.g. *the destruction of the city, John’s admiration of her, the development into the hills, his writing of the novel, John’s sending letters to Mary every day,* etc.

Many prominent linguists have analyzed nominalizations and their argument structure including Chomsky (1970, 1981), Zubizarreta (1987), Grimshaw (1990), Borer (1993, 1997, 2001), and Emonds (2000). Their views on how nominalizations are generated vary and they have also developed and changed throughout time. Firstly, according to Lees (1960), in the

early transformationalist approach, nominalizations were considered to be generated as transformations of kernel sentences with verbs by phrase structure rules in the base. Lees noticed the similarity between the active sentence in (15a) and the corresponding nominal versus the passive sentence in (15b) and the corresponding nominal and assumed that they must be transformations of one another.

15. a *the enemy destroyed the city* → *the enemy's destruction of the city*  
b *the city was destroyed by the enemy* → *the city's destruction by the enemy*

The Lexicalist Hypothesis formulated by Chomsky (1970) claimed that word formation is not performed by syntactic transformations but by a set of Lexical Rules. Chomsky argued that if the transformationalist approach were correct, derived nominals would exist in all the cases in which we have gerundive nominals; however, that is not the case:

16. a *John's being easy to please.* (a gerund) X *\*John's easiness to please.* (no derived nominal)  
b *John's being eager to please.* (a gerund) X *John's eagerness to please.* (a derived nominal)  
c *His criticizing the book before he read it.* (a gerund) X *\*His criticism of the book before he read it.* (no derived nominal)

Instead, he advocated the transformationalist analysis of gerunds but the lexicalist analysis of derived nominals. This is supported by the fact that gerunds are productive while derived nominals are much more restricted (16a), gerunds can have S complements (16b) and can be modified by VP adjuncts<sup>2</sup> (16c) since gerunds are generated by grammatical transformations, while derived nominals are generated as nouns in the Lexicon. Derived nominals thus must satisfy fixed selectional and strict subcategorizational features given in the Lexicon, but *easy* (16a), unlike *eager* (16b), does not appear in the Lexicon with a strict subcategorizational feature indicating that it can take a sentential complement (Chomsky 1970, 191-193).

---

<sup>2</sup> Adverbial temporal clauses do not occur with simple event nominals either: *\*Johns trip before he was ready was dangerous.*

However, although Chomsky made a step forward by distinguishing gerunds from derived nominals, he did not pay enough attention to the fact that derived nominals are a mixed group and not one type, as we will see just below.

Within the Government and Binding Theory, Chomsky (1981, 50) focused on the assignment of the three cases of the English case system: the nominative, objective and genitive case. Subjects of tensed clauses carry nominative case, verbs and prepositions assign objective case and genitive case is assigned to NP specifiers (as in *their book*, *John's admiration*, etc.). Therefore the ungrammaticality of the nominal in (17) is attributed to the fact that nouns and adjectives (+N categories) cannot assign objective case in English.

17. \**John's admiration her.*

However, insertion of the semantically empty preposition *of* “rescues” examples of this sort from violating the Case filter:

18. *John's admiration of her.*

Moreover, Chomsky (1981, 51) assumes that a nominalization like e.g. *the destruction of the city* is derived from the VP *destroy the city* but verbs and nominals differ in the form in the surface structure. The nominal formed from the VP *destroy the city* can surface in one of the two forms either as i) *the city's destruction* by Move  $\alpha$  followed by a genitive case assignment or as ii) *the destruction of the city* by *of* insertion. In either case, the Case filter is satisfied.

However, there might be some questions as to what the relations are among the many notions subcategorize, theta-mark, govern and case-assign in nominalizations. According to Chomsky (1981, 51), they generally coincide, but not always. Subcategorization is only for internal arguments, while theta marking concerns all arguments which are assigned theta roles. In such examples as *the destruction of the city* the NP *the city* is subcategorized in D-structure by *destruction* or its verbal head and theta-marked by this element, while it is governed by the inserted preposition *of*, and also assigned Case by *of*.

Government rather than subcategorization is the relevant notion for Case-assignment – in this case, at S-structure. But government is also the relevant notion for subcategorization in D-structure in *destroy the city*, and generally. Thus the theories of

subcategorization, theta-marking and Case all fall within the general theory of government, at least in their essentials. (Chomsky 1981, 51)

Grimshaw's (1990) lexicalist approach contributed to the analysis of nominalizations by classifying them into three types as simple event nominals (e.g. *exam*), result nominals (e.g. *a colourful collection of butterflies*) and complex event nominals (e.g. *the quick transformation of the market*) because according to her they have a number of different properties.<sup>3</sup> The last type, complex event nominals, has argument structure like verbs, and according to her this is not accidental but systematic. Complex event nominals are generated as syntactic transformations (similar to passives, although nominalization is an independent process) and therefore satisfy the verbal argument structure obligatorily. On the other hand, simple event and result nominals are lexical units (like nouns); they do not have argument structure and have mostly nominal properties. If their interpretation is similar to verbs it is merely a question of semantic relatedness. Just like Chomsky, Grimshaw also agreed that gerunds are generated by transformations.

Moreover, in her view argument structure is constructed in accordance with the thematic hierarchy. Theta role assignment takes place from the least (internal) to the most (external) prominent argument. "Argument structures are constructed in accordance with the Thematic Hierarchy, so the structural organization of the argument array is determined by universal principles, based on the semantic properties of the arguments" (Grimshaw 1990, Ch.1 23). Previous to Grimshaw a theta grid had been an unordered list of theta roles but in her approach the theta grid of a predicate is equated with its argument structure and argument structure also specifies the hierarchy among the roles.

However, although both verbs and nominals theta mark, nouns never theta-mark directly, but via prepositions in English (19b). Compare the following complex event nominal examples where (19c) is ungrammatical because the complement immediately follows the nominal without a preposition:

19. a *John is reconstructing a house.*

b *John's / his reconstruction of the house / The reconstruction of the house (by John) took one year.*

c *\*John's reconstruction the house took one year.*

---

<sup>3</sup> She also correctly pointed out that one nominal form can belong to two different types in her classification.

Unlike (19b), (19c) is ungrammatical because the theta-marked complement immediately follows the nominal without a preposition.

Although Grimshaw provided a thorough analysis of the internal properties of simple event, result and complex event nominals, the details of how exactly they are first generated remain unclear. Also the fact that the list of determiners of complex event nominals is limited, while for result nominals it is not, is in her account an accident.

Later Börner (1993, 1997, 2001) and Emonds (2000) took over the transformationalist approach, but they also built on Grimshaw's classification and her view of argument structure. Basically, in their view complex event nominals are derived by cyclic derivation and they only differ in terminology. Börner's Parallel Morphology responds roughly to Emonds's Syntacticon, and while in Börner's analysis VP is nominalized, in Emonds's model [ $\sqrt{V}$ ] selects and then is nominalized.

In Emonds's (2000) morphosyntactic model complex event nominals have two syntactic heads. The V head subcategorizes in the deep structure, and the nominalizing suffix inserted later in the syntax becomes the surface structure nominal head. The main advantage of his approach is that it simplifies the operation by avoiding passivation of the sentence and its subsequent nominalization.

With result nominals the nominalizing morpheme is inserted early, before syntax, and it becomes the head. Therefore the V does not select at all, and result nominals have nominal properties. With gerunds the *-ing* morpheme is inserted late, after syntax, so they have all the internal VP properties.

As a result, the argument structure is still present in complex event nominals and they retain more verbal properties than result nominals. The crucial difference between complex event nominals, result nominals and gerunds are thus the different levels at which the nominalizing morphemes are inserted in a derivation. Although the arguments of the verb can appear with both result and complex event nominals, it depends which category takes them, V or N (Emonds 2000, Ch.4 155).

In conclusion, Lees (1960) first systematically analyzed all nominalizations as transformations; Chomsky (1970) discussed various reasons which lead to the transformationalist approach to gerunds but the lexicalist approach to complex event and result nominals; Grimshaw (1990) introduced the concept of argument structure of nominals, showing that complex event nominals have argument structure, but result nominals do not, and provided a detailed analysis of the internal properties of different types of nominals;

Emonds (2000) used Grimshaw's classification but accounted for the different properties not in terms of lexical semantics but syntax. Since he manages to explain how complex event and result nominals are differently generated, i.e. why complex event nominals inherit the argument structure, while others don't, and also differ in their internal properties, his account seems to be so far the most precise and complete treatment of complex event nominals.

#### **2.4. Chapter Summary**

Each of the different frameworks for argument structure has had a different insight, has added some new concepts, depending on how they understand the interface between syntax and semantics, and has moved the analysis forward, but there is no real consensus yet. Chomsky (1981) showed that argument structure of nominals is related to government. Grimshaw (1990) devised the classification of derived nominals and Emonds (2000) used Grimshaw's classification to analyze how result and complex event nominals are derived. However, many questions still remain unanswered, especially those related to contrastive linguistics and whether nominalizations are formed in the same or similar ways in different languages. For this reason, this study has extended the treatments of the authors, who focus on English, to other languages such as Dutch and Czech.

### 3. Dutch Nominalizations

#### 3.1. Chapter Introduction

This chapter deals with the nominalization process in Dutch and tries to draw parallels between the Dutch and English constructions. Although different authors describe different constructions as Dutch nominalizations, I have decided to include only those that fulfill two basic criteria. Firstly, they inherit the denotation (namely the state of affairs) of the verb they are derived from and, secondly, they inherit the argument structure of that verb if interpreted as complex event or process nominals. For this reason the ER-nouns (included for example in *Syntax of Dutch 2012*) ending in allomorphs *-er/-ster* (e.g. *schrijver/ster* ‘male/female writer’, *lezer/eres* ‘male/female reader’, *fietsers* ‘cyclist’, *opener* ‘opener’, *wekker* ‘alarm clock’, *waaier* ‘fan’, etc.) and certain other derivational affixes will not be considered, as they do not inherit the denotation of the verb, and the affix already indicates that they mostly denote persons or objects, rather than events or states. I will also discuss where different authors disagree and which aspects of their analyses can be resolved more satisfactorily. As a result of this study, I will be able to draw some original, if tentative, conclusions about the derivation of Dutch nominalizations.

The chapter is divided into four sections. After the general introduction of Dutch nominals, the second section will focus on Dutch true derived nominals of two types. The first group are ING-nominals, the second one are GE-nominals. Although morphologically different, these two derived nominals have many similarities in terms of their shared nominal and verbal properties and have the external distribution of DPs. Besides that, both of them inherit the argument structure of the verb they are derived from and can denote the action of the verb in two ways – as a process (event) or as a result.<sup>4</sup>

The third section will examine nominal infinitives (NIs) of two types. The first type are bare nominal infinitives (NI-Bs), the second type are determined nominal infinitives with the definite article *het* (NI-Ds). I will demonstrate that although their external syntax is basically the same – they both have the distribution of DPs fulfilling the syntactic functions of subjects, objects, PP-objects or adverbials – their internal structure differs. Both types of nominal infinitives also inherit the argument structure of the verb as well as its denotation, but they denote the action of the verb only as a process (event). Furthermore, I will compare their

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<sup>4</sup> I am using the terms process/event and result nominal in line with J. Grimshaw, presentation in *Argument Structure* (1990).

nominal and verbal properties and examine how they behave with respect to different criteria such as the form of an internal object, modification, pluralization, etc.

Dutch nominal infinitives have been studied previously in detail by both traditional and generative linguists (e.g. Hoekstra, 1985; Zubizarreta and Van Haaften, 1988; Looyenga, 1992; Hoekstra, 1999; Schoorlemmer, 2001; Reuland, 2011; Broekhuis, 2012), and although these authors have managed to describe their behaviour extensively, they have not been able to show formally that they are in fact very systematic and logical constructions or how they fit into a broader theoretical linguistic context, as Dutch nominal infinitives have always been “notoriously difficult to analyze” (Schoorlemmer, 2001). I depart more from previous approaches in my treatment of nominal infinitives than of the GE- and ING-nominals and propose a new analysis.

The fourth section will draw some conclusions, it will situate Dutch nominalizations within a broader linguistic context and summarize my treatment of Dutch nominal infinitives.

## **3.2. Derived Nominals**

### **3.2.1. External Contexts**

The first types of Dutch nominalizations examined in this chapter are the derived nominals that have in terms of previous studies predictable and regular behavior. Dutch derived nominals are constructions with a purely nominal lexical head that can be either basic or “derived”, that is added in a syntactic derivation. There are two types of derived nominals which will be included in this section, as they both inherit the denotation as well as the argument structure of the verb they are derived from. But unlike nominal infinitives, described in the next section, they can denote the action of the verb both as a process and as a result. The first type I will examine are ING-nominalizations; the second type are GE-nominalizations.

Externally, like nominal infinitives, both types of derived nominals have the distribution of DPs and thus can appear in the syntactic functions of subjects (1), direct objects (2), prepositional objects (3) or adverbials (4).



1. (ING-nominalization as a subject)

*a Ik hoorde dat de vernietiging van de stad vele slachtoffers eiste.*

I heard that the destruction of the city many victims cost

‘I heard that the destruction of the city cost many victims.’

(GE-nominalization as a subject)

*b Dat verslag zegt dat het gewandel van de patiënten in het park veel aandacht*

that report says that the walking of the patients in the park a lot of attention  
*trok.*

attracted

‘That report says that the walking of the patients in the park attracted a lot of attention.’

2. (ING-nominalization as a direct object)

*a Zij heeft mij de vernietiging van de stad beschreven.*

she has me the destruction of the city described

‘She has described the destruction of the city to me.’

(GE-nominalization as a direct object)

*b De leraar heeft zijn geschrift nagekeken.*

the teacher has his writing checked

‘The teacher has checked his own writing.’

3. (ING-nominalization as a PP object)

*a Wij hebben veel over de vernietiging van de stad gehoord.*

we have a lot about the destruction of the city heard

‘We have heard a lot about the destruction of the city.’

(GE-nominalization as a PP object)

b *Ik ben moe van het gewandel.*

I am tired of the walking

‘I am tired from walking.’

4. (ING- nominalization as an adverbial)

a *Na de vernietiging van de stad vluchtten de bewoners naar het buitenland.*

after the destruction of the city fled the inhabitants to the abroad

‘After the destruction of the city the inhabitants fled abroad.’

(GE-nominalization as an adverbial)

b *Na al het gewandel kreeg ik honger.*

after all the walking got I hunger

‘After all the walking I got hungry.’

Their nominal nature can also be tested by coordination with other DPs (5) and by their occurrence after prepositions in PPs (6). Since derived nominals appear in both positions, they must be analyzed as Ns themselves, as Emonds (2014) demonstrates for English gerunds.

5. a *De vernietiging van de stad en de brand eisten veel slachtoffers.*

the destruction of the city and the fire cost many victims

‘The destruction of the city and the fire cost many victims.’

b *Ik vond het gewandel en de frisse lucht plezierig.*

I found the walking and the fresh air pleasant

‘I found the walking and the fresh air pleasant.’

6. a *Na de vernietiging van de stad en de brand vluchtten de bewoners naar*  
after the destruction of the city and the fire fled the inhabitants to  
*het buitenland.*

the abroad

‘After the destruction of the city and the fire the inhabitants fled abroad.’

b *Ik ben moe van het gewandel en de frisse lucht.*

I am tired of the walking and the fresh air

‘I am tired of the walking and the fresh air.’

It is apparent that externally both types of Dutch derived nominals behave the same. In the next two subsections I will examine ING- and GE-nominalizations with respect to their internal structure and their nominal and verbal properties.

### 3.2.2. ING-nominalizations

First, we will now examine the first type of derived nominals, the ING-nominalizations in more detail. ING-nominalization is only a partially productive process since some verbs, for example the object-experiencer verbs and the raising verbs, do not allow any form of nominalization.<sup>5</sup> Apart from that the following verbs are also excluded completely in ING-nominalizations (Broekhuis 2012, 70):

7. a intransitive

\**Jans dansing amuseerde ons.*

John’s dancing amused us

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<sup>5</sup> For a parallel with restrictions on English derived nominals see Chomsky (1970, 188-189).

b inherently reflexive verbs

*\*Zijn schaming van zichzelf over zijn gedrag was niet voldoende.*

his being ashamed of himself about his behaviour was not sufficient

c verbs of sensory perception

*\*Jans voeling was begrijpelijk.*

John's feeling was understandable

d verbs of thinking

*\*Jouw denking is niet logisch.*

your thinking is not logical

e verbs of saying

*\*Maria's zegging was waarheidsgetrouw.*

Mary's saying was truthful

f stative verbs

*\*Voldoende weting is belangrijk.*

knowing enough is important

g auxiliary/modal verbs

*\*Kunning rijden is nodig.*

canning drive is necessary

With respect to their morphological analysis, the ING-nominalizations are derived from the input verb by attaching the suffix *-ing*. Having said that, however, not all ING-nominalizations end in the morpheme *-ing*; other derived nominals end in the suffixes *-age* (*fabricage* 'manufacture', *montage* 'assembly', etc.), *-atie* (*isolatie* 'isolation', *argumentatie* 'argumentation', etc.), *-ering* (*isolering* 'isolation', *formulering* 'formulation', etc.), *-st* (*komst*

‘coming’, *vondst* ‘discovery’, etc.) or have idiosyncratic forms (such as *bod* ‘offer’, *jacht* ‘hunt’, *diefstal* ‘theft’, etc.), and these also count as ING-nominalizations (8) (Broekhuis 2012, 62-63).

8. a *Jans jacht op de zeldzame editie was vergeefs.*

John’s hunt on the rare edition was vain

‘John’s hunting for the rare edition was vain.’

b *Youw argumentatie is niet logisch.*

Your argumentation is not logical

Unlike nominal infinitives (described later in this chapter), ING-nominalizations can denote the action of the verb in two different ways. Most of them denote the action as the process or event (9a-b), but some also denote the concrete or abstract result of the action (9c-d) (e.g. *verzameling* ‘collection’, *vertaling* ‘translation’, *uitvinding* ‘discovery’, *onderneming* ‘company’, etc.).

9. a *De verhoging van de prijzen veroorzaakte paniek.*

the rising of the prices caused panic

b *De formulering van het programma was niet duidelijk.*

the formulation of the program was not clear

c *Wat vind je van mijn nieuwe verzameling postzegels?*

what find you of my new collection stamps

‘How do you find my new collection of stamps?’

d *De vertaling van het boek verkocht goed.*

the translation of the book sold good

‘The translation of the book sold well.’

So let’s compare the nominal and verbal properties of ING-nominalizations to see what they are like internally. Just like regular nouns, ING-nominalizations can be both definite (10a) as well as indefinite (10b) (if they are interpreted as result nominals). They take demonstratives (10c) and as result nominals can also co-occur with quantifiers and can be pluralized (10d).<sup>6</sup>

10. a *De behandeling van de patiënt bleek succesvol.*

the treatment of the patient proved successful

‘The treatment of the patient proved successful.’

b *Een behandeling van deze patiënt zou succesvol kunnen zijn.* (result)

a treatment of this patient should successful can be

‘A treatment of this patient could be successful.’

c *Deze behandeling van de patiënt zou succesvol kunnen zijn.*

this treatment of the patient should successful can be

‘This treatment of the patient could be successful.’

d *De twee behandelingen van de patiënt waren succesvol.* (result)

de two treatments of the patient were successful

‘Two treatments of the patient were successful.’

(Broekhuis 2012, 66)

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<sup>6</sup> Their gender is [-NEUTER], which is why they co-occur with the article *de* used for both masculine and feminine gender (e.g. *de man* ‘the man’, *de vrouw* ‘the woman’, etc.).

Moreover, the ING-nominalizations in subject positions can be questioned (11a) and sometimes also pluralized (11b), although the result very often sounds marked. The pluralization is fully acceptable only if the nominalization is modified by an adjective or if the arguments can be recovered from the context (Broekhuis 2012, 67).

11. a *Welke behandeling van de patiënt zou succesvol kunnen zijn?*  
which treatment of the patient should successful can be  
'Which treatment of the patient could be successful?'

b *De lang voorspelde verhogingen van de prijzen veroorzaakten paniek.*  
the long predicted increases of the prices caused panic  
'The long predicted increases of the prices caused panic.'

Like regular underived nouns, ING-nominalizations are modified by adjectives, not adverbs. However, they take VP adjectives (12) and adjectives expressing frequency and duration as well (13); these properties are related to their verbal origin and in Grimshaw's (1990) classification modify complex event nominals.

12. *De sterke / \*sterk prijsverhoging van benzine veroorzaakte paniek.*  
the steep / steeply price.increase of petrol caused panic  
'The steep increase of the price of petrol caused panic.'

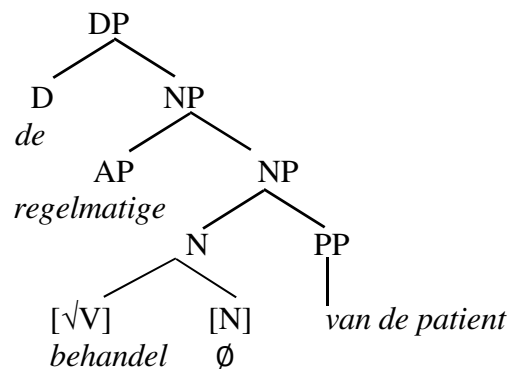
13. *De regelmatige / \*regelmatig behandeling van de patiënt bleek succesvol.*  
the frequent / frequently treatment of the patient proved successful  
'The frequent treatment of the patient proved successful.'

Note that these are exactly the properties given in Grimshaw (1990) for English complex event nominals. Nonetheless, some ING-nominalizations can be result nominals as well and these can appear with indefinite determiners, be quantified and also pluralized.

From the point of view of their internal syntax, the tree structure of a prototypical complex event ING-nominalization like for example *de regelmatige behandeling van de patient* ‘the frequent treatment of the patient’ is like the one in (14a) where the phrase is a DP with the *van*-phrase (*van de patient*) in the complement position. In line with Emonds’s (2000) morphosyntactic model, the details of which will be explained in the next chapter, the verbal root is the deep level lexical head that selects, while the empty N is inert to selection at this level. The nominalizing suffix *-ing* replaces  $\emptyset$  later during the syntactic derivation and becomes the nominal lexical head in s-structure. If the ING-nominalization is a result nominal like *de nieuwe vertaling*, its internal structure will look like the tree under (14b). In this case the merge with the suffix occurs already in the Lexicon. Notice that the nominal properties are carried by the suffix *-ing*, which according to Williams’s (1981) Right Hand Head Rule, is the head of the word.

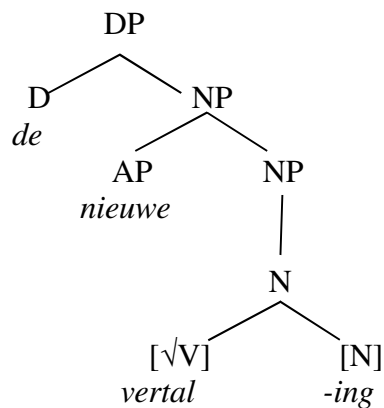
14.

(a)





(b)



With respect to the argument structure inherited from the input verb, the ING-nominalizations retain both the number of arguments as well as their thematic functions, just as complex event nominals do in other languages, although these arguments are expressed optionally (Broekhuis 2012, 78-80). The patient can appear in two positions. It will either precede the nominalization as a possessive pronoun or a genitive noun phrase (15a) or follow it in the form of a *van*-phrase (15b), since this is the standard position for complements in NPs in Dutch.

15. a *Jans behandeling was succesvol.*

John's treatment was successful

'The treatment of John was successful.'

b *De behandeling van de patiënt was succesvol.*

the treatment of the patient was successful

'The treatment of the patient was successful.'

The agent can be expressed either prenominally by a possessive pronoun or a genitive noun phrase (16a), or it can appear in the postnominal position as the *door*-phrase (16b) in the case of monotransitive verbs.

16. a *Jans behandeling van de patiënt was succesvol.*

John's treatment of the patient was successful

'John's treatment of the patient was successful.'

b *De behandeling door de dokter was succesvol.*

the treatment by the doctor was successful

'The treatment by the doctor was successful.'

With ditransitive verbs, however, the order of the arguments is obligatory. The patient must be in the form of a *van*-phrase, the recipient can optionally be expressed by an *aan*-phrase and the agent by a *door*-phrase (17), parallel to their English equivalents.

17. a *Ik geloof in de vergeving van de zonden (aan alle volken) (door God).*

I believe in the forgiveness of the sins to all people by God

'I believe in the forgiveness of sins for all people by God.'

Verbs which select a PP complement can be nominalized too, and the nominalization will obligatorily be followed by the PP (18a), the PP can never precede the nominalization (18b), unlike, as will be seen later in subsection 3.3.2., in bare nominal infinitive constructions. This is apparently a nominal property since in Dutch nouns must be followed by any PP complement, while verbs are preceded by it.

18. a *Jans jacht op de zeldzame editie was vergeefs.*

John's hunt on the rare edition was vain

'John's hunting for the rare edition was vain.'

b *\*Jans op vossen jacht is een rare hobby.*

John's on foxes hunt is a strange hobby

As pointed out before, some ING-nominalizations can also have the interpretation of result nominals. These can also be premodified by a possessive pronoun or a genitive noun phrase and postmodified by a *van*-phrase as in (19).

19. *Haar vertaling van het boek verkocht goed.*

her translation of the book sold good

'Her translation of the book sold well.'

However, it is necessary to say that in result nominals these modifiers will not be interpreted as verbal arguments (Broekhuis 2012, 64) just as Grimshaw (1990) has shown for English result nominals and also proves to be the case with Czech result nominals.

As we have seen in this subsection, most ING-nominalizations behave like English complex event nominals, in Grimshaw's (1990) terminology; some of them are interpreted as result nominals as well. Her diagnostics and classification exemplified with English derived nominals also correctly predicts the behaviour of Dutch ING-nominalizations because they are fairly exact counterparts of derived nominals in other languages.

### 3.2.3. GE-nominalizations

Dutch GE-nominalizations, like ING-nominalizations, are classified as true derived nominals. They also inherit the denotation and the argument structure of the verb they are derived from, and in this sense are related to the base verb. However, GE-nominalizations add something to the meaning of the input verb, namely they very often have a negative connotation or express some degree of irritation (Broekhuis 2012, 79).

Just like ING-nominalizations GE-nominalizations can denote the action of the verb in two ways, either as a process/event (e.g. *gewandel* 'walking, strolling', *getreiter* 'bullying', etc.) or as a result (e.g. *gebouw* 'building', *gebak* 'cake', *gedicht* 'poem', etc.). Sometimes the same GE-nominalization can even be used both as a process and as a result. Thus, in the first example in (20a) the result GE-nominalization is modified by a relative clause, while the second example of a process/event GE-nominalization in (20b) is followed by a *van*-phrase, a pattern that will also be seen in nominal infinitives. Compare the examples below:

20. a *Het grote gebouw, dat stond op de hoek, was een school.*

the big building that stood on the corner was a school

‘The big building that stood on the corner was a school.’

b *Er moet een einde komen aan het gebouw / bouwen van woningen hier.*

there must an end come to the building / build of houses here

‘The building of houses ought to be put to a stop.’

The same ambiguous reading can also be found with GE-nominalizations expressing human, animal or object sound emissions (e.g. *gelach* ‘laughing’, *gebabbel* ‘chattering’, *gefluister* ‘whispering’, *geloei* ‘mooing’, *gesnor* ‘whirring’, etc.).

The nominalization process of forming GE-nominals is a morphologically productive process in which the prefix *ge-* is attached to the verbal stem. However, the nominalization process is excluded for certain classes of verbs such as the object-experiencer verbs, the auxiliary/modal verbs and the raising verbs, as discussed for ING-nominals in the previous subsection. Furthermore, there are no GE-nominalizations formed from the following verbs (Broekhuis 2012, 80-81):

21. a unaccusative verbs

\**Jans gesterf duurde erg lang.*

John’s dying took very long

b verbs expressing opinion

\**Jans gevind hem saai verraste ons allemaal.*

John’s considering him boring surprised us all

c verbs which are not controlled by the participants in the event.

\**Het gelig van het boek op de grond was onverwacht.*

the lying of the book on the floor was unexpected

d verbs with inseparable Germanic prefixes like *be-*, *ver-*, *ont-*, *her-*<sup>7</sup>

\**Het gebesprek over de politieke situatie was aanvurend.*

the discussion over the political situation was inspiring

e reflexive verbs

\**Zijn geschaam van zichzelf was begrijpelijk.*

his being.ashamed of himself was understandable

Reflexive verbs are very often prefixed themselves, in which case then the reflexive pronoun must be realized as a *van*-phrase which would be contradictory to how the reflexive pronoun is realized for instance in nominal infinitives. However, if the PP containing the reflexive pronoun is dropped, it becomes possible to form the GE-nominalization (e.g. *Ik ben moe van dat geschaam.* 'I am fed up with that being ashamed.').

With respect to the nominal and verbal properties examined by Grimshaw (1990) for English, Dutch GE-nominalizations they can be both definite (22a), and if interpreted as result nominals, also indefinite (22b)<sup>8</sup>. As result nominals they can also be quantified (22c), questioned (22d) and pluralized (22e). Here my informants depart from *Syntax of Dutch* (2012) which does not consider result GE-nominals as true nominalizations and therefore excludes their pluralization.

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<sup>7</sup> The prefix *ge-* appears to be in the same series as these other inseparable prefixes. On the other hand, verbs with separable prefixes, which form a past participle form by the affix *ge-*, do allow GE-nominalizations (e.g. *doordrammen* 'nag': *Dat extreem doorgedram kan niemand overtuigen.* 'That extreem nagging can persuade nobody; *uitzoeken* 'find out': *Na een beetje uitzoek kwam ik erachter dat het onzin was.* 'After a little bit of research I came to the conclusion that it was nonsense.' etc.).

<sup>8</sup> They take the definite article *het*, used for neuters, and thus contrast with ING-nominalizations discussed in the previous subsection.

22. a *Het gehuil van de kinderen was irritant.*

the crying of the children was irritating

‘The crying of the children was irritating.’

b *Dat was een saai gepraat over politieke zaken.*

that was a boring talk over political matters

‘That was a boring talk about political matters.’

c *Ik vind elk gepraat over politieke zaken saai.*

I find each talk over political matters boring

‘I find each talk about political matters boring.’

d *Welk gepraat over politieke zaken vind je zo saai?*

which talk over political matters find you so boring

‘Which talk about political matters do you find so boring?’

e *De twee gebouwen op de hoek zijn een school en een bank.*

the two buildings on the corner are a school and a bank

‘The two buildings on the corner are a school and a bank.’

GE-nominalizations, just like ING-nominalizations, take adjectival modifiers (23a); adverbial modification would be marked. Nevertheless, GE-nominalizations can also be modified by adjectives that express frequency and duration, which are verbal properties (23b), as Grimshaw (1990) has previously shown for English complex event nominals.

23. a *Het luid / ?luid gepraat over politieke zaken was saai.*

the loud / loudly talk over political matters was boring

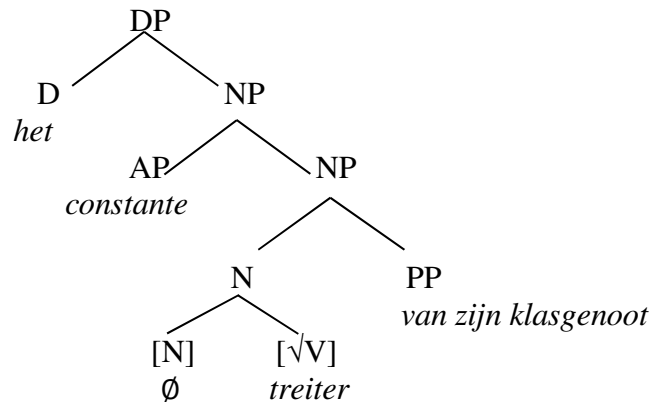
‘The complicated talk about political matters was boring.’

b *Het voortdurende / ?voortdurend gepraat over politieke zaken was saai.*  
 the constant / constantly talk over political matters was boring  
 ‘The constant talk about political matters was boring.’

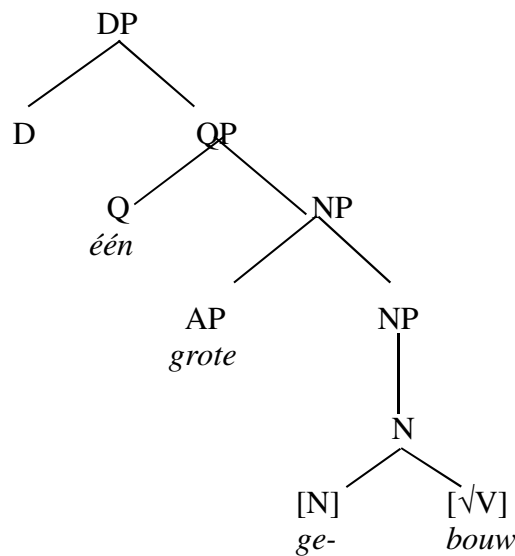
Tree structures for a complex event GE-nominalization like a DP *het constante getreiter van zijn klasgenoot* ‘the constant bullying of his classmate’ (24a) and a result GE-nominalization like a QP *één grote gebouw* ‘one big building’ (24b) are below. Similar to ING-nominalizations, it is the prefix *ge-* that bears the nominal properties in these nominalizations, although this implies that the Right Hand Head Rule is reversed here. However, to explain how this restriction is best expressed is not within the scope of this study. As in the previous section on ING-nominalizations and in line with Emonds’s (2000) model, the merge with the prefix *ge-* occurs at different levels in (24a) and (24b). Thus in the complex event GE-nominalization *ge-* replaces  $\emptyset$  in the syntactic derivation, while in result nominals it already occurs in the Lexicon. We are going to discuss the different levels of insertion in the next chapter on English nominalizations.

24.

(a)



(b)



With respect to their argument structure, GE-nominalizations inherit the argument structure from the input verb, which confirms what Grimshaw (1990) correctly predicts for complex event nominals, and as with ING-nominalizations their arguments can be realized optionally.

With intransitive verbs the agent can be realized postnominally either as a *van*-phrase (25a) or prenominally as a possessive pronoun or a genitive noun phrase (25b). With monotransitive verbs the agent will be realized as a possessive pronoun or a genitive noun phrase (26a). However, it can also appear postnominally as a *door*-phrase (26b).

25. a *Het gelach van de kinderen was irritant.*

the laugh of the children was irritating  
'The laughing of the children was irritating.'

b *Jans gelach was irritant.*

John's laughing was irritating  
'John's laughing was irritating.'



26. a *Henks getreiter van zijn klasgenoot is verschrikkelijk.*

Henk's bullying of his classmate is awful

'Henk's bullying of his classmate is awful.'

b *Het getreiter van zijn klasgenoot door Henk is verschrikkelijk.*

the bullying of his classmate by Henk is awful

With a transitive verb the patient is realized as a postnominal *van*-phrase (27a). However, unlike with nominal infinitives (to follow) it is neither possible to realize the patient prenominally by a noun phrase nor by a possessive pronoun or a genitive noun phrase (27b).

27. a *Het getreiter van zijn klasgenoot was verschrikkelijk.*

the bullying of his classmate was terrible

'The bullying of his classmate was terrible.'

b *\*Zijn / zijn klasgenoot getreiter was verschrikkelijk.*

his / his classmate bullying was awful

In this way, GE-nominalizations are also, unlike ING-nominalizations (Broekhuis 2012, 84). This seems to indicate that ING-nominalizations allow NP-movement to SPEC, but that GE-nominalizations do not.<sup>9</sup> However, this phenomenon is not further explained in this study as it would go beyond its scope.

GE-nominalizations of ditransitive verbs are not very common, but if all three arguments appear, they must be realized in this way: patient by means of a *van*-phrase, recipient as an *aan*-phrase and agent as a *door*-phrase (28) (Broekhuis 2012, 79).

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<sup>9</sup> In comparison to Dutch, English gerunds are more like Dutch GE-nominalizations since examples such as *\*The room's painting took a long time.* are ungrammatical.

28. *Het gegeef van geld aan de kerk door Jan was verrassend.*  
the giving of money to the church by John was surprising  
'The giving money to the church by John was surprising.'

Verbs which select a PP-complement can also be subject to the process of GE-nominalization. The prepositional phrase will be inherited by the noun but the PP can only appear postnominally (29), as with ING-nominalizations (cf. subsection 3.2.2.), since in Dutch nouns are followed by a PP, not preceded by it and both GE- and ING-nominalizations are Ns.

29. *Jans gejaag op konijnen is een rare hobby.*  
John's hunting on rabbits is a strange hobby  
'John's hunting for rabbits is a strange hobby.'

We have seen so far that GE-nominalizations behave predictably and regularly and according to Grimshaw's analysis can be classified as complex event nominals, but some of them serve as result nominals too.

#### **3.2.4. A Summary of Dutch Derived Nominals**

As this section has shown, both ING- and GE-nominalizations are true derived nominals and behave similarly and predictably according to Grimshaw's (1990) analysis. Both of them can denote the action of the verb in two ways either as a process or as a result and if they are interpreted as result nominals, they inherit the argument structure of the base verb.

However, ING-nominalizations show more nominal properties, since unlike with GE-nominalizations their patient can be realized as a genitive noun phrase or a possessive pronoun (apart from its postnominal realization by a *van*-phrase), which suggests that they allow NP movement to SPEC. Furthermore, although both types of derived nominals can be modified by verbal adjectives expressing frequency and duration, only GE-nominalizations

can take adverbial modifiers, even if they are marked. On the other hand, neither type allows prenominal patient or recipient NP or prenominal recipient PP, which is a verbal property.

Both types of derived nominals can be premodified by definite and, if interpreted as result nominals also indefinite determiners. Furthermore, result GE- and ING-nominalizations can be quantified, questioned and pluralized. Thus using Grimshaw's and later Emonds's (2000) diagnostics and classification, both types of Dutch derived nominals behave like regular complex event nominals with their argument structures inherited from the verbs, although some of them can also be interpreted as result nominals, in which case their prenominal possessive NPs and postnominal *van*-phrases are interpreted as modifiers and not arguments.

Apart from these differences in nominal and verbal properties, unlike ING-nominalizations, GE-nominalizations very often have a negative connotation or express some degree of irritation.

### **3.3. Nominal Infinitives**

#### **3.3.1. External Contexts**

Dutch nominal infinitives (henceforth NIs) are phrases that at first sight appear to be headed by an infinitival verb form (e.g. *lezen* 'read', *schrijven* 'write', *eten* 'eat', etc.). Like derived nominals, they inherit the denotation as well as the argument structure of the verb they are derived from. However, one substantial difference between them and the derived nominals described in the previous section is that infinitives always denote the action of the verb as a process (event) and never a result.

As mentioned earlier, Dutch distinguishes two types of nominal infinitives. The first type which I will from now on refer to as NI-Bs are bare (indefinite) nominal infinitives (30a),

the second type which is henceforth referred to as NI-Ds are nominal infinitives with the definite article *het* (30b), normally used for neuter nouns.<sup>10</sup>

30. a *Boeken lezen is interessant.*

books read is interesting

‘Reading books is interesting.’

b *Het lezen van boeken is interessant.*

the read of books is interesting

‘The reading of books is interesting.’

In general, infinitival nominalization is an almost fully productive process in Dutch, which means that unlike the derived nominals discussed in the previous section, almost all verbs, even stative (31a), reflexive (31b) or functional verbs (31c) can form nominal infinitives. However, NI-Bs are less likely to occur in these latter constructions than NI-Ds. The only limits on this nominalization process are raising verbs (31d) and object-experiencer verbs (31e), which are completely excluded from these constructions.

31. a (*Het*) *kunstenaar zijn is niet makkelijk.*

the artist be is not easy

‘Being an artist is not easy.’

b (*Het*) *zich voortdurend bedrinken is ziekelijk.*

the REFL. continuously get.drunk is unhealthy

‘Continuously getting drunk is unhealthy.’

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<sup>10</sup> The definite article *de* is used for both masculine and feminine gender nouns (e.g. *de man* ‘the man’, *de vrouw* ‘the woman’, etc.). Compare also the differing gender of ING- and GE-nominalizations described in the preceding section.

c *Jouw willen lezen van een boek verbaast me.*  
your want read of a book astonish.<sub>3.sg</sub> me  
'Your wanting to read a book astonishes me.'

d *\*Het schijnen dat hij rijk is verwarde ons.*  
the seem that he rich is confused us

e *\*Het hem lukken van al zijn plannen is niet mogelijk.*  
the him succeed of all his plans is not possible

In comparison Hoekstra (1985, 258) points out that bare NI-Bs rather than NI-Ds seem to appear in timeless constructions with generic meaning as in (32a) and (32b) as these constructions have to be indefinite, so they sound marked with the definite article *het* in (32a') and (32b').

32. a *Roken schaadt de gezondheid.*  
smoke damage<sub>3.sg</sub> the health  
'Smoking damages health.'

a' *?Het roken schaadt de gezondheid.*  
the smoke damage<sub>3.sg</sub> the health  
'The smoking damages health.'

b *Vallen is pijnlijk.*  
fall is painful  
'Falling is painful.'

b' *Het vallen is pijnlijk.*

the fall is painful

'The falling is painful.'

If we examine the two types of nominal infinitives from the point of view of their external syntax, it appears that they have exactly the same distribution as regular DPs with syntactic functions of subjects (33a), direct objects (33b), PP-objects (33c) or adverbials (33d). Compare the pairs of sentences below, where the first sentence is always a bare nominal infinitive (NI-B) and the second sentence is a determined nominal infinitive (NI-D):

(NI-B as a subject)

33. a *Dat verslag zegt dat fruit eten gezond is.*

that report says that fruit eat healthy is

'That report says that eating fruit is healthy.'

(NI-D as a subject)

a' *Hij zegt dat het eten van fruit hem gezond maakt.*

he says that the eat of fruit him healthy makes

'He says that the eating of fruit makes him healthy.'

(NI-B as a direct object )

b *De dokter suggereerde groenten eten bij het diner aan me.*

the doctor suggested vegetables eat for the diner to me

'The doctor suggested eating vegetables for diner to me.'

(NI-D as a direct object)

b' *De dokter suggereerde het eten van groenten bij het diner aan me.*

the doctor suggested the eating of vegetables for the dinner to me

'The doctor suggested the eating of vegetables for dinner to me.'

(NI-B as a PP object)

*c Ik ben dol op zeilen.*

I am crazy on sail

‘I am fond of sailing.’

(NI-D as a PP object)

*c' Ik ben dol op het zeilen.*

I am crazy on the sail

‘I am fond of the sailing.’

(NI-B as an adverbial)

*d Na boeken lezen gaat hij naar bed.*

after books read goes he to bed

‘He goes to bed after reading books.’

(NI-D as an adverbial)

*d' Na het lezen van boeken ging hij naar bed.*

after the read of books went he to be

‘After the reading of books he went to bed.’

Another test for their external syntax is the coordination test. Since only constituents of the same type can be coordinated and nominal infinitives can co-occur with other DPs headed by nouns which are not derived from verbs (34), they must be DPs themselves.

34. a *Voldoende water drinken en genoeg frisse lucht is gezond.*

plenty of water drink and enough fresh air is healthy

‘Drinking plenty of water and enough fresh air is healthy.’

b *Genoeg frisse lucht en het voldoende drinken van water is gezond.*  
enough fresh air and the plenty of drink of water is healthy  
'Fresh air and the drinking of enough water is healthy.'

Moreover, nominal infinitives follow prepositions in PPs (35) which is a typical position of noun phrases. The following examples illustrate that both bare and determined NIs behave in the same way in these tests:

35. a *Ik ben dol op films en boeken lezen.*  
I am crazy on films and books read  
'I am fond of films and reading books.'

b *Ik ben dol op films en het lezen van boeken.*  
I am crazy on films and the read of books  
'I am fond of films and the reading of books.'

Here if we compare the behaviour of Dutch nominal infinitives with English infinitives used as arguments of higher verbs, it becomes obvious that their distribution is completely different. Though it is not always understood, especially in traditional treatments, English infinitives do not have the distribution of DPs, which can be demonstrated by the fact that they can never be coordinated with other DPs, nor do they appear after Ps in PPs (Emonds, 2014). Constructions such as (36a) and (36b) are ungrammatical in English:

36. a *\*I like short stories and to watch films.*  
a' *I like short stories and watching films.*  
b *\*I am fond of short stories and to watch films.*  
b' *I am fond of short stories and watching films.*



It is rather English gerunds that have the same distribution as Dutch nominal infinitives and could appear in all the positions in (36a', b'). The following subsections thus often contrast both types of Dutch nominal infinitives with English gerunds.

On the other hand, both types of Dutch derived nominals can be easily coordinated with nominal infinitives because they both externally and internally are DPs, as exemplified in (37).

37. a *Ik vond het gepraat over politieke zaken en het luisteren naar de voorman saai.*

I found the talk over political matters and the listening to the leader boring  
'I found the talk about political matters and the listening to the leader boring.'

b *De verhoging van belastingen en het ruziën met de premier kostte de minister zijn zetel.*

the increasing of taxes and the arguing with the prime minister cost the minister his chair  
minister his chair  
'The increase of taxes and the arguing with the prime minister cost the minister his chair.'

Thus so far we have seen that both types of nominal infinitives denote the action of the verb as a process (event) and not as a result, that infinitival nominalization is an almost fully productive process and that externally they have the same distribution as DPs. In the following subsection I will treat each type of Dutch nominal infinitive separately, I will examine their internal syntax and compare their nominal and verbal properties.

### 3.3.2. Bare Nominal Infinitives

In this subsection, I will examine more closely the first type of nominal infinitives, that is bare (indefinite) nominal infinitives (NI-Bs). Just like English VP gerunds NI-Bs seem to have the internal structure of VPs, with a verbal lexical head (Zubizarreta and van Haaften, 1988). This

for example means that in Dutch the object precedes the V more frequently rather than following it as a *van*-phrase (the Dutch equivalent of the English *of*-phrase).

In the infinitival construction with *te* (the Dutch counterpart of the English infinitive with *to*), the *van*-phrase is excluded completely (38b).

38. a *Het is leuk boeken te lezen.*

it is nice books to read

‘It is nice to read books.’

b \**Het is leuk te lezen van boeken.*

it is nice to read of books

It should be pointed out that in Dutch objects of verbs normally precede their head in VPs, while they follow it in NPs in the form of a *van*-phrase, so that if the object can precede the infinitive as in (39a), then the infinitive must be verbal. If an object can follow it as in (39b), then it must be nominal as well.

39. a *Sigaren roken is ongezond.*

cigarettes smoke is unhealthy

‘Smoking cigarettes is unhealthy’

b ?*Roken van sigaren is ongezond.*

smoke of cigarettes is unhealthy

‘Smoking of cigarettes is unhealthy’

However, we must note here that the reported judgments with respect to the acceptability of bare NI-Bs with an object following the head in a *van*-phrase PP differ among authors. While some (e.g. Looyenga, 1992; Haeseryn et. al., 1997) exclude it completely, others (e.g. Broekhuis, 2012) consider it a less preferred and more marked option. Referring

to what was said before, if (39b) is acceptable and the object can follow the head, then the construction must have some nominal properties as well.

With respect to the object form in NI-Bs, it is further restricted in such a way that the object must be indefinite, which for example means that pronouns (40a), proper names (40b) and definite DPs (40c) are unacceptable in the pre-head position (Hoekstra 1999, 268).

40. a \**Hen lezen vind ik saai.*

them read find I boring

b \**Jan opbellen heb ik geen tijd voor.*

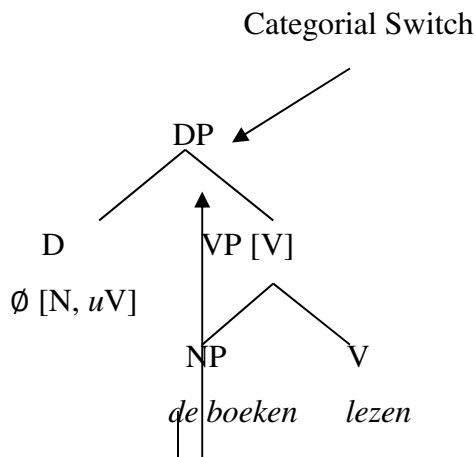
Jan call have<sub>1.sg.</sub>I no time for

c \**De boeken lezen vind ik interessant.*

the books read find I interesting

Since this phenomenon has not been otherwise accounted for in the literature, I propose to extend an idea of Jackendoff (1968) for percolation of ‘definiteness’. I claim that the definiteness of the object should percolate the VP as is illustrated under (41). This, however, contradicts the indefiniteness of the bare nominal infinitive. This conflict then accounts for the acceptability of the judgements in (40).

41.



The internal verbal properties of NI-Bs can be tested by the modifiers that they take and by their ability to be pluralized, quantified and questioned. With respect to modification, just like verbs, bare NIs can be modified by adverbs (42a). However, their adverbial status is sometimes questioned in the literature since the *-e* ending which marks adjectives (42b) appears only if an NP is determined by a definite determiner. Since there is no article with the NI-Bs, analysts waiver as to whether the lack of *-e* indicates adverbial status, or simply the lack of definiteness. To illustrate the phenomenon, compare the following examples, which show that the word *goed* can be an adjective as well as an adverb depending on the preceding word. The *-e* ending that clearly marks *goed* as an adjective, and not an adverb, appears only if a definite article precedes it and the whole NP is thus determined. Compare the following examples: *goed luisteren* ‘listen well’, *een goed boek* ‘a good book’, but *het goede boek* ‘the good book’.

42. a *Frequent bomen kappen door de industrie is schadelijk.*

frequently trees cut by the industry is harmful

‘Cutting trees frequently by the industry is harmful.’

b ?*Frequent kappen van bomen door de industrie is schadelijk.*

frequently cut of trees by the industry is harmful

‘Cutting of trees frequently by the industry is harmful.’

c \**Frequente bomen kappen door de industrie is schadelijk.*

frequent trees cut by the industry is harmful

(Reuland 2011, 2)

Thus since NI-Bs in the preceding examples, unlike in NI-Ds, need to be modified by the adverb *frequent* and not the adjective *frequente*, they must be verbal themselves.

Furthermore, nominal infinitives of both types can contain auxiliary or modal verbs while all other types of nominalizations (e.g. derived nominals described in the preceding section) exclude modals or auxiliaries as their input (43). The example under (43a) indicates that they can take the grammatical marker [+ ASPECT].

#### 43. a auxiliary verbs

*Zo'n boek geschreven hebben is niet genoeg om je schrijver te noemen.*

Such a book write<sub>CP.PARTICIPLE</sub> have is not necessary to yourself writer to call

‘Having written such a book is not enough to call yourself a writer.’

#### b modal verbs

*Met een auto kunnen rijden is nodig.*

with a car can drive is necessary

‘Being able to drive a car is necessary.’

Unlike countable nouns, bare NIs cannot co-occur with quantifiers (44a) and cannot be pluralized (44b) or questioned (44c) either. A sentence like *Veel sprookjes lezen elke dag is niet gezond* ‘Reading a lot of fairytales every day is not healthy’ would, however, be

acceptable, since the quantifier clearly premodifies only the direct object itself and not the whole NI. This can also be shown by the agreement of the verb with a subject in singular.

44. a \**Veel sprookje lezens waren saai.*

many fairy tale reads were boring

b \**Peter geniet van sprookje lezens.*

Peter enjoys of fairy tale reads

c \**Welk sprookje lezen vind je het leukst?*

which fairy tale read find you the nicest

Different studies analyze the internal structure of NI-Bs differently. Looyenga (1992) for instance suggests that NI-Bs are internally IPs that appear in argument position. According to other studies (e.g. Hoekstra, 1985) these constructions even have a PRO subject, a typical clausal property, which he claims is supported by the impossibility of examples such as (45).

45. *iemand geld lenen (\* door Jan)*

somebody money lend ( by John)

The analysis that I propose here is below in (46). Although, as explained above, NI-Bs can have structures both with the complement preceding the head (*bomen kappen* ‘cutting trees’) as in (46a) as well as following the head (*kappen van bomen* ‘cutting of trees’) as in (46b), the first ‘verbal’ word order is preferred, unmarked and more frequent, probably because it is more economical in the bare nominal infinitive. Principles of economy are understood as in the Minimalist Program (Chomsky, 1995) and favour simpler structures for expressing the same LFs and prohibit superfluous steps in derivations.

Thus in order to utilize less structure, the head of the NI-B can merge with the DP complement earlier, at the VP level, of course then giving rise to the VP-type word order. The

less frequent ‘nominal’ word order (46b) is less economical, because it requires (i) a step where the head changes its category from V to N and then (ii) a merge with a *van*-phrase PP. Since DPs are for NI-Bs ‘cheaper’ than DPs inside PPs, and Dutch makes it possible to express a DP argument with a V-headed construction (with no additional lexical N in the head position), it is more economical for the bare nominal infinitive to merge with a DP rather than with a PP complement later. The same logic holds in NI-Bs for Dutch APs without agreement (adverbs) which are ‘cheaper’ than Dutch APs with agreement (adjectives).

Now to explain both possible word orders we have to use some operation that combines Merge, the central concept of the Minimalist Program, as well as some version of the ‘Categorial Switch’ described by Panagiotidis and Grohmann (2009). However, in my view they interact and are not independent processes. Merge tells us that only one complement/adjunct can enter a tree at a time, not two. And the patterns of NI-Bs explored above tell us that in nominalizations, such constituents can merge either before a V becomes an N (‘Categorial Switch’) or after. This scenario captures descriptive generalizations, it is a new type of independent evidence that all syntactic structure is binary branching, i.e. even lexically selected phrases enter trees one at a time.

The “Switch Categorizer Hypothesis” as formulated by Panagiotidis and Grohmann (2009) claims that between two types of domains in a derivation (e.g. verbal and nominal) there appears an additional ‘functional categorizer’ that triggers a switch between the two categories. Moreover and crucially, the switch from one category to another can occur only once, so for example a change from verbal to nominal domain and then back to nominal again is not allowed.<sup>11</sup> This is in line with the principles of economy: 0 steps is better than 2.

Applying this idea to my analysis of nominal infinitives in Dutch, the switching category is a language particular lexical item, which must have an interpretable nominal feature [N] and an uninterpretable verbal feature [ $\mu$ V] that is checked against the interpretable

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<sup>11</sup> The operation of Categorial Switch presupposes that, however complex the phrases might be themselves (e.g. the verbal phrase can in fact be the whole IP), they must remain coherent (Bresnan, 1997). In other words the chunks making each phrase must be categorially uniform without any interspersed verbal elements within a nominal domain, or the other way around.

feature [V] of the verbal chunk. In this way Categorical Switch brings about a change between the verbal and the nominal domain.

In my view, apparently counter to these authors, it is not necessary to postulate any new feature or category to effect the switch. In particular, the lexical entry for the switching item in NI-B is just an interpretable lexical D with an uninterpretable feature [ $\mu$ V] that ensures selection of an interpretable sister that is a verbal projection. For NI-Bs, the lexical D is a null indefinite article. D, which like any functional category in the extended projection of N, has a nominal feature.

Another important principle of my theory is that complements and adjuncts are all optional unless a maximal projection of V is reached. The many examples presented here have shown repeatedly that this is true. And here we make use of it to explain why a V sister of an empty N can have unsatisfied selection features. These features can be satisfied in a subsequent derivational phase for NP, as will be exemplified below.

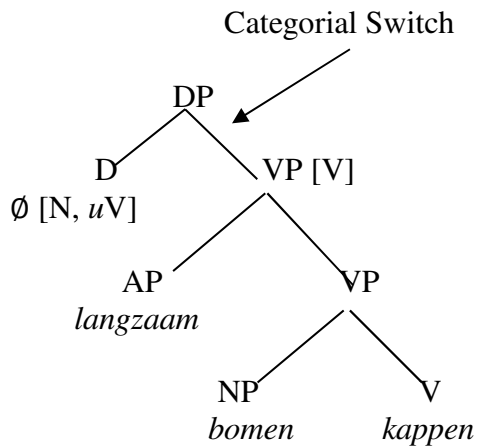
Finally, when we get to the maximal projection in case of NI-Bs, the D head will remain empty. Thus because of the nature of Merge and the operation of Categorical Switch, the tree structure of the NI-B comes out automatically, a confirming result which has not previously been made explicit in other analyses.

The two examples below (46a-b) are the two alternative options for the structure of NI-Bs:

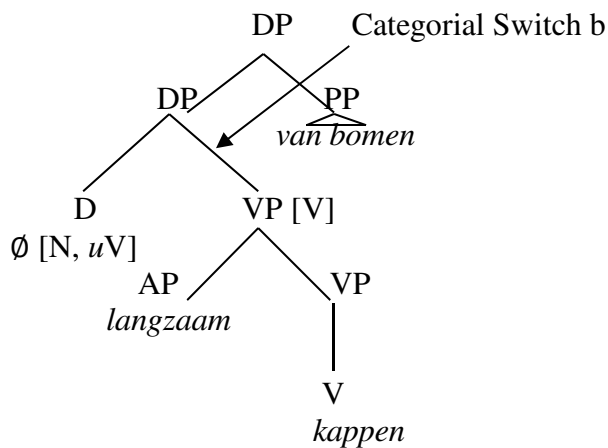


46.

(a)



(b)



Let's now consider the argument structure of a given NI-B. As mentioned before, bare nominal infinitives inherit their argument structure from the verb and their thematic frame (47a) essentially remains unaffected by the derivational process. However, unlike with verbs in a maximal verbal projection VP (in today's terms, a phasal domain vP), the arguments of an NI-B are not obligatorily expressed at this level.<sup>12</sup> Thus while the patient is most frequently realized as an NP in the pre-head position (47b), its realization can be delayed until the next

<sup>12</sup> Satisfaction of obligatory complementation is not part of Merge, but can occur later.

phrase, where it possibly follows the nominal head in the form of a *van*-phrase (47c), although this is a more marked and less preferred option (as previously discussed).

47. a *Jan schrijft artikelen.*

Jan write.<sub>3.sg.</sub> artikels

‘Jan writes articles.’

b *Artikelen schrijven kost veel tijd.*

articles write cost.<sub>3.sg.</sub> a lot of time

‘Writing articles costs a lot of time.’

c ?*Schrijven van artikelen kost veel tijd.*

write of articles cost<sub>3.sg.</sub> a lot of time

‘Writing of articles costs a lot of time.’

An agent phrase is neither a selected complement nor an adjunct in a VP, so it is not realized inside a maximal VP, whether the verb is intransitive (48a) or transitive. However, if it is expressed, then it will be in a nominal projection, either following the head as a *van*-phrase (48b) or preceding it in the form of a possessive pronoun or a genitive noun phrase (48c).

48. a *Kinderen / Jan lachen / lacht.*

Children / Jan laugh / laughs

‘Children / Jan laugh / laughs.’

b *Lachen van kinderen was te horen.*

laugh of children was to hear

‘Laughing of children was to hear.’

c *Jans lachen was te horen.*

John's laughing was to hear

'John's laughing was to hear.'

In a ditransitive verb, the recipient can appear either as an NP in the prenominal position (49a), or it can be realized as a PP in which case it will follow the patient and either appear in VP in the prenominal (49b) or in the NP in the postnominal position (49c).

49. a *De kerk geld schenken is een goede zaak.*

the church money donate is a good thing

'Donating money to the church is a good thing.'

b *Geld aan de kerk schenken is een goede zaak.*

money to the church donate is a good thing

'Donating money to the church is a good thing.'

c *Geld schenken aan de kerk is een goede zaak.*

money donate to the church is a good thing

'Donating money to the church is a good thing.'

Verbs which select a PP complement can also be nominalized, and in this case with bare nominal infinitives, the PP complement will either precede a V head (50a) or follow an N head (50b), but the more frequent and preferred word order is the verbal one with the complement preceding the head.

50. a *Op konijnen schieten is een rare hobby.*

on rabbits shoot is a strange hobby

'Shooting on rabbits is a strange hobby.'

b *Schieten op konijnen is een rare hobby.*

shoot on rabbits is a strange hobby

‘Shooting on rabbits is a strange hobby.’

As mentioned before head nouns will never be preceded by a PP, while bare NIs may be (Hoekstra 1999, 267), which is another verbal property. Thus, if the PP complement precedes the head, the merge must occur in the verbal domain prior to Categorical Switch, while if it follows the head, it must occur later in the nominal domain. The change from one to the other is affected by the empty head D which selects a verbal projection by means of an uninterpreted feature [*uV*]. The special property of Dutch is that this null lexical item in nominal infinitives seems indifferent to the level of the projection of this verbal projection. Compare this to English where, unlike in Dutch, the PP complement will always follow a gerund.

### 3.3.3. Determined Nominal Infinitives

The second type of Dutch nominal infinitives, which I will discuss in this subsection, are determined nominal infinitives (NI-Ds). In comparison to NI-Bs, NI-Ds are internally a nominal construction with mixed nominal and verbal lexical heads (Zubizarreta and van Haaften 1988, 282). This can for example be shown by the fact that the object in determined NI-Ds can both precede the verb (51a), which is a property typical of VPs, as well as follow the infinitive as a *van*-phrase (51b), as is the case in NPs. However, unlike with NI-Bs Looyenga (1992), Hoekstra (1999), Reuland (2011), etc. claim that both of these forms are equally acceptable.<sup>13</sup>

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<sup>13</sup> Although Broekhuis (2012, 57) claims that the unmarked form is the exact opposite of bare nominal infinitives, that is with the object following the head in a DP.

51. a *Het boeken lezen vind ik vervelend.*

the books read find I annoying

‘I find the reading of books annoying.’

b *Het lezen van boeken vind ik vervelend.*

the read of books find I annoying

‘I find the reading of books annoying.’

As these examples illustrate, this construction seems to be equivalent to both the nominal and verbal English gerunds at the same time. Although it does not exactly exist in English, the closest counterpart would be the following example, where a limited list of determiners can take either gerund complements (52a) or derived nominals (52b):

52. a *John’s / his / this / that / any / no reading books all night can be harmful.*

b *John’s / his / this / that / any / no reading of books all night can be harmful.*

On the other hand, determiners such as *some*, *each* or *every* are excluded in the gerund construction (53).

53. \**Some / each / every reading books can be harmful.*

Nevertheless, Emonds (2000) does not treat such examples beyond mentioning them, and Chomsky (1970) considers them peculiar and restricted.

When we test NI-Ds with modifiers, just like NI-Bs they preferably take adverbial modifiers, although some speakers accept both adjectives as well as adverbs as below in (54).

54. a *Het ???frequente / frequent bomen kappen door de industrie is schadelijk.*

the frequent / frequently trees cut by the industry is harmful

‘The frequent cutting of trees by the industry is harmful.’

b *Het ?frequente / frequent kappen van bomen door de industrie is schadelijk.*  
the frequent / frequently cut of trees by the industry is harmful  
'The frequent cutting of trees by the industry is harmful.'

In my analysis, the combination with an adjective is not directly generated as grammatical, since in the NI-D the Categorical Switch is effected by DET, after the A *langzaam / langzame* enters the derivation. I thus account for its non-preferred status, and conclude that its marginal status is due to performance, involving also its very close similarity to the grammatical form.

However, if both an adjective and an adverb precede an NI-D, they must occur in the order Adj\_Adv (55a), and the opposite would result in an ungrammatical construction (55b). This fact can be easily explained by combining Merge and Categorical Switch, as the merge with the adverb has to occur lower down within the verbal domain (earlier in the derivation), while the merge with the adjective has to occur later, after the Categorical Switch and higher up in the nominal domain.

55. a *Het irritante langzaam kappen van bomen was vervelend.*  
the irritating slowly cut of trees was annoying  
'The irritating slow cutting of trees was annoying.'

b *\*Het langzaam irritante kappen van bomen was vervelend.*  
the slowly irritating cut of trees was annoying

A similar principle can explain example (54a) where the whole verbal chunk consisting of the verb, its complement and the adverbial modifier can undergo the Categorical Switch together. The same holds for example (54b) with the difference that the obligatory complementation of the verb is satisfied later in the nominal domain by the “*van*-phrase”.

The mixed properties of NI-Ds are also illustrated well by the fact that they can co-occur with a PP modifier in the pre-head position, which requires a V category, and a *van*-phrase, which requires an N category, in one construction (56). In this case again the PP modifier has to merge first in the verbal domain while the *van*-phrase merges after the Categorical Switch.

56. *Het met een mesje schillen van aardappels is gemakkelijk.*

the with a knife peel of potatoes is easy

‘The peeling of potatoes with a knife is easy.’

Just like bare nominal infinitives, NI-Ds can contain complex verbal structures with a modal or auxiliary verb (57a-c). This indicates that Categorical Switch can apply quite late in NI-Ds.

57. a *Het willen lezen van een boek is nodig.*

the want read of a book is necessary

‘The will to read a book is necessary.’

b *Het kunnen rijden met een auto is nodig.*

the can drive with a car is necessary

‘Being able to drive a car is necessary.’

c *Het hebben gelezen van een boek was nodig.*

the have read<sub>P.Participle</sub> of a book was necessary

‘The having read a book was necessary.’

The previous examples show that unlike in English, Dutch modals and auxiliaries are not in I position but in V position and thus both the lexical and the modal/auxiliary verb

undergo the Categorical Switch together and then merge with the *van*-PP higher up within the nominal domain.

Unlike ING- and GE-nominalizations, both types of nominal infinitives allow modals and auxiliaries in the nominalizations. This shows that Categorical Switch occurs higher or later than the derivation of complex event nominals. Therefore, bare nominal infinitives must realize the complement of the lexical verb as an NP in the pre-head position, while determined nominal infinitives as a *van*-phrase (Broekhuis 2012, 50), depending whether it is more or less economical to wait longer.

On the other hand, just like regular nouns NI-Ds can be determined by articles or demonstrative pronouns (58a), but unlike countable nouns, they can never be quantified (58b), pluralized (58c) or questioned (58d). These restrictions show that both Dutch bare and determined nominal infinitives are like neuter (or perhaps genderless) mass nouns; their indefinite and definite Ds are respectively  $\emptyset$  and *het*.

58. a *Dat constant roken van sigaren was irritant.*  
that<sub>neut.</sub> constant smoke of cigarettes was irritating  
'That constant smoking of cigarettes was irritating.'

b\**Veel lezens van boeken waren verschillend.*  
many reads of books were different

c\**Peter geniet van de lezens van boeken.*  
Peter enjoys of the reads of books

d\**Welk lezen van boeken vind je het leukst?*  
Which read of books find you the nicest

The internal structure of NI-Ds has been analyzed differently in different studies. The most detailed analysis is provided by Looyenga (1992) whose determined NIs are NPs that



consist of an IP to which an affix expressing nominal features has been attached. This affix which carries the nominal features has no morphological realization. The affix provides the NI-Ds with nominal characteristics and gives it, together with the determiner, the internal grammar of a nominal phrase (Looyenga 1992, 178). However, neither he nor the other authors explain why two word orders in both types of nominal infinitives are possible, although one word order is always preferred. Unlike Looyenga, I do not think that IP level is needed and I consider the Categorical Switch analysis more systematic and elegant and thus an advantage over previous studies.

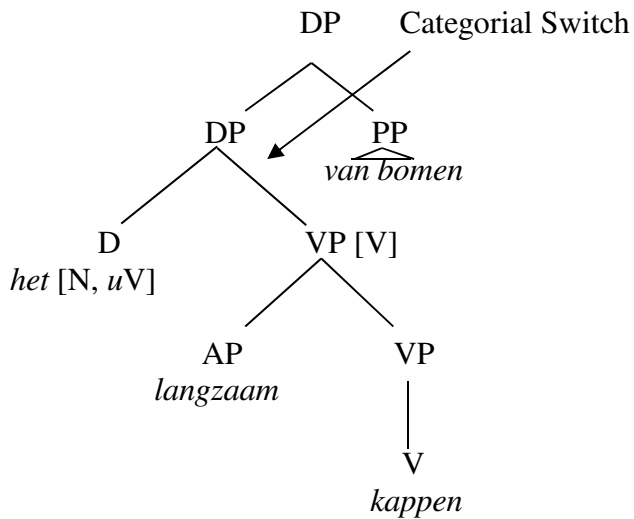
In my view, no redundant null affix expressing nominal features is needed, because the same operation that combines Merge and Categorical Switch that brings about for NI-Bs is at work in NI-Ds too (59). As discussed before in subsection 3.3.2., just like bare nominal infinitives, determined nominal infinitives also have two possible word orders which are alike in both types of NIs; one with the complement following the head (*het lezen van boeken* ‘the reading of books’) (59a) and the other with the complement preceding the head (*het boeken lezen* ‘the reading of books’) (59b). Although both word orders are acceptable, the preferred order is the former one which copies the internal word order of DPs, since for determined NIs it is the more economical version. In this word order the merge with the complement has to occur higher up in the tree structure after *lezen* has switched its category from a V to an N so that it can merge with a *van*-phrase. In the latter word order, the merge between the head and the complement has to occur lower down at the V level. With respect to their preferred word orders NI-Ds are the exact opposite of NI-Bs since with determined nominal infinitives with a mixed nominal and verbal head, PPs (*van*-phrases) are required by the definiteness of the NI and therefore ‘cheaper’ and more economical than DP complements that are selected by Vs.

Again with Merge and Categorical Switch, as explained in the preceding subsection, the tree structure comes out right. The hypothesis of Categorical Switch and Phrasal Coherence is also consistent with the fact that if premodified by both an adjective and an adverb, the adjective has to precede the adverb and the opposite order is never acceptable in NI-Ds.

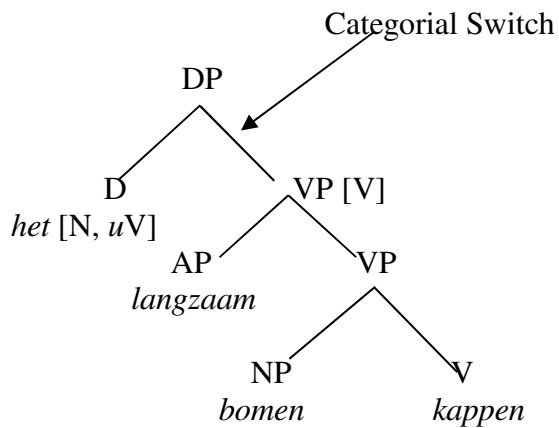
Unlike NI-Bs the D head does not remain empty but is occupied by the definite article *het*. The definiteness of NI-Ds also clarifies why the DP word order is more economical. Compare the two optional word orders of NI-Ds below in (59).

59.

(a)



(b)



Since the internal structures of NI-Bs and NI-Ds are very similar with only the difference that a different word order is preferred (not obligatory) in each type, with respect to their argument structure, NI-Ds seem to be the counterpart of bare NI-Bs with their thematic frame inherited from the verbs they are derived from (60a) (Broekhuis, 2012). Thus the patient will most frequently follow the head N in the form of a *van*-phrase (60b), since this is the preferred word order, or possibly appear in front of the head verb as an NP (60c), as discussed above.

60. a *Jan leest boeken.*

John read<sub>3rd.sg.</sub> books

‘John reads books.’

b *Jan geniet van het lezen van boeken.*

John enjoy<sub>3rd.sg.</sub> of the read of books

‘John enjoys the reading of books.’

c *Jan geniet van het boeken lezen.*

John enjoy<sub>3rd.sg.</sub> of the books read

‘John enjoys the reading of books.’

Just as with NI-Bs the agent does not have to be expressed if the verb is intransitive. However, if it is expressed it may either precede the head NP as a genitive NP or a possessive pronoun (61b) or follow it in the form of a *van*-phrase (61c).

61. a *Jan / kinderen lacht / lachen.*

John / children laugh<sub>3rd.sg.</sub> / laugh

‘John / children laughs / laugh.’

b *Jans lachen was te horen.*

John's laugh was to hear  
'John's laughing was to hear.'

c *Het lachen van kinderen was te horen.*

the laugh of children was to hear  
'The laughing of children was to hear.'

If the verb is transitive, both arguments may be expressed. The patient will preferably appear as a *van*-phrase, and the agent will be expressed either in the form of a possessive pronoun or a genitive noun phrase (62b) or it can follow the head in the form of a *door*-phrase (the Dutch equivalent of the English *by*-phrase) (62c). Note that the *door*-phrase is not allowed with bare nominal infinitives. A less frequent (more marked) but also possible realization is with a patient preceding the head and an agent following it in the form of a *van*-phrase (62d).

62. a *Jan verzamelt postzegels.*

Jan collect<sub>3rd.sg.</sub> stamps  
'John collects stamps.'

b *Jans / Zijn verzamelen van postzegels is tijdrovend.*

John's / his collect of stamps is time-consuming  
'John's collecting of stamps is time-consuming.'

c *Het verzamelen van postzegels door Jan is tijdrovend.*

the collect of stamps by John is time-consuming  
'John's collecting of stamps is time-consuming.'

d ?*Het postzegels verzamelen van Jan is tijdrovend.*

the stamps collect of Jan is time-consuming

‘John’s collecting stamps is time-consuming.’

With ditransitive verbs the recipient must follow both the head and the patient in NI-Ds and cannot precede them (63), which means that the [def] feature must be added prior to satisfying complementation. Thus the original verb selects its obligatory complements but the satisfaction occurs later.

63. *Het schenken van geld aan de kerk is een goede zaak.*

the donate of money to the church is a good thing

‘The donating of money to the church is a good thing.’

Furthermore, determined NI-Ds appear when the patient is expressed as a *van*-phrase in a generic example (64).

64. *Het vallen van bladeren gebeurt elk najaar.*

the fall of leaves happens every autumn

‘The falling of leaves happens every autumn.’

With verbs which select PP-complements, although both word orders are acceptable in (65), there is a clear preference for placing the PP-patient in post-head position in NI-Ds (65b), unlike with NI-Bs.

65. a *Het op konijnen schieten is een rare hobby.*

the on rabbits shoot is a strange hobby

‘The shooting on rabbits is a strange hobby.’

b *Het schieten op konijnen is een rare hobby.*

the shoot on rabbits is a strange hobby

‘The shooting on rabbits is a strange hobby.’

This is clearly a nominal property, since nouns in Dutch will be followed by a PP complement, while verbs will be preceded by it. The preferred word orders of PP-complements in (65) obviously copy the preferred word orders with respect to NP-patient complements of both NI-Bs and NI-Ds, so the definiteness of the NI-D also affects the preference for the nominal word order. The merge with the PP complement in the preferred word order in (65b) must occur higher up in the tree structure in the nominal domain, after the head changes its category from a V to an N.

### 3.3.4. A Summary of Dutch Nominal Infinitives

When comparing bare nominal infinitives (NI-Bs) and determined nominal infinitives (NI-Ds) we have seen that both of them are externally DPs with all their typical syntactic functions, but internally they differ. While NI-Bs have mostly verbal properties, NI-Ds have mixed nominal and verbal properties. The predominant nominal or verbal properties of both types of nominal infinitive are also reflected with respect to definiteness, the modifiers that they take and the realization of arguments, especially that of patient.

Moreover, each type of nominal infinitive also has two possible word orders, one of which is preferred and more economical than the other one, but their tree structures can be explained through the same operation that combines Merge and Categorical Switch. Merge tells us that only one complement or adjunct can enter the tree at a time, and the hypothesis of Categorical Switch together with Phrasal Coherence proposes that at certain point the phrase can be changed from verbal to nominal while remaining internally coherent. However, while NI-Bs have an empty D head higher up in the tree structure, NI-Ds are determined, usually by a definite article *het*.

### 3.4. Chapter Summary

In this chapter I have examined Dutch nominalizations which have been studied before by different linguistics who were descriptively accurate but did not situate them satisfactorily within a theoretical linguistic context. Their analyses left many questions unanswered and especially their treatment of nominal infinitives was not very systematic or predictive. I believe that I have been able to better explain what the internal structure of Dutch nominal infinitives looks like and how they combine with their complements in two different ways, one of which is always the preferred or more economical option. What is important is that previously assembled data confirm my hypothesis.

The second section examined Dutch derived nominals of two types, the ING- and GE-nominalizations, which are quite predictable in behaving like regular complex event nominals in Grimshaw's (1990) terminology, although some of them can be result nominals too. The following section analyzed Dutch nominal infinitives that result from a syntactic operation that combines Merge and Categorical Switch. I showed that the fact that Vs can combine with their complements in two different ways can be easily explained by Merge, which is part of Universal Grammar and which can occur either lower down in the tree structure within the verbal domain, or higher up in the nominal domain, after the infinitive changes its category from V to N. The operation of Categorical Switch, described before by Panagiotidis and Grohmann (2009), is a language particular phenomenon, but in combination with Merge it provides a very systematic and logical treatment of the Dutch nominal infinitives which had been previously described as "notoriously difficult to analyze" (Schoorlemmer, 2001).

## 4. English Nominalizations

### 4.1. Chapter Introduction

In this chapter I will look in detail at the nominalization process in English, I will examine which types of constructions are considered to be nominalizations in English and how different authors divide them into individual categories. English nominalizations have been previously studied most prominently by Chomsky (1970), Roeper and Wasow (1972), Anderson (1982), Grimshaw (1990), Börner (1993, 2001, 2007, 2013, etc.), Emonds (2000, 2014), as well as others. Based on their classifications, I will examine three types of English nominals, but unlike the previous authors I will approach them cross-linguistically, integrate my analysis with that of Dutch and Czech nominals described in other chapters and I will also bring new claims and arguments into their treatment.

In line with Grimshaw's (1990) terminology, I will examine simple event nominals, result nominals, complex event nominals and finally gerunds. The *-er* agent nominals (e.g. *writer, publisher, actor, opener*, etc.), which mostly denote persons or objects and the thematic role of an agent is already morphologically realized by the *-er* suffix, are not included for the same reason they are not included in the chapter on Dutch nominalizations. These nominalizations, although they are derived from a verb, do not inherit the denotation (the state of affairs) of the verb, but like simple event and result nominals they do not have an argument structure. Unlike simple event nominals, they do not refer to real time and unlike result and complex event nominals, they are never ambiguous in their result/process reading.

This chapter is divided into three sections. After the preliminary outline of the chapter, the second section deals with different types of English nominals and is divided into five subsections. The first subsection gives a general introduction to English nominalizations and compares their external distribution and possible sentence functions.

The second and the third subsections deal with simple event (e.g. *a trip, a race, an exam*, etc.) and result nominals (e.g. *a construction, a translation, an examination*, etc.) including those that end in the *-ing* suffix and denote a result of an action (as in e.g. *the concrete building that stands on the corner*) which are similar in that neither of them inherits



the argument structure of the verb. I will look in turn at their internal syntax, discuss how they realize their thematic roles, which modifiers they can take, and whether or how they can be quantified and pluralized.

The fourth subsection will focus on complex event nominals or process nominals (Grimshaw, 1990) (e.g. *the sudden destruction of the city, the construction of the bridge by the army, the quick translation of the book, the examination of students by the professor, etc.*), including those that end in the *-ing* suffix and denote the action as a process (as in e.g. *The building of the road took two years.*). These nominals denote an action of the verb but also inherit its argument structure. I will compare and contrast their ability to be modified, quantified and pluralized with the previously discussed simple event and result nominals. Finally, I will analyze their internal syntax and their tree structures and discuss how their thematic frames are realized.

The fifth subsection will focus on the last type of English nominals, namely on gerunds (e.g. *reading books, watching films, etc.*). Unlike previous approaches to the analysis of gerunds, I will demonstrate that the operation which combines Merge and Categorical Switch into a single step as with nominal infinitives in Dutch can be used to generate English gerunds as well. A gerund originates as a verb and therefore initially takes over some verbal properties, but when higher up in the tree the VP Merges with the *-ing* morpheme that carries the uninterpretable [*u*V] feature, the *-ing* morpheme triggers the Categorical Switch and the construction becomes nominal with nominal properties on the left side of the phrase.

Throughout, I have in mind in each subsection how these English nominals compare and contrast with the nominals of other languages examined in other chapters. I will try to determine whether the same processes and mechanisms can be used to explain their specific properties, or whether different language devices are involved.

Finally, the last section will summarize the conclusions. One of the aims of this chapter is also to confirm whether there really is a default form for the English process nominalizations, as Anderson (1982) proposes, or not.

## 4.2. Four Types of English Nominalizations

### 4.2.1. External Contexts

First I am going to look at all types of English nominalizations together from the point of view of their external syntax since, although they differ internally, all of them have the same properties externally. This means that they appear in the same sentence functions and have the same external distribution.

As mentioned in the introduction to this chapter (p.1), the four types of English nominals which will be described here are simple event, result and complex event nominals and gerunds. All of them have the distribution in a sentence like other noun phrases. They appear in the sentence where other NP/DPs do and just like other NP/DPs they fulfill the syntactic functions of subjects (1), direct objects (2), PP-objects (3), or adverbials (4):

1. (a simple event nominal as a subject)

a *I heard that the exam was difficult.*

(a result nominal as a subject)

b *They didn't believe us that the examination / the booking was still valid.*

(a complex event nominal as a subject)

c *The report said that the development of the new district / the translating of the documents is going to take another year.*

(a gerund as a subject)

d *The report said that translating the documents is going to take another year.*

2. (a simple event nominal as a direct object)

a *He described the race to me.*

(a result nominal as a direct object)

b *Tom admired the extensive collection of stamps / the modern packaging of the pills.*

(a complex event nominal as a direct object)

c *Environmentalists are trying to prevent further destruction of rainforests / the polluting of rivers.*

(a gerund as a direct object)

d *Environmentalists are trying to prevent polluting rivers.*

Notice that the underlined nominals under 3 are objects of prepositions whereas the PPs under 4 have adverbial function:

3. (a simple event nominal as a PP-object)

a *I have heard a lot about your trip to the Amazon.*

(a result nominal as a PP-object)

b *Mary was thinking about John's writing / the final assignment for the seminar.*

(a complex event nominal as a PP object)

c *John was recovering from the exhausting translation of the book / the repairing of the car.*

(a gerund as a PP object)

d *John was exhausted from repairing the car.*

4. (a simple event nominal as an adverbial)

a *After the trip to the mountains everyone was tired.*

(a result nominal as an adverbial)

b *There was a large underground car park under the concrete construction / building.*

(a complex event nominal as an adverbial)

c *The children went to bed after his arrival / the reading of fairytales.*

(a gerund as an adverbial)

d *The children went to bed after reading fairytales.*

Their nominal status can be tested by two independent tests which Emonds (2014) uses to distinguish between the nominal status of gerunds and the verbal status of infinitives. The first one is the coordination test which shows that English nominalizations can be coordinated with other noun phrases which are not derived from verbs (5). According to the principle that only constituents of the same type can be freely coordinated, all English nominalizations must be NP/DPs. Compare the following examples for each type of English nominalization:

5. (a simple event nominal)

a *Both the concert and the event were a great success.*

(a result nominal)

b *His collection of stamps / writings and all the books were stored in boxes in the attic.*

(a complex event nominal)

c *The construction / the constructing of the new highway and the other road projects cost the government a lot of money.*

(a gerund)

d *Constructing the new highway and the other road projects cost the government a lot of money.*

The second test is the focus position in English cleft sentences, which is grammatical only for NP/DPs (6a) and PPs (6b), but not for APs (6c), VPs (including participles introduced by *V-ing*) (6d) or CPs (with the complementizers *that / for*) (6e) as illustrated below (Emonds 2014, 12-13).

6. a *It's the lemon pie that we disliked.*
- b *It is with great pleasure that I present our speaker.*
- c *\*It's very unhappy that Bill is / appeared.*
- d *\*It is sell some buildings that you should (do).*
- e *\*It was that the guests left that John regretted so much.*

Since all of the English nominalizations appear in focus position in cleft sentences they must be NP/DPs (7). Compare the examples below:

7. (a simple event nominal)
- a *It is the race that exhausted her.*

(a result nominal)

b *It is his collection of stamps / writings that she admired.*

(a complex event nominal)

c *It was the construction / the constructing of the new highway that cost the government a lot of money.*

(a gerund)

d *It was constructing the new highway that cost the government a lot of money*

As we have seen above, all of the nominalizations satisfy both of these tests for NP/DP, and therefore they must be NP/DPs themselves.

A third test taken over from Veselovska (2001, 8) is the occurrence after Ps in prepositional phrases, which is a typical position where underived nouns appear as part of NP/DPs (8).

8. (a simple event nominal)

a *John was so exhausted after the race that he collapsed on the ground.*

(a result nominal)

b *The tourists looked at the new construction / building with admiration.*

(a complex event nominal)

c *We talked about his life-long passionate collection of stamps / collecting of stamps and other hobbies.*

(a gerund)

d *We talked about collecting stamps and other hobbies.*

As the examples above have shown English nominalizations behave externally exactly like NP/DPs, because they fulfill the same syntactic functions as NP/DPs normally do. Their coordination with other nouns, which are not derived from any verbs, and their occurrence after Ps in prepositional phrases also provide solid evidence for their nominal status.

In the following four subsections I will look at each type of the English nominalization separately, while focusing on their similarities and differences. I will examine their internal syntax and compare and contrast their nominal and verbal properties.

#### 4.2.2. Simple Event Nominals

The first type of English nominalizations is simple event nominals (henceforth SENs) which, just like result nominals described in the next subsection, do not inherit the argument structure or, in other words, the thematic roles of the verb. They do not have an event structure either. SENs (e.g. *trip*, *event*, *race*, *exam*, etc.) were first classified separately from nominalizations by Grimshaw (1990).

However, unlike result nominals, which only denote the result of an action, simple event nominals really denote events in some sense; they take place in real time and occur over time (9).

9. *The exam / trip / race / event took a long time / took place at 6 p.m.*

We have seen that externally SENs behave like NP/DPs. Likewise internally, SENs exhibit mostly nominal properties. Thus, they will take both definite (10a) as well as indefinite (10b) articles, demonstratives (10c) and possessives (10d) and form DPs with them. Moreover, they can be quantified (10e), counted (10f) as well as pluralized (10g) like regular countable nouns.

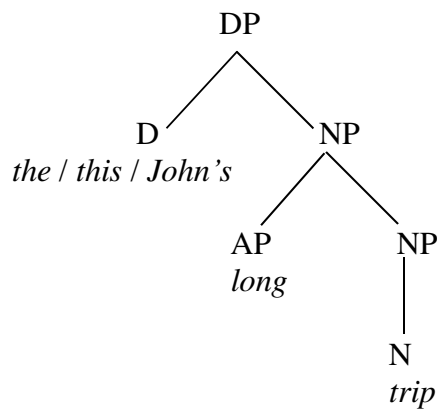
10. a *The trip was organized by his friends.*  
b *An event like this is always a great success.*  
c *This race was ten kilometers long.*  
d *John's race was exciting.*  
e *He passed every exam with ease.*  
f *The two last races were the hardest.*  
g *Our trips to the Mediterranean were really expensive.*

Normally, just like other nouns, SENs are modified by adjectives (11a) and not adverbs, as would be expected with verbs, and they can be modified by adjectives expressing time or duration (11b). Moreover if they are pluralized, they can also co-occur with adjectives expressing frequency like *constant* and *frequent* (11c), which also occur with complex event (or process) nominals discussed further on. However, this is the only internally verbal property that simple event nouns retain.

11. a *The demanding / quick / \*quickly race exhausted him.*  
 b *The long / two-hour race exhausted him.*  
 c *Students hated the constant / frequent exams of the teacher.*

An internal structure of a SEN like *the / this / John's long trip* is as below in (12), which illustrates that SENs are internally NP/DPs where *trip* is the nominal head of the determined and premodified construction.

12.



Unlike complex event nominals discussed later, SENs already appear in the Lexicon as nouns so they do not inherit the argument structure of the verb, which is why they pattern with result nominals. In other words, arguments of a verb such as agent, patient or recipient are not productively realized in simple event nominals (Grimshaw 1990, Ch. 3 130). Although



there are generally very few examples of SENs in Grimshaw, the following examples of mine confirm Grimshaw's predictions. So let's consider different types of verbs separately.

An intransitive verb such as *party* or *race* can form a SEN but (13b) where *John* is interpreted as the agent of the verb is ungrammatical. On the other hand, in (13c) *John* is only a modifier, giver of the party, and not an agent and therefore the simple event nominalization is acceptable and fully grammatical. Compare the following examples:

13. a *John parties all the time.*  
b \**John's party all the time bothers me.*  
c *John's party was quite fun.*

Monotransitive verbs (e.g. *examine*, *practise*, etc.) can also form SENs, but the internal argument of the verb, the patient, cannot be realized in the form of an *of*-phrase in the nominalization, and therefore (14b) results in an ungrammatical construction. However, (14c) is grammatical since *John* is here again interpreted as the modifier and the patient disappears completely.

14. a *John examined the students.*  
b \**John's exam of the students took two hours.*  
c *John's exam was difficult.*

This shows that SENs, unlike verbs and complex event nominals, do not select their complements obligatorily and behave more like other regular nouns where the postnominal *of*-phrase, as for example in the nominal phrase *a book (of stories)*, is always optional because it is a modifier not required for the grammaticality of the whole NP. Therefore an NP without the postmodifying *of*-phrase like e.g. *a book* is perfectly grammatical.

Some ditransitive verbs such as *give* can also form SENs, although their arguments will not be realized in the nominalization as arguments of the verb either, which is why (15b)

results in an ungrammatical construction. On the other hand, (15c) is acceptable since *Peter* is the modifier of *gift* and the internal arguments, the patient as well as the recipient, disappear.

15. a *Peter gave his students good marks.*

b *\*Peter's gift his students (of) good marks surprised everyone.*

c *Peter's gift surprised everyone.*

Although there are sentences like *Peter's gift of 1000 pounds to the charity was very generous.*, it is not the V category that takes the complements but the category N. Thus, it is not the question of whether complements appear with the nominalizations or not, but rather which category takes the complements; V or N (Emonds 2000, 154-155).

So far we have examined simple event nominals, which were first considered as one form of Chomsky's (1970) Derived Nominals generated in the Lexicon and which were classified as a separate category by Grimshaw (1990). Using various categorial tests, which Grimshaw did not use, I have demonstrated that externally they are NP/DPs, since they appear in all the syntactic functions in which NP/DPs normally appear and their categorial status is clearly a noun. Furthermore, we have seen that SENs resemble other countable nouns because they can be determined, quantified, pluralized and also modified by adjectives. The only verbal property that they retain is their ability to be modified by adjectives expressing time or duration and by frequency adjectives such as *constant* and *frequent*. My analysis of their internal structure has also shown that SENs, which are generated in the Lexicon as nouns, form NP/DPs like other regular nouns. Finally, the analysis of different types of verbs has shown that SENs do not satisfy their complements obligatorily and that the premodifiers and postmodifiers cannot be interpreted as arguments of the semantically related verbs. In the next subsection I am going to compare them with result nominals, which in most respects behave similarly.

### 4.2.3. Result Nominals

Result nominals (henceforth RNs) refer to a concrete entity perceivable by the senses or the result of the action of the verb. The distinction between result and process nominals was not made clear by earlier authors e.g. Chomsky (1970). Although they are a heterogeneous group, Chomsky put all Derived Nominals together into the Lexicon and distinguished them from gerunds generated by transformations in grammar. It was Grimshaw (1990) who divided Derived Nominals into different categories and used the term result and process nominals. Although she was not the first one, her analysis was more complete.<sup>14</sup>

While “result nominals name the output of a process, process nominals name a process or an event” of the verb (Grimshaw 1990, Ch. 3. 111). For illustration compare the two examples below where (16a) is a result nominal and (16b) a process nominal:

16. a *The written examinations were on the table.*

b *The examination of the patients took a long time.*

Result nominalization is not a completely productive process. RNs are formed from the base verb to which the nominalizing suffixes such as *-ment* (e.g. *development*, *government*, etc.), *-(a)tion* (e.g. *examination*, *organization*, *construction*, etc.), or the derivational *-ing* suffix (e.g. *a tall building*, *the Latin writing*, etc.) are attached. The *-ing* suffix is here a derivational morpheme and not an inflectional one, since it derives a new category, a noun, and does not only change the paradigm of the verb within its own category.<sup>15</sup> However, not all verbs (e.g. modals, auxiliaries) allow result nominalizations.

Grimshaw (1990) classified result nominals into a separate category and accounted for their behavior by the fact that result nominals, unlike complex event nominals, do not have the external *Event* argument in their lexico-semantic specification. However, she did not explain clearly how RNs are generated or what their internal structure would look like. Unlike

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<sup>14</sup> Prior to her it was for example Fraser (1970, 85) who used the term “action nominalizations” for what we call complex event nominals now.

<sup>15</sup> Notice that a derivational *-ing* suffix also derives one type of nominalization in Dutch (e.g. *verzamelen* ‘collect’ → *verzameling* ‘collection’), but in Dutch the ING-nominalizations are complex event nominals, sometimes also result nominals.

her lexicalist approach, Emonds's (2000, Ch. 4. 155-156) morphosyntactic model shows that these nominalizing suffixes are inserted in result nominals at deep structure before syntax and are the deep lexical heads in these constructions.<sup>16</sup> This can for example be shown by the placement of quantifiers (e.g. *three, several, many*, etc.) above them in their tree structures. As a consequence of the early, pre-syntactic, insertion of the suffix, the V structure of RNs is almost invisible. The level at which the nominalizing suffix is placed is the one crucial difference between result nominals and complex event nominals discussed in the next subsection.

Unlike simple event nominals discussed above, result nominals only denote the concrete result of the action of the verb and therefore do not take place in real time (Moulton 2014, 6). This is why the example below under (17) results in an ungrammatical construction.

17. \**That solid concrete construction took three years.*

We have seen in the second subsection of this chapter that externally result nominals behave like NP/DPs. In the following paragraphs I will look at their internal structure in detail and I will examine their nominal and verbal properties.

Internally, result nominals have only nominal properties, since they can be determined by both indefinite (18a) as well as definite (18b) articles, demonstratives (18c) and possessives (18d).

18. a *The teacher gave the students an assignment / his writing.*  
b *The examination / packaging of the pills was on the table.*  
c *What do you think of that translation of the book / new building.*  
d *Tom's collection of books / writing was really impressive.*

In addition, RNs can be quantified (19a), counted (19b) and pluralized (19c) like other regular countable nouns because they have the semantic feature [+ CONCRETE]. Chomsky

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<sup>16</sup> Deep and later insertion is used in his framework for different co-occurrences.

(1970) and others e.g. Roeper and Wasow (1972) present some data along these lines, although perhaps not systematically. Note that all of these nominal properties are shared by both simple event and result nominals.

19. a *Each translation of the book / building was different.*  
b *The last two translations / buildings were alike.*  
c *The assignments / writings were easy to understand.*

Furthermore, result nominals like all other regular countable nouns can be modified by adjectives (20).

20. a *The library had an impressive / large / new collection of books.*  
b *I could not open the blue / paper packaging of the pills.*

But unlike both simple and complex event nominals, RNs rule out frequency adjectives *constant* or *frequent* as modifiers (Grimshaw 1990, Ch.3 113-114), even when the result nominal is pluralized (21a), as pointed out by Moulton (2014, 6).<sup>17</sup> Compare example (21a) with the previously examined simple event nominalization in (11c) where the modifiers *constant* and *frequent* are allowed if the simple event nominal is plural.

21. a *\*All the constant / frequent concrete constructions were unnecessary.*  
b *\*His constant / frequent writings made readers cry.*

Just like typical lexical nouns, result nominals do not accept other adjectives expressing the sense of time and duration either as the examples in (22a) illustrate. On the other hand, adjectives describing material, height, ownership or size are acceptable just as they would be with other lexical nouns (22b).

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<sup>17</sup> Note that the only exception is result nominals followed by sentential complements, which will be discussed later on in this section.

22. a *\*The long-lasting / quick / regular construction / building standing on the corner annoyed everyone.*  
b *The concrete / tall / city's / big construction / building standing on the corner annoyed everyone.*

Verbal modifiers such as *deliberate* and *intentional* (23a), discussed by Grimshaw (1990, Ch.3 114-115), and infinitival purpose clauses (23b) are also not allowed, since result nominals do not refer to voluntary activities but to the results of these actions (Emonds 2000, Ch. 4).

23. a *\*Nobody liked the deliberate / intentional concrete construction / buildings.*  
b *\*The new modern developments / buildings to attract more visitors to the city were questioned by everyone.*

Finally, just like with simple event nouns and unlike with complex event (or process) nominals, the complement of the verb from which the result nominal is derived is not realized or interpreted as an argument of the root verb. This is yet another nominal property, given the fact that verbs often select their complements obligatorily (24a), otherwise the construction becomes ungrammatical (24b), while nouns don't (24c).

24. a *John assigned the final homework.*  
b *\*John assigned.*  
c *\*John's assignment of the final homework was difficult to do.*

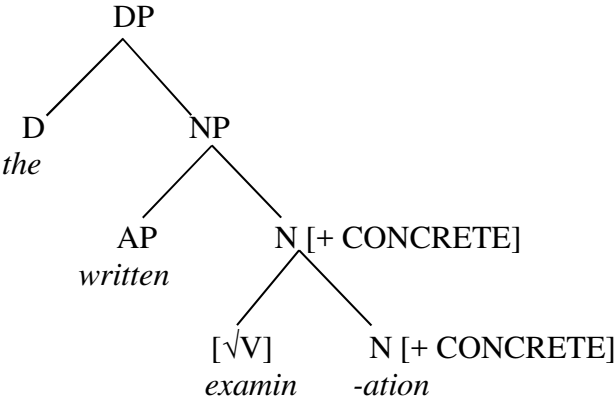
This property of RNs will also be further discussed later with respect to the issue of their argument structure.

The internal structures of two result nominals like *the written examination* and *the concrete building* are below in (25), where the suffixes *-ation* (25a) and *-ing* (25b) carry the nominal properties and determine the category of the word. These suffixes are inserted early

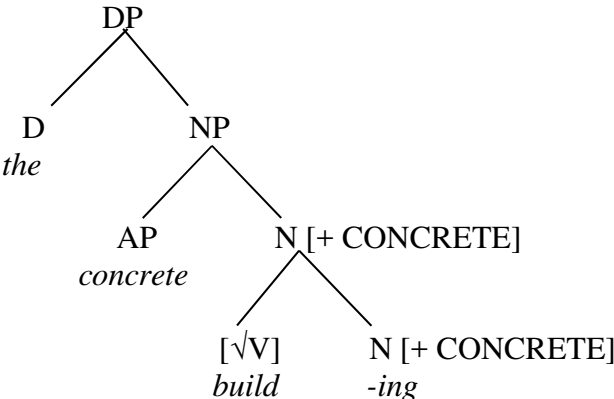
at the deep structure before syntax so the head of the construction is an N and as a result the V structure is almost invisible (Emonds 2000, Ch. 4. 155-156). The Right Hand Head Rule (Williams, 1981) applies here so that the nominalizing suffixes are the heads of the result nominal constructions.

25.

(a)



(b)



Let's now consider the argument structure of result nominals. Just like simple event nominals, result nominals do not inherit an argument structure of the verb from which they are derived (Grimshaw 1990, Ch.3 104-105). As mentioned before, this means that arguments such as agent, patient or recipient can become modifiers of the derived nominal but will not

be interpreted as arguments of the nominal, unlike with complex event nominals which will be discussed in the next subsection. This property of result nominals is like that of lexical nouns, which do not have an argument structure either (Grimshaw, 1990), so that in *Mary's book of stories* neither *Mary* nor *of stories* are interpreted as an external and an internal argument, respectively, but as modifiers.

There are not many intransitive verbs that form result nominals, however, a few can be found. One of them is for example the verb *to happen* and the result nominal formed from it is *the happening*. In this case the subject of the sentence is not really an agent and (26b) is ungrammatical because *the concert* cannot become a modifier or a possessor of the result nominal, therefore it has to be omitted entirely (26c).

26. a *The concert happened.*

b *\*The concert's happening was a great success.*

c *The musical happening was a great success.*

Monotransitive verbs like *collect*, *build*, *organize*, *write*, etc. can be nominalized too and can form a result nominal. However, for the nominal to become a result nominal and not a complex event (or process) nominal as in (27b), the external argument of the verb, the agent, as well as the internal argument, the patient, must be both interpreted as optional modifiers of the nominalization as is the case in (27c).

27. a *John collected those stamps.*

b *John's collection of those stamps took several years.* (a process nominal)

c *John's collection (of those stamps) was in the box.* (a result nominal)

As mentioned before, unlike complex event nominals, the internal argument of the verb or the complement, which is obligatorily subcategorized for by the V, is not obligatorily realized by the corresponding result nominal. Thus unlike complex event nominals, result nominals do



not take complements in the form of obligatory *of*-phrases. Compare this with what was said in the previous subsection about SENs and their complements.

In many cases, as with *-ing* result nominals in example (28), the obligatory complement of the monotransitive verb *write* MUST be omitted, otherwise the nominalization *writing* would be interpreted as a process nominal (28b) and not as a result nominal (28c).

28. a *Mary wrote letters.*

b *Mary's writing of letters usually takes hours.* (a process nominal)

c *Mary's writing (\*of a letter) arrived yesterday.* (a result nominal)

Finally, there are not many ditransitive verbs that can be nominalized as result nominals, some of them are for example verbs like *donate*, *offer*, *promise*, etc. When e.g. *donate* forms a result nominal, its internal arguments can be realized optionally as *of*-phrases, but it is the noun which takes the complements in (29b), not the verb.

29. a *They donated a lot of money to the hospital.*

b *Their donation (of money) (to the hospital) was very generous.*

Another ditransitive verb is *order*, which is followed by a recipient and an infinitival VP (30a). In the result nominalization below under (30b) both internal arguments are realized optionally and not obligatorily.

30. a *They ordered the troops to leave.*

b *Their order (to / \*of the troops) (to leave) was unexpected*

Unlike verbs, which theta mark directly, nouns are not true theta-marking heads and therefore the preposition *to*, which is semantically based, appears in (30b) (Grimshaw 1990, Ch.3 159).

Verbs which take obligatory sentential complements (31a) such as *announce*, *conclude*, *state*, etc. can also be nominalized, and moreover their nominalizations (31b) must

be interpreted as result nominals and never as process nominals. The postnominal (clausal) modifier is optional here, as it always is with result nominal.

31. a *They concluded that they have made a mistake.*

b *Their conclusion (that they have made a mistake) shocked everyone.*

Moreover, unlike other result nominals, RNs with sentential complements allow adjectives such as *constant* and *frequent* when pluralized, however, even here the whole construction seems marked (32).

32. ?*The constant / frequent announcements that flights were cancelled annoyed the passengers.*

Thus we can conclude that the important generalization, originally proposed by Grimshaw (1990), which should be retained from the preceding examples, is (33).

33. **RNs are not argument-taking.** A verb's argument structure is not satisfied in RNs.

Both the external (agent) as well as the internal (patient and recipient) arguments of the V are in the result nominalization realized as optional modifiers. In fact just as with SENs it is the category N, not V, that takes these modifiers. Generally speaking, the similarity between the verbal arguments and the modifiers of an RN is just an accidental overlap.

So far in this subsection we have seen that result nominalization is not a productive process of forming nominals. Only a restricted list of root suffixes are inserted at deep structure, form the heads of these constructions, and allow result nominalizations. Since the insertion of the suffix occurs so early and before syntax, their V structure is almost invisible. This can be compared for example with Dutch nominal infinitive constructions, which are a result of the syntactic operation called 'Categorial Switch' and whose V structure remains visible even after the nominalization process.

Furthermore, result nominals behave externally like NP/DPs and internally like regular countable nouns since they can be determined, questioned, quantified, pluralized and modified by concrete adjectives. In these respects, they behave just like simple event nouns, but unlike SENs they do not allow VP adjectives and adjectives like *constant* and *frequent*. Unlike complex event nominals, which will be analyzed in the next subsection, all the data presented here confirm that RNs are not argument-taking, which means that the argument structure of the stem verbs is not satisfied obligatorily.

#### 4.2.4. Complex Event Nominals

In this subsection I will look at “complex event nominals” (henceforth referred to as CENs) which are nominalizations derived from verbs which, unlike result nominals, do not denote the result of the action of the verb but the event as a process (Grimshaw, Ch. 3 1990).

According to her, also unlike simple event and result nominals, only complex event nominals have an event structure and obligatorily satisfy their subcategorization. This property will be clarified in more detail later on in this subsection.

Complex event nominalization is a productive process so complex event nominals can be formed from almost all verbs either by adding the derivation suffixes *-(a)tion* (e.g. *organization, collection, translation, etc.*), *-ion* (e.g. *expansion, etc.*), *-al* (e.g. *arrival, appraisal, etc.*), *-ment* (e.g. *development, management, etc.*) or by attaching the derivational *-ing* suffix and thus forming *-ing* complex event nominals (e.g. *writing, teaching, organizing, etc.*).

Nevertheless, the nominalization process of complex event nominals is restricted for auxiliary verbs (34a), modals (34b) and raising verbs (34c), which are excluded as complex event nominals.

34. a \**John's having criticized of the book resulted in the lack of interest.*  
b \**Her canning drive / can driving of the car surprised everyone.*  
c \**Her seeming to read of so many books surprised us.*

In fact this restriction can be generalized to hold for all stative verbs such as *know*, *understand*, *remember*, *mean*, *realize*, *like*, *love*, *belong*, *own*, *hope*, etc. So there are no sentences like those under (35) in English (Emonds, 2007).

35. a *\*His gradual owning of so much property spoiled him in the end.*  
b *\*Her remembering of all the events from our childhood took the whole evening.*  
c *\*Their quick understanding of maths surprised me.*

If CENs are productive, the question naturally arises whether there is any default form of CENs. By default form we mean a morpheme which is unmarked and regular. As Anderson (1982, 585) suggests, the *-ing* morpheme is such a type of morpheme. When we compare all the suffixes listed above it becomes clear that no other morpheme can be attached for all of the verbs except for the semantically limited list of verbs discussed above (auxiliary, modal, raising or stative verbs). For this reason we do not for example have forms like *\*read / sing / eat-ation*; *\*read / sing / eat-al*; *\*read / sing / eat-ment* but we do have *reading*, *singing*, *eating*. Compare some more examples below in (36):

36. a *\*The markation / markal / markment of the students' essays took longer than I expected.*  
a' *The marking of the students' essays took longer than I expected.*  
b *\*We were surprised by the quick spreadatin / spreadal / spreadment of the news all over the world.*  
b' *We were surprised by the quick spreading of the news all over the world.*

Anderson's proposal is thus correct and the *-ing* complex event nominals really are the default form of CENs.

In subsection 4.2.1. we saw that externally complex event nominals, just like simple event and result nominals, are structurally modified like nouns. Now we are going to compare

their nominal and verbal properties and look at their internal structure. Unlike SENs and RNs, complex event nominals have an internal V-headed structure and are also more closely related to the verbs from which they are derived, which is also why they have more verbal properties. This becomes obvious (i) when we test them with determiners, quantifiers, modifiers and (ii) when we examine their argument structure.

(i) Let's first examine the verbal properties of CENs. Just like simple event and unlike result nominals, complex event nominals also take place in real time and over time, which is related to their verbal origin and is a verbal property (37).

37. a *The examination of the students took place in the teacher's office.*

b *His chaotic organizing of the events took a lot of time.*

In terms of their modification by the category A, complex event nominals are modified by adjectives (38a), not adverbs (38b), just as all nouns are. However, CENs can also take frequency adjectives *constant* and *frequent* (38c), since they are licensed by the verb's event structure (Grimshaw 1990, Ch. 3 114), and can be modified by other adjectives expressing time or duration (38d), which is another verbal property.

38. a *His passionate collection / collecting of stamps lasted all his life.*

b *\*His collection / collecting of stamps passionately lasted all his life.*

c *The constant / frequent examination / examining of students made the teacher rather unpopular.*

d *The slow / long / regular production of films / making of films can be very expensive.*

Since CENs refer to the activity of the verb as a process and not to the result of it, some adjectives which clearly modify RNs and their qualities are ungrammatical here (39).

39. a *The \*blue / quick packaging of the pills saves a lot of time.*

b *We protest against the \*treeless / rapid development of modern areas in the city.*

Furthermore, since complex event nominals often express voluntary verbal activities, CENs are also acceptable with modifiers such as *intentional* and *deliberate* (40a) and infinitival purpose clauses (40b). Compare the following examples with the result nominal examples in (23) that exclude both of these modifiers because result nominals do not refer to voluntary activities.

40. a *Their intentional / deliberate falsification / falsifying of documents destroyed the company's reputation.*

b *Their falsification / falsifying of documents to get more money from their clients destroyed the company's reputation.*

All of the examples above show that CENs have verbal properties which must be licensed by a verbal head which is present in complex event nominals but not in result nominals.

Internally, unlike simple event and result nominals, complex event nominals do not allow the indefinite determiner or a numeral *one* (41a), as we would expect with regular countable nouns, but they can take definite determiners (41b), demonstratives (41c) and possessive pronouns (41d). However, note that the possessive subject NP must have the definite determiner and that the indefinite determiner would be ungrammatical here.

41. a *\*A / one development into the hills should be stopped immediately.*

b *The assignment of the problem resulted in a fierce debate.*

c *This / that examination of students took longer than normally.*

d *His / the teacher's / \*a teacher's examination of students was exhausting.*

On the other hand, the *-ing* complex event nominals allow both the indefinite and definite determiners (42a), demonstrative pronouns (42b) and also possessive pronouns and NPs (42c).

42. a *John enjoyed a / the reading of The Bald Soprano.*  
b *This / that reading of The Bald Soprano was very enjoyable.*  
c *His / John's reading of The Bald Soprano was very enjoyable.*

(Roeper and Wasow 1972, 45)

As regards their countability, complex event nominals do not pluralize so they can appear only in the singular form (43a) and the plural form results in the ungrammaticality of the example below in (43b).

43. a *The production of the film took several months.*  
b *\*The productions of the films took several months.*

This can be explained by the fact that CENs behave like mass nouns which are not normally pluralized either, therefore we do not for example have forms like *\*airs*, *\*waters*, *\*lights*, etc.

This leads to the next observation that complex event nominals can be premodified by quantifiers such as *any* and *no* (44a) and, unlike SENs and RNs, they can also appear without any determiner at all (44b). As this isn't acceptable with singular countable nouns (44c), complex event nominals derived by all suffixes except for the *-ing* suffix (44d) again share this property with uncountable mass nouns (44e).

44. a *No / Any production of films can earn you so much money.*  
b *Collection of stamps can be a nice hobby.*  
c *\*Book is more interesting than magazine.*  
d *\*Collecting of stamps can be a nice hobby.*

*e Tea is healthier than coffee.*

The nominal properties of CENs which are more at the surface level are given by the fact that the nominal suffix is inserted later during the syntactic derivation. Since Emonds's (2000) approach allows for the verbal and the nominal head, I have chosen his later insertion model which will be explained below.

(ii) The internal structure of CENs has been analysed differently by different linguists but basically there have been two approaches. According to the lexicalist approach first suggested by Chomsky (1970), which was generally accepted during the 1970s and the 1980s, and also taken over by Grimshaw (1990), all nominalizations including CENs are generated as lexical units in the lexicon. Although Chomsky succeeded in drawing attention to nominalizations in general, he did not distinguish the different types of nominals, even though they are at first sight a mixed group of nominals. It was Grimshaw (1990) who classified nominals into different categories according to their nominal and verbal properties and the realization of argument structure.

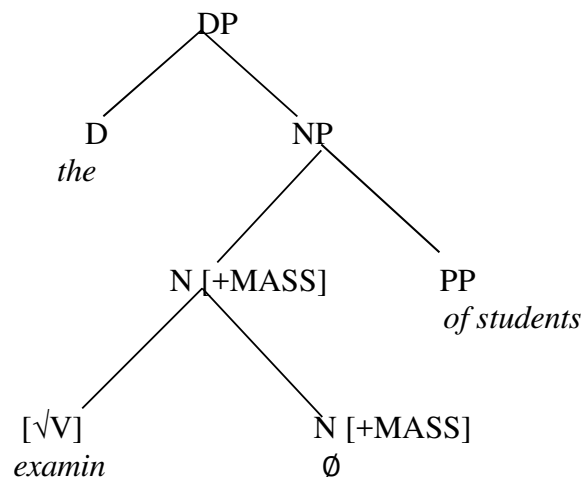
The second approach referred to as syntactic was first proposed by Lees (1960), who claimed that nominalizations are generated by transformations from both active and passive sentences. This was later taken over for example by Börner (1993, 1997, 2001), Emonds (2000), and many other linguists. Both Börner and Emonds rely on syntactic operations and argue that CENs are derived by cyclic derivation, they differ mainly in terminology. What Börner calls Parallel Morphology is for Emonds the Syntacticon, and while in Börner's analysis VP is nominalized, in Emonds's treatment [ $\sqrt{V}$ ] selects and then is nominalized.

However, since Börner's arguments for VP nominalization are based on examples which are problematic as far as their acceptability is concerned, I claim Emonds (2000, Ch.4 153) is correct and his analysis is more accurate. Unlike Grimshaw (1990), he accounts for the different properties not in terms of lexical semantics but by syntax and manages to explain how CENs and RNs are generated, why CENs both inherit the argument structure and yet also differ in their internal properties.



In line with this, an internal structure of a CEN like *the examination of students* / *the examining of students* (*took three hours*) looks in my analysis like the one below under (45), where the CEN has two lexical heads. The verbal root is the deep level lexical head that selects in CENs, while the empty N is inert to selection at this level. The nominalizing suffix *-ation*, *-ing*, etc. replaces  $\emptyset$  later during the syntactic derivation and becomes the nominal lexical head in s-structure. As a result of this late insertion of the nominalizing suffix, complex event nominals have a full phrasal projection of the root. In comparison to Lees (1960), Emonds (2000) simplifies the operation by avoiding passivization of the active sentence and its subsequent nominalization.

45.



As a result of this operation, the event structure is still present in CENs and they retain more verbal properties than RNs. The crucial difference between CENs and RNs are thus the different levels at which the nominalizing morphemes are inserted. With RNs the morpheme is inserted early, before syntax, and therefore RNs have nominal properties, while with CENs the suffix is inserted late, during syntax, so CENs obligatorily satisfy their argument structure and have more verbal properties.

It should also be pointed out that many derived nominals (e.g. *collection, translation, development, etc.*) have an ambiguous form so that they can be interpreted as both result nominals (e.g. *This translation of the book was really original.*) or complex event nominals (e.g. *The translation of the whole book took him several months.*). Their different reading is brought about by the different levels at which the nominalizing morpheme is inserted. If this morpheme insertion occurs early, in the deep structure, the nominalization is a result nominal, if the nominalization process happens later, during the syntax, i.e. in the derivation by phase, the resulting nominal is a complex event nominal. On the other hand, *-ing* complex event nominals as well as those ending in the suffixes *-ion* (e.g. *expansion*) or *-al* (e.g. *arrival*) have only event, and no result reading (Emonds 2000, Ch. 4 153-156).

Now we are going to look at the argument structure of CENs. Unlike simple event and result nominals, only complex event nominals have an event structure and realize their complements obligatorily. This for example means that “if the a-structure of a nominal has exactly the same status as that of a verb, then it must be satisfied” (Grimshaw 1990, Ch. 3 112). Thus we can formulate another generalization:

**46. CENs are argument-taking.** They satisfy their argument structure obligatorily.

To illustrate this generalization we are going to examine each type of the verb and its argument structure separately. For example an intransitive verb like *arrive* can become a complex event nominal (47). The external argument, the agent, will optionally be realized as a possessive pronoun or a genitive NP (47a) or an *of*-phrase (47b) since it is not an obligatory complement.

47. a *John arrived last night.*

b *His / John's / the arrival last night surprised everyone.*

c *The arrival of John last night surprised everyone.*

Monotransitive verbs like *examine*, *destroy*, *manage*, *collect* or *assign* can also be nominalized (48) and (49). Unlike RNs, however, the internal argument which is selected and subcategorized for by the V must be obligatorily satisfied with the CEN. Hence, the complement will be realized as an *of*-phrase or can become a genitive NP, while the agent, which is an external argument and therefore optional, will become either a possessive pronoun or a genitive NP (48b) and (49b) or a *by*-phrase (48c) and (49c).

48. a *The professor assigned final homework.*

b *His / The professor's assignment of final homework took an hour. / The final homework's assignment took an hour*

c *The assignment of final homework by the professor took an hour.*

49. a *Paul solves problems quickly.*

b *His / Paul's quick solving of problems saves time.*

c *The quick solving of problems by Paul saves time.*

On the other hand, if the agent is not realized, the grammaticality of the construction remains unchanged (50a) and (51a). However, without the obligatory satisfaction of the internal arguments, the complex event nominalization in its eventive reading becomes ungrammatical (50b) and (51b).<sup>18</sup>

50. a *The assignment of final homework took an hour.*

b *\*The professor's assignment took an hour.*

51. a *The quick solving of problems saves time.*

b *\*The quick solving saves time.*

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<sup>18</sup> Note that the nominalization in (50b) could be interpreted as a result nominal but not as a complex event nominal.

Let's now look at ditransitive verbs such as *donate*, *give*, *show* or *put* which can be nominalized as CENs (52). As Grimshaw (1990, Ch.3 112) predicts, their two internal arguments, complements, must both be obligatorily satisfied (52b), while the external argument, agent, is again realized optionally as a possessive pronoun or genitive NP (52b) or a *by*-phrase (52c). If either of the complements is not satisfied, the construction becomes ungrammatical (52d,e).

52. a *Mary frequently shows the city center to foreigners.*

b *Her / Mary's frequent showing of the city center to foreigners is much appreciated.*

c *The frequent showing of the city center to foreigners by Mary is much appreciated.*

d *\*Mary's frequent showing of the city center is much appreciated.*

e *\*Mary's frequent showing to foreigners is much appreciated.*

Just as with the three types of verbs discussed above, verbs which take PP complements such as *point at*, *listen to*, *focus on* or *look at* (53) must also realize these PP complements even in the nominalizations (53b). If the PP complement selection is violated in any way, the nominalization becomes ungrammatical (53c,d), as we have seen in the previous examples.

53. a *John pointed at the statue.*

b *John's pointing at the statue drew attention immediately.*

c *\*John's pointing drew attention immediately.*

d *\*John's pointing the statue drew attention immediately.*

However, verbs with obligatory clausal complements like *announce*, *state* and *conclude* (54) cannot become complex event nominals so CENs do not take clausal complements. The reason is that the nominalizations like *announcement*, *statement* or *conclusion* never refer to the event or process but to the result of the action of the verb (54b), as mentioned above in subsection 4.2.3.

54. a *The government concluded that taxes were going to increase.*

b *The government's conclusion that taxes were going to increase surprised everyone.*

(a result nominal)

In conclusion, CENs share both verbal and nominal properties. They take place in real time, are modified by adjectives expressing time or duration or modifying the activity of the verb, adjectives such as *deliberate* and *intentional*, and infinitival purpose clauses. All of these are verbal properties that CENs retain from the verbs they are derived from. On the other hand, CENs can be determined only by definite, not indefinite, determiners, they are not countable because they are [+ MASS] nouns, although they can be quantified by quantifiers such as *any* and *no*, which are nominal properties.

The verbal and nominal properties indicate that CENs have two heads – the deep level verbal lexical head and the surface level nominal head as Emonds's (2000) model assumes. As Grimshaw (1990) predicts, CENs are also argument-taking, which means that they satisfy their argument structure obligatorily. This means that they realize their complements obligatorily, if the complements, the internal arguments of the verb, are obligatory with the verb from which they are derived. However, the external argument, the agent, which can be realized as a possessive pronoun/possessive NP or the *by*-phrase, is not a true argument; it is never obligatory, but optional. Agents are licensed by the argument structure but they are not required for argument structure satisfaction like true arguments, complements, are, therefore Grimshaw (1990, Ch. 4. 53) calls them a-adjuncts. Finally, optional phrases outside of the argument structure like adverbial phrases are in her terminology real adjuncts, however, these are not the subject of this study.

#### **4.2.5. Gerunds**

Finally, in this subsection we are going to examine the last type of English nominalizations and that is gerunds. Gerunds are constructions that externally look like NPs but internally are

VPs and in fact have more verbal properties than all the other types of nominals described in the previous subsections.

At first glance, gerunds might seem to have more properties in common with VP infinitives but using Edmonds's (2014) diagnostics I will later demonstrate that they are not VPs in the true sense and in fact differ from infinitives in many ways.

The formation of gerunds is also an almost fully productive nominalization process so they can be formed from almost all verbs, including auxiliary verbs (55a), by adding the *-ing* suffix. Only modals (55b) and raising verbs (55c) are excluded.

55. a *John's having criticized the book resulted in a lack of interest.*

b *\*Her canning drive the car surprised everyone.*

c *\*Her seeming to be so well-read confused us.*

Although the form of the nominal itself (e.g. *writing*) may seem to resemble both the result nominals as well as the complex event nominals formed with the *-ing* suffix, they differ fundamentally in their formal status, in the way they realize their objects, as well as in their modifiers or the ability to be quantified.

The reference of gerunds just as of SENs and CENs, but unlike RNs, takes place in time and occurs over time since they refer to a process or event and not to the result of an activity. That is why the examples below are grammatical (56).

56. a *Reading those twenty assigned books took me half a year.*

b *Opening Christmas presents usually takes place in the living room.*

As mentioned before, externally gerunds behave like NPs and appear in all the syntactic positions where NPs normally do as we have seen before in subsection 4.2.1. However, their internal structure seems to be more verbal than nominal. Therefore, I am now going to examine both their nominal as well as verbal properties.

Gerunds appear neither with the indefinite nor with the definite determiner (57a), but they occur with demonstratives (57b)<sup>19</sup>, and possessive or object form of pronouns and possessive NPs (57c).

57. a \**Mary enjoyed a / the reading the Bald Soprano.*  
b *Mary enjoyed this / that reading the Bald Soprano.*  
c *Mary enjoyed his / him / Paul's reading the Bald Soprano.*

Determiners such as *any* and *no* are also acceptable (58a) but determiners such as *some*, *each* and *every* are excluded (58b), which shows that gerunds are not normally quantified.

58. a *Any / no reading books all night can be harmful.*  
b \**Some / each / every reading books all night can be harmful.*

CENs cannot be counted (59a) or pluralized (59b) either, as the examples below illustrate.

59. a \**Three writings John a letter exhausted him.*  
b \**Writings John a letter exhausted him.*

All these properties indicate that the external left side of a gerund with its premodifiers is partly nominal, although countability and pluralization are excluded. On the other hand, the internal right side of the construction is verbal since gerunds are modified by adverbs (60a), not adjectives (60b), and their complements occur in the ACC case or object form (61a) and not in the GEN case as *of*-phrases (61b), counter to the *-ing* complex event nominals.

60. a *My writing quickly / regularly / already him a letter surprised John.*

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<sup>19</sup> Note that demonstratives with gerunds seem to require habitual interpretation. The same holds for *any* and *no*.

b \**My blue / quick / regular writing him a letter surprised John.*

61. a *Seeing John / him in town yesterday surprised me.*

b \**Seeing of John / him in town yesterday surprised me.*

In comparison to the *-ing* complex event nominals, gerunds have fewer nominal properties since they are not modified by adjectives and do not assign the genitive case to their complements. Moreover, unlike CENs (62), gerunds take a tense marker [+ ASPECT] (63b), which is another property that they share with verbs (Roeper & Wasow 1972, 45). CENs with the perfective aspect are ungrammatical (62b).

62. a *I appreciate graceful diving.*

b \**I appreciate graceful having dived.*

63. a *I appreciate diving gracefully.*

b *I appreciate having dived gracefully.*

In fact, gerunds appear to have mixed both nominal and verbal properties so that the left side of the construction looks nominal, with its possessive modifiers, while the internal right side of the phrase looks like a typical VP. Naturally a question may arise whether gerunds are not more like infinitives, since infinitives can also appear as syntactic subjects and objects. Therefore, let's now compare gerunds and infinitives to see whether the constructions have more similarities or differences.

Although infinitives can have the syntactic function of subjects, they do not occur in all the subject positions. For example infinitives are excluded from subject positions in embedded clauses (64a). In fact they appear only in a root or main clause initial position (64b) as Emonds (2014, 5-6) shows. On the other hand, gerunds appear in all subject positions even in embedded clauses (64c,d).



64. a *\*The survey claimed that to eat milk chocolate isn't healthy.*  
 b *To eat milk chocolate isn't healthy.*  
 c *The survey claimed that eating milk chocolate isn't healthy.*  
 d *Eating milk chocolate isn't healthy.*

Furthermore, infinitives do not invert with the main verb, not even in root clauses (65a), while gerunds do (65b).

65. a *\*Wouldn't to get the certificate please you?*  
 b *Wouldn't getting the certificate please you?*

As with subjects, infinitives do not in fact appear in all the object positions where we normally have DP objects (66a), while gerunds do. So while gerunds occur as objects of prepositions which select a DP, thus P + \_\_DP, such as *on, for, from, at, because of*, etc. (66b), infinitives do not occur in these positions (66c).

66. a *You should only focus on the facts.*  
 b *You should only focus on writing more articles.*  
 c *\*You should only focus on to write more articles.*

Moreover, infinitives are not like real objects of Vs since another selected complement (e.g. a PP) can both precede and follow a gerund (67a,b) but not an infinitive (67c,d). While a gerund can always precede other complement phrases because it is truly a DP, an infinitive can't because it is actually not a DP (67d). Infinitives must be in the final position under VP (67c) as Emonds (2014, 10) convincingly argues:

67. a *I will take upon myself the burden / repairing the roof.*  
 b *I will take the burden / repairing the roof upon myself.*  
 c *She showed Peter the new device / how to use the computer.*

d *She showed the new device / \*how to use the computer to Peter.*

Two further independent categorial tests used before also prove that other DPs can coordinate with gerunds (68a) but not infinitives (68b), which means that gerunds and nouns share the same category, however, infinitives don't.

68. a *The rain and being outside all day wore us out.*

b *\*The rain and to be outside all day wore us out.*

Secondly, gerunds are acceptable in the focus positions in cleft sentences (69a), where NPs normally appear, while infinitives are in such positions ungrammatical (69b) (Emonds 2014, 11-12). Both of these tests thus confirm that gerunds are DPs but infinitives are not.

69. a *It was the exhibition / visiting the museum that he enjoyed.*

b *It was the exhibition / \* to visit the museum that he enjoyed.*

All these arguments have shown that externally gerunds really are DPs since they appear in all the syntactic positions where DPs normally appear. On the other hand, infinitives are not DPs but VPs, even if they occur in the syntactic function of a subject or object. As subjects in root or main clauses infinitives are in fact in a pre-subject position where they bind a null expletive subject and as objects they appear in clause-final position and not in the position of object DPs. It is, however, not within the scope of this chapter to list all the arguments to support this claim as more can be found in Emonds (2014).

Let's now consider the internal tree structure of gerundial constructions. Diachronically, English gerunds developed from a nominal construction that has acquired more verbal features over the centuries, so that it resulted in a construction with mixed nominal and verbal features, which authors like Lakoff (1972) take as evidence for the "fuzziness" of categories. In the previous chapter I discussed Dutch nominal infinitives which

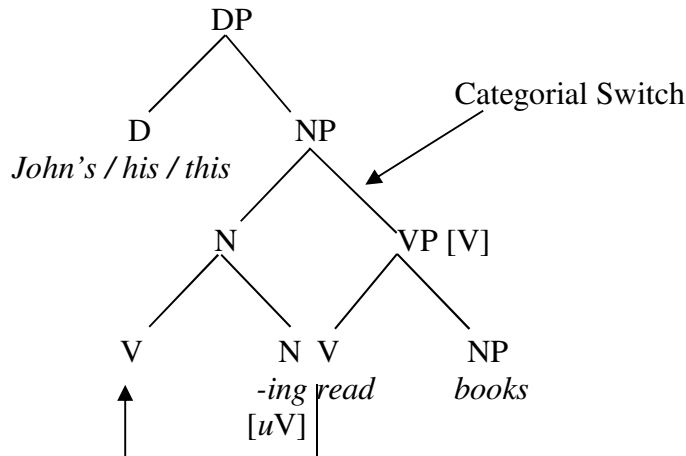
are similarly constructions with truly mixed nominal and verbal features, and I will try to unify their analysis with that of gerunds.

Many different linguists (Reuland, 1983; Abney, 1987; Emonds, 2000; Veselovska and Emonds, 2015, etc.) and approaches have tried to characterize the internal structure of gerunds in different ways. Reuland (1983) reflects an early generative tendency to analyze non-finite clauses with structures as close as possible to finite ones, and in fact claims outright that gerunds are finite, even though they lack agreement. In contrast, Veselovska and Emonds (2015, 10-11) view gerunds as a kind of syntactic derivation unrelated to Tense and in fact totally lacking it, in other words a nominalization of a vP, with a ‘nominalizing’ suffix located in the projection of the Determiner. In their treatment the *-ing* morpheme is inserted at the very top of a verbal projection (v/VP), and it has a [+D] feature. Consequently, this feature becomes the head, the whole complex projects and thus forms a DP layer above the layer of v/VP.

In my analysis here, I propose a different treatment of gerunds and I claim that their mixed properties can be explained through a single operation that combines Merge and some version of Categorical Switch (Panagiotidis and Grohmann, 2009), the principles of which have been explained in more detail in the previous chapter. I accounted for this phenomenon first when examining Dutch nominal infinitives but in fact the same principle can be applied to English gerunds as well, providing an elegant solution for their internal tree analysis.

The whole construction starts as a VP (e.g. *read books*), which can also be extended by adverbs (e.g. *quickly*), with an interpretable [V] feature. When higher up in the tree structure the VP merges with the *-ing* morpheme that carries an uninterpretable [*u*V] feature, a “Categorical Switch” is triggered by the morpheme. In the next stage the V (*read*) is moved in front of the *-ing* morpheme and as a result we end up with an NP (*reading books*) that can merge with a determiner (e.g. *John’s / his / this*) above the NP level and thus we get the DPs like *John’s / his / this reading books quickly* (70).

70.



Let's now examine the argument structure of gerunds. Similarly to CENs, gerunds have an argument structure inherited from the verbs, but their arguments are realized differently. In fact, gerunds realize their arguments in almost the same way as infinitives and, except for the case marking of the subject, their arguments also have the same form as arguments of a finite verb. To illustrate this we can compare the following examples where the agent of the finite verb is in the Subject or Nominative case (71a), while with an infinitive it changes into the Object/Accusative case (71b), and with a gerund it is in the Object/Accusative or Possessive case (71c). However, note that the Possessive case with gerunds seems to be becoming less and less frequent (Veselovska and Emonds 2015, 5). On the other hand, the patient is in the Object/Accusative case in all of the three constructions.

71. a *He<sub>SUB</sub> writes letters<sub>OBJ</sub> / them<sub>OBJ</sub> frequently.*  
 b *It is impossible for him<sub>OBJ</sub> to write letters<sub>OBJ</sub> / them<sub>OBJ</sub> frequently.*  
 c *I appreciate him<sub>OBJ</sub> / ?his<sub>POSS</sub> writing letters<sub>OBJ</sub> / them<sub>OBJ</sub> frequently.*

Now, we are going to compare the different types of verbs one by one to see how gerunds realize their arguments. Intransitive verbs such as *sleep*, *cough*, *sneeze* or *arrive* can form gerunds and it is exactly the form of the subject and the ability to take adverbial modifiers instead of adjectives that help us distinguish whether the nominalization really is a

gerund or a complex event nominal. The example below shows that the gerund realizes the agent of the finite verb (72a) optionally as a noun or pronoun in the Object/Accusative or Possessive case (72b). Notice that if the agent is omitted, the construction still remains grammatical.

72. a *They<sub>SUBJ</sub> sneeze constantly.*

b *(Them<sub>OBJ</sub> / ?Their<sub>POSS</sub>) such sneezing constantly irritated everyone.*

Secondly, we will look at monotransitive verbs such as *examine, destroy, manage, collect*, etc. which also form gerunds. Similarly to the previous examples, the agent will be in the Object/Accusative or Possessive case, the patient, however, unlike with CENs, will not become an *of*-phrase but will remain in the Object/Accusative case (73b) as with a finite verb (73a). However, just like with CENs if the internal argument of the verb, the patient, is omitted in the nominalization, the construction becomes ungrammatical (73c).

73. a *He examines students<sub>OBJ</sub> / them<sub>OBJ</sub> thoroughly.*

b *Him<sub>OBJ</sub> / his<sub>SUBJ</sub> examining students<sub>OBJ</sub> / them<sub>OBJ</sub> thoroughly is feared by everyone.*

c *\*Him<sub>OBJ</sub> / his<sub>POSS</sub> examining thoroughly is feared by everyone.*

Thirdly, ditransitive verbs such as *donate, give, put, show*, etc. form gerunds too (74). As with the previous examples, the agent will be in the Object or Possessive case and the patient takes the Object/Accusative case. The recipient will either precede the patient as a noun or pronoun in the Dative case (74b) or follow it as a PP (74c). On the other hand, if either of the arguments is omitted the construction becomes ungrammatical (74d,e).

74. a *He gave his kids every penny / every penny to his kids.*

b *Him<sub>OBJ</sub> / His<sub>POSS</sub> giving his kids / them<sub>OBJ</sub> every penny was admirable.*

c *Him<sub>OBJ</sub> / His<sub>POSS</sub> giving every penny to his kids was admirable.*

d *\*Him<sub>OBJ</sub> / His<sub>POSS</sub> giving his kids / them<sub>OBJ</sub> was admirable.*

e \**Him<sub>OBJ</sub> / His<sub>POSS</sub> giving every penny was admirable.*

Next, we will examine verbs which obligatorily select PP arguments such as *point at*, *focus on*, *listen to* or *look at*. As with CENs the PP argument must be realized even in the gerund (75b) and (76b), otherwise the construction becomes ungrammatical (75c) and (76c).

75. a *John suddenly pointed at the picture.*  
b *John's pointing at the picture suddenly drew attention to it.*  
c \**John's pointing suddenly drew attention to the picture.*

76. a *Mary focused only on the advantages.*  
b *Mary's focusing only on the advantages biased the analysis.*  
c \**Mary's focusing biased the analysis.*

Finally, when we look at gerunds formed from verbs that subcategorize for clausal complements such as *announce*, *state*, *conclude*, *report*, etc. we can see they can be nominalized as gerunds (77b) and the omission of the sentential complement leads to an ungrammatical example (77c).

77. a *The government announced unexpectedly that taxes were going to increase.*  
b *The government's announcing unexpectedly that taxes were going to increase shocked the public.*  
c \**The government's announcing unexpectedly shocked the public.*

To sum up, in this subsection I have discussed gerunds and we have seen that gerunds and infinitives internally share many properties. For example, both of them are modified by adverbs and not adjectives, they take arguments obligatorily and the internal arguments have the same forms as with a finite verb. The external argument, the agent, however, will have a different form so that with infinitives it will be in the Object case while with gerunds it will

take either the Object or Possessive case. This shows that the right side of the gerund looks verbal but the left side, the premodifiers, are in part nominal. Besides that, infinitives and gerunds differ in their categorial status so that gerunds are DPs which appear in all the syntactic positions where DPs do, while infinitives are not DPs but VPs, even if they occur in the syntactic functions of a subject or object. As discussed before, as subjects in root or main clauses infinitives are in fact in a pre-subject position where they bind a null expletive subject and as objects they appear in clause-final position and not in the position of object DPs.

Another construction that gerunds might at first sight resemble are complex event nominals, analyzed in the previous subsection, since both of them can take the *-ing* suffix. Both CENs and gerunds appear in the syntactic functions where DPs do, they do not pluralize, and they realize the internal arguments of the verb obligatorily, however, the patient is realized as an *of*-phrase with CENs but as a DP in ACC or Object case with gerunds. The external argument, the agent, will in both cases be realized as a DP in Possessive case, although gerunds can also have the agent in Object case. On the other hand, gerunds take adverbial modifiers, while CENs are modified by adjectives, gerunds do not take the definite or indefinite article, while CENs are determined, and the tense marker [+ ASPECT] appears only with gerunds and not CENs.

In conclusion, gerunds are an independent construction that shares some features with infinitives, others with CENs. What makes them similar to other nominalizations in other languages is the process in which they are formed and their internal tree structure that combines two operations, Merge and Categorial Switch, into a single step as with nominal infinitives in Dutch, although Dutch nominal infinitives do not merge with the suffix and the verb does not move. The construction originates as a verb and therefore initially takes over some verbal properties including the adverbial modification, but higher up in the tree the VP Merges with the *-ing* morpheme that carries the uninterpretable [*u*V] feature. This *-ing* morpheme triggers Categorial Switch and the construction becomes nominal with nominal properties on the far left side of the phrase.

### 4.3. Chapter Summary

In this chapter I have examined English nominalizations of four types, all of which behave externally like NP/DPs and appear in all the syntactic environments where NP/DPs do. That's why they can occur as subjects, direct objects, prepositional objects and, certain types of adverbials. All the categorial tests, such as the coordination test, their appearance in cleft focus positions and after prepositions that select a DP, also demonstrate that they are noun phrases. However, although they do not differ in their categorial status, we found differences between them internally.

Firstly, I looked at simple event (SEs) and result nominals (RNs), which do not refer to the action of the verb as a process but a result. These nominals have got the most nominal properties, including the ability to be counted and quantified, and they are not argument-taking, in the sense of obligatory satisfaction of argument structure.

Secondly, I analyzed complex event nominals (CENs) that are formed by attaching several derivational suffixes, out of which the *-ing* suffix is the default form of CENs. No other morpheme can be attached to all of the verbs except for auxiliary, modal, raising and stative verbs. Complex event nominals refer to the action of the verb as a process and not as a result, therefore, they are not normally counted and quantified but they are argument-taking, which means that they obligatorily realize the arguments that are selected by the base verb. Yet, CENs still have more nominal than verbal properties.

Finally, I examined gerunds which are a construction with both nominal and verbal properties so that the internal right side of the phrase looks verbal while the external left side of the construction looks nominal. In my analysis I propose that gerunds are formed by a single operation that combines Merge and Categorial Switch that is also used to generate nominal infinitives in Dutch as well. Gerunds start as a VP construction with an interpretable [V] feature which higher up in the tree structure merges with the *-ing* morpheme that carries an uninterpretable [ $\mu$ V] feature.<sup>20</sup> This merge triggers Categorial Switch, the verb moves left of the *-ing* morpheme and the construction becomes nominal. This operation which

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<sup>20</sup> In Dutch it is the category D with an uninterpretable [ $\mu$ V] feature that triggers Categorial Switch.



encompasses my analysis of gerunds provides an elegant solution and brings English gerunds closer to nominal infinitives in Dutch where a similar version of this operation applies as well.

## 5. Czech Nominalizations

### 5.1. Chapter Introduction

In this chapter I will look at Czech nominalizations (in Czech terminology “deverbal nouns”) and compare them with Dutch and English nominalizations described in the previous chapters. I will examine whether the same or similar mechanisms described in these two Germanic languages are involved in Slavic Czech as well.

Czech nominalizations have previously been studied by Czech linguists. The first prominent linguist who paid more attention to them was Trávníček (1951) with his detailed description of the two types of nominals (also discussed here), who noticed their special properties but was not able to group them together. Ten years later he was followed by Havránek and Jedlička (1960), who gave a less detailed account but in principal groupings took over Trávníček’s classification and also noticed that some Czech nominals denote the result of the activity rather than the activity itself. Dokulil (1962) contributed to the descriptive analysis with his work on word formation processes, and Jelínek (1967) claimed that although Czech deverbal nouns are formed from verbs, they do not differ in other aspects from nouns. Šmilauer (1972) classified the nominals in detail according to their suffixes and discussed their specific semantic and morphological properties but considered them to be derivations from passive structures. Within the valency syntax, Daneš et. al. (1967) dealt with the relation between a syntactic structure of a sentence and a syntactic structure of a nominal and the relation between various syntactic positions and their semantic interpretations. Other traditional linguists who built on the collected data were Komárek (1978), Petr et.al (1986), Grepl and Karlík (1998), and Nekula et.al. (2012), as well as linguists within the valency framework such as Panevová (1999, 2000) and Novotný (1980). All of these mentioned authors described the special semantic and morphological properties and the valency frames of Czech nominals in great detail but were unable to capture generalizations for the processes by which the nominalizations are formed and through which they acquire these properties.

More recently linguists within the Lexicalist Framework, Karlík and Nübler (1998), who have proposed the Modified Valency Framework (Karlík 2000, 2002, 2003, 2004, 2007),

and generative linguists such as Veselovská (2001, 2015) and Stehlíková (2010) have tried to explain more systematically the mechanisms by which the nominals are formed. However, none has combined the detailed knowledge of the behaviour of these nominals with a broader and generally accepted linguistic framework so as to systematically explain which two types of Czech nominals are generated, why they have some particular properties and whether they are similar to or different from nominalizations in other languages.

I will take an approach similar to the previous chapters and will deal with nominals which either denote the result of the action of the verb or the action of the verb as a process. With these criteria in mind we are left with two types of Czech nominalizations, the first type are nominalizations ending in *-ba/ka* and some other suffixes (henceforth referred to as B/K nominals), e.g. *četba* ‘reading’, *procházka* ‘walk’, *sběr* ‘picking’, etc., and the second type are the *-ní/tí* nominalizations (henceforth referred to as N/T nominals), e.g. *čtení* ‘reading’, *šití* ‘sewing’, *sbírání* ‘picking’, etc. Other types of Czech nominalizations denote for example an object (e.g. *sběrač* ‘a tool for collecting things’), a person (e.g. *sběratel* ‘collector’) or a place (e.g. *sběrna* ‘junkyard’). They are related to the action of the verb, but since they do not denote the process or the result they are not included here, for the same reason that they are not included in the other chapters on Dutch and English.

All types of Czech nominalizations have been traditionally divided into individual categories according to their suffixes as if each suffix formed a homogenous group. However, in this chapter I will show that one suffix and one form can in Grimshaw’s (1990) terminology actually represent two different types of nominals which are generated in two different ways. I will thus show that the classification only according to suffixes is insufficient.

This chapter is divided into three sections. The first section provides an introduction. The second section is divided into three subsections, first of which deals with the external distribution of Czech nominalizations and shows which syntactic functions they can appear in, comparing their distribution with the distribution of nominalizations in English and Dutch.

The second subsection deals with the first type of Czech nominalizations, the *-ba/ka* nominalizations, in more detail and focuses on their semantic and morphological properties,

showing how they differ from other underived nouns. Since Czech is a rich synthetic language, with nominal declension, their special morphological properties are worth paying attention to. I will follow a similar pattern as in the previous chapters and examine the nominal and verbal properties of the B/K nominals (e.g. their ability to be quantified, counted and modified) the processes by which they are formed and the mode of realization of their arguments.

The third subsection will analyze the second type, the *-ní/tí* nominalizations, and will examine them in the same way, focusing on the similarities and differences between the two types. I will also try to explain why each type primarily forms either result or process nominals.

Finally, I will summarize the results of my examinations and compare and contrast these two types of nominalizations again. I will also try to situate them in a broader linguistic context and determine whether or not there is a Czech default form, like the English *-ing*.

## 5.2. Two Types of Czech Nominalizations

### 5.2.1. External Contexts

Firstly, let's look at the distribution of Czech nominalizations in a sentence. Just as the nominals in English and Dutch described in the previous chapters, Czech nominals can have exactly the same syntactic functions. Thus they appear in the sentence in positions where other NP/DPs do and just like other NP/DPs they fulfill the syntactic functions of subjects (1), direct objects (2), PP-objects (3) and adverbials (4):

1. (a B/K nominal as a subject)

a *Doktor* *řekl*, *že* *krátká procházka mu udělá dobře*.

Doctor<sub>NOM</sub> say<sub>3rd.sg.masc.past</sub> that short walk<sub>NOM</sub> he<sub>DAT</sub> do<sub>3rd.sg.fut</sub> well

'The doctor said that a short walk will do him good.'

(an N/T nominal as a subject)

b *Článek tvrdil, že psaní by se mělo učit jinak.*  
article<sub>NOM</sub> claim<sub>3rd.sg.past</sub>. that writing<sub>NOM</sub> COND. REFL. should<sub>3rd.sg.neut</sub> teach  
differently

‘The article claimed that writing should be taught differently.’

2. (a B/K nominal as an object)

a *Petr nesnáší dlouhé procházky.*

Petr<sub>NOM</sub> hate<sub>3rd.sg.pres</sub>. long<sub>pl</sub> walks<sub>ACC</sub>

‘Peter hates long walks.’

(an N/T nominal as an object)

b *Marie obdivovala Janino šití.*

Mary<sub>NOM</sub> admire<sub>3rd.sg.fem.past</sub>. Jane<sub>POSS</sub> sewing

‘Mary admired Jane’s sewing.’

3. (a B/K nominal as a PP object)

a *Jan se podíval na malbu na stěně.*

John<sub>NOM</sub> REFL. look<sub>3rd.sg.masc.past</sub> at painting<sub>ACC</sub> on wall<sub>LOC</sub>

‘John looked at the painting on the wall.’

(an N/T nominal as a PP object)

b *Jan přemýšlel o zimním lyžování.*

John<sub>NOM</sub> think<sub>3rd.sg.masc.past</sub> about winter skiing<sub>LOC</sub>

‘John thought about winter skiing.’

4. (a B/K nominal as an adverbial)

a *Po zkoušce šli všichni studenti domů.*

after exam<sub>LOC</sub> go<sub>3rd.pl.past</sub> all students<sub>NOM</sub> home

‘After the exam all students went home.’

(an N/T nominal as an adverbial)

b *Petr byl před zkoušením nervózní.*

Petr<sub>NOM</sub> be<sub>3rd.sg.masc.past</sub> before examining<sub>INSTR</sub> nervous

‘Petr was nervous before examining.’

We can also test the nominal status of these nominalizations by two independent tests used by Emonds (2014). The first test, which is applied in the previous two chapters as well, is the coordination test, and it shows that deverbal nouns can be coordinated with other nouns which are not derived from verbs (5). This illustrates that they must belong to the same part of speech since generally only members of the same category can be coordinated (Ross 1967).

5. *Test a zkouška* (a B/K nominal) / *zkoušení* (an N/T nominal) *budou trvat dvě*

test<sub>NOM</sub> and exam<sub>NOM</sub> / examining<sub>NOM</sub> will<sub>3rd.pl.</sub> take two

*hodiny.*

hours

‘The test and the exam / examining will take two hours.’

Veselovská and Emonds (2015, 22), as well as this thesis, also employ the focus test for testing the category of English semiclauses. This diagnostic applied to Czech shows that both B/K and N/T nominals can appear in the focus position in cleft sentences, which is reserved for nominal expressions (6a) but excludes verbal projections (6b):

6. a *Byla/o*                    *to zkouška* (a B/K nominal) / *zkoušení* (an N/T nominal), *čeho*  
 be<sub>3rd.sg.fem./neut.past</sub> it exam<sub>NOM</sub>                    / examining<sub>NOM</sub>                    that<sub>GEN</sub>  
*se*    *bála*                    *nejvíce*  
 REFL. fear<sub>3rd.sg.fem. past</sub> most  
 ‘It was the exam / examining that she feared the most.’

b \**Bylo*                    *to zkoušet, čeho*    *se*    *bála*                    *nejvíce*  
 be<sub>3rd.sg. neut. past</sub> it examine that<sub>GEN</sub>. REFL. fear<sub>3rd.sg.fem. past</sub> most

Moreover, Veselovská (2001, 8) demonstrates that deverbal nouns appear after prepositions which select [+NP] in forming PP’s. Only NP/DPs can appear in these positions and thus form PPs.

7. *Chystal*                    *se*    *na zkoušku* (a B/K nominal) / *zkoušení* (an N/T nominal).  
 prepare<sub>3rd.sg.masc.past</sub> REFL. at exam<sub>ACC</sub>                    / examining<sub>ACC</sub>  
 ‘He was preparing for an exam / examining.’

Another two tests that Veselovská (2001, 19-20) uses show that both B/K and N/T nominals can be premodified by demonstratives and other similar elements (8) and postmodified by a relative clause (9). The following examples indicate that Czech nominals must have a functional category D [\_\_+NP] and can thus form DPs:

8. *Jan*    *se*    *bál*                    *této*    *zkoušky* (a B/K nominal) / *tohoto*  
 John<sub>NOM</sub> REFL. fear<sub>3rd.sg.masc.past</sub> this<sub>DEM.GEN</sub> exam<sub>GEN</sub>                    / this<sub>DEM.GEN</sub>  
*zkoušení*. (an N/T nominal)  
 examining<sub>GEN</sub>  
 ‘John feared this exam / this examining.’

9. *Toto je zkouška* (a B/K nominal) / *zkoušení* (an N/T nominal),  
 this<sub>3rd.sg.pres.</sub> exam<sub>NOM</sub> / examining<sub>NOM</sub>  
*kterého se bojím.*  
 which<sub>GEN</sub> REFL. fear<sub>1st.sg.pres.</sub>  
 ‘This is the exam/examining which I fear.’

As we have seen in this subsection, both B/K and N/T nominals have exactly the same distribution as nominalizations in Dutch and English. Like other Czech nouns, Czech nominals:

- fulfil the syntactic roles of subjects, direct objects, PP objects and adverbials;
- can be coordinated with other nouns which are not derived from verbs;
- appear as the focus in cleft structures;
- appear after prepositions;
- follow determiners and demonstratives;
- are postmodified by relative clauses.

All of these are positions and properties typical of nouns, thus from the point of view of their external syntax we have seen that Czech nominalizations behave like nouns. In the next subsection I will look at each type separately and discuss their specific morpho-semantic, nominal, and verbal properties, as well as the processes by which they are formed.

### 5.2.2. The B/K Nominalizations

The first type of Czech nominalizations studied in traditional works are the *-ba/ka* nominalizations which will be referred to as the B/K nominals. These nominalizations form a smaller group than the *-ní/tí* nominals but they will be discussed first. They mainly denote the result of the activity of the verb and not the process.

Firstly, I will look at their word-formation process. The B/K nominals are formed irregularly by adding different suffixes to the verbal root (e.g. *-ba – četba* ‘reading’, *-ka –*



*procházka* ‘walk’, *-a – rada* ‘advice’, *-tva – bitva* ‘a battle’, *-tba – modlitba* ‘a prayer’, *-ota – robota* ‘labour’, *-ice – chumelenice* ‘a snowfall’, *-čka – bouračka* ‘a carcrash’, *-ost – žádost* ‘a request’, *-est – bolest* ‘pain’, *-ň – sklizeň* ‘a harvest’, *-o – hon* ‘a hunt’, *-ek – odpočinek* ‘a rest’, *-ot – jásos* ‘cheering’, *-lo – jídlo* ‘food’, etc.). Since the suffixes *-ba* and *-ka* are the most frequent, this whole class of deverbal nouns is referred to as the *-ba/ka* nominalizations.

If we look at this type of nominals in more detail, we can observe that the traditional classification just according to their suffix as one homogeneous group does not seem sufficient as the B/K nominals can actually be interpreted in two different ways, as both result and complex event nominals in Grimshaw’s (1990) terminology.

Those B/K nominals that are interpreted as complex event nominals have argument structure (see generalization (46) in the English chapter) and take place over time, just as all complex event nominals do (10) (Grimshaw 1990, Ch.3). This has also been discussed in the Dutch and the English chapter.

10. a *Autorská četba románu probíhala ve velkém sále.*  
 author’s reading novel<sub>GEN</sub> happen<sub>3rd.sg.fem.past</sub> in big hall  
 ‘The author’s reading of the novel took place in the big hall.’

b *Zkouška studentů zabrala skoro hodinu.*  
 exam students<sub>GEN</sub> take<sub>3rd.sg.fem.past</sub> almost hour  
 ‘The examining of students took almost an hour.’

On the other hand, B/K result nominals refer to the result of the activity of the verb, do not have an argument structure (formulated as generalization (33) in the English chapter) and do not take place in stretches of time. Compare B/K result nominals with ING- and GE-nominalizations in sections 3.2.2. and 3.2.4. of the Dutch chapter and English result nominals in section 4.2.3. of the English chapter to see that result nominals in all the three studied languages behave in this respect in the same way.

11. a *Seznam obsahoval* *povinnou četbu.*

list contain<sub>3rd.sg.masc.past</sub> obligatory reading

‘The list contained the obligatory reading.’

b *Písemná zkouška (\*studentů) měla dvě otázky.*

written exam (students<sub>GEN</sub>) have<sub>3rd.sg.fem.past</sub> two questions

‘The written exam had two questions.’

Although, unlike N/T nominals, all B/K nominals are primarily result nominals, some can also be interpreted as complex event nominals, therefore I propose the following generalization (12), which is also confirmed by their nominal and verbal properties.

12. There is no B/K nominal which would only have the complex event nominal reading and not the result nominal reading. B/K result nominals are productive Czech result nominals.

In the past traditional linguists such as Trávníček (1951) correctly pointed out that B/K nominals look more nominal and have more nominal properties than N/T nominals. However, he did not have the framework to explain why it should be so. So let’s first look at their nominal and verbal properties in more detail.

Unlike N/T nominals discussed later, B/K nominals differ among themselves in gender and in their declension paradigms. Some B/K nominals are masculine, others feminine, and a few of them are neuter depending on the suffix<sup>21</sup>, but they all have full declension paradigms so the endings change in both the singular and the plural forms as the tables below illustrate. The fact that B/K nominals have all the three genders is one of the nominal features shared with other underived Czech nouns.

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<sup>21</sup> Both *-ba* and *-ka* nominalizations are of feminine gender, which is therefore the most frequent among the B/K nominals.

Table 1: B/K nominal declension paradigms of *odpočinek* ‘a rest’, *četba* ‘a reading’, and *jídlo* ‘food’ in singular.

CASE (singular)	a masc. B/K nom.	a fem. B/K nom.	a neut. B/K nom.
NOM	<i>odpočin + ek</i> rest <sub>NOM.MASC.SG.</sub>	<i>čet + ba</i> reading <sub>NOM.FEM.SG.</sub>	<i>jíd + lo</i> food <sub>NOM.NEUT.SG.</sub>
GEN	<i>odpočin + ku</i> rest <sub>GEN.MASC.SG.</sub>	<i>čet + by</i> reading <sub>GEN.FEM.SG.</sub>	<i>jíd + la</i> food <sub>GEN.NEUT.SG.</sub>
DAT	<i>odpočin + ku</i> rest <sub>DAT.MASC.SG.</sub>	<i>čet + bě</i> reading <sub>DAT.FEM.SG.</sub>	<i>jíd + lu</i> food <sub>DAT.NEUT.SG.</sub>
ACC	<i>odpočin + ek</i> rest <sub>ACC.MASC.SG.</sub>	<i>čet + bu</i> reading <sub>ACC.FEM.SG.</sub>	<i>jíd + lo</i> food <sub>ACC.NEUT.SG.</sub>
LOC	<i>odpočin + ku</i> rest <sub>LOC.MASC.SG.</sub>	<i>čet + bě</i> reading <sub>LOC.FEM.SG.</sub>	<i>jíd + le</i> food <sub>LOC.NEUT.SG.</sub>
INSTR	<i>odpočin + kem</i> rest <sub>INSTR.MASC.SG.</sub>	<i>čet + bou</i> reading <sub>INSTR.FEM.SG.</sub>	<i>jíd + lem</i> food <sub>INSTR.NEUT.SG.</sub>

Table 2: B/K nominal declension paradigms of *odpočinek* ‘a rest’, *četba* ‘a reading’, and *jídlo* ‘food’ in plural.

CASE (plurals)	a masc. B/K nom.	a fem. B/K nom.	a neut. B/K nom. (pl.)
NOM	<i>odpočin + ky</i> rest <sub>NOM.MASC.PL.</sub>	<i>čet + by</i> reading <sub>NOM.FEM.PL.</sub>	<i>jíd + la</i> food <sub>NOM.NEUT.PL.</sub>
GEN	<i>odpočin + ků</i> rest <sub>GEN.MASC.PL.</sub>	<i>čet + eb</i> reading <sub>GEN.FEM.PL.</sub>	<i>jíd + el</i> food <sub>GEN.NEUT.PL.</sub>
DAT	<i>odpočin + kům</i> rest <sub>DAT.MASC.PL.</sub>	<i>čet + bám</i> reading <sub>DAT.FEM.PL.</sub>	<i>jíd + lům</i> food <sub>DAT.NEUT.PL.</sub>

ACC	<i>odpočin + ky</i> rest <sub>ACC.MASC.PL.</sub>	<i>čet + by</i> reading <sub>ACC.FEM.PL.</sub>	<i>jíd + la</i> food <sub>ACC.NEUT.PL.</sub>
LOC	<i>odpočin + cích</i> rest <sub>LOC.MASC.PL.</sub>	<i>čet + bách</i> reading <sub>LOC.FEM.PL.</sub>	<i>jíd + lech</i> food <sub>LOC.NEUT.PL.</sub>
INSTR	<i>odpočin + ky</i> rest <sub>INSTR.MASC.PL.</sub>	<i>čet + bami</i> reading <sub>INSTR.FEM.PL.</sub>	<i>jíd + ly</i> food <sub>INSTR.NEUT.PL.</sub>

As for their countability, B/K nominals are uncountable and considered to be mass nouns if they are interpreted as complex event nominals (13a), but they become countable as result nominals (13b). Consider the following example:

13. a \**Dvě malby zabraly celý den.*  
two paintings<sub>NOM</sub> take<sub>3rd.pl.fem.past</sub> whole day

b *Dvě nové malby visely na stěně.*  
two new paintings<sub>NOM</sub> hang<sub>3rd.pl.fem.past</sub> on wall<sub>LOC</sub>  
'Two new paintings hung on the wall.'

Since B/K nominals also belong to the class of nouns, they are normally modified by adjectives, and not adverbs, which again shows they have mostly nominal properties (14).

14. *Pomalá / \*pomalu četba životopisu všechny unavila.*  
slow / slowly reading biography<sub>GEN</sub> everyone tire<sub>3rd.sg.fem.past</sub>  
'The slow reading of the biography tired everyone.'

However, if B/K nominals are interpreted as complex event nominals, they can be premodified by adjectives expressing frequency or duration and adjectives which logically presuppose the existence of a subject/agent (15a). They cannot be modified by adjectives expressing a physical quality of the nominal (15b). On the other hand, B/K result nominals,

cannot be modified by adjectives expressing duration or frequency or adjectives which presuppose the existence of a subject/agent (16a); they can only be modified by adjectives expressing some physical quality of the result nominal (16b). This indicates that complex event nominals, unlike result nominals, retain some verbal properties, and that the nominalizing suffix enters the nominalization process later in a derivation.

15. a *Zdlouhavá / záměrná četba životopisu všechny unavila.*

longish / intentional reading biography<sub>GEN</sub> everyone tire<sub>3rd.sg.fem.past</sub>

‘The longish intentional reading of the biography tired everyone.’

b *\*Obsáhlá četba životopisu všechny unavila.*

extensive reading biography<sub>GEN</sub> everyone tire<sub>3rd.sg.fem.past</sub>

16. a *\*Zdlouhavá / \*záměrná četba ležela na stole.*

longish intentional reading lie<sub>3rd.sg.fem.past</sub> on table

‘The extensive reading lay on the table.’

b *Obsáhlá četba ležela na stole.*

extensive reading lie<sub>3rd.sg.fem.past</sub> on table

‘The extensive reading lay on the table.’

As for negation, which is a verbal property, B/K nominals are never negated so the negative prefix *-ne*, which also negates Czech verbs in general e.g. *psát* ‘to write’ – *nepsat* ‘not to write’, is ungrammatical with all B/K nominals, as illustrated in (17).

17. *\*Nečetba knih studenty přispívá k jejich špatné slovní zásobě.*

not-reading books students<sub>INST</sub> contribute<sub>3rd.sg.fem.pres</sub> to their poor vocabulary

This is a nominal property because regular Czech nouns are not normally negated (e.g. *kniha* ‘book’ – *\*nekniha* ‘not book’, *počítač* ‘computer’ – *\*nepočítač* ‘not computer’, etc.)<sup>22</sup>.

Also as opposed to N/T nominals and verbs, B/K nominals do not take many prefixes and their ability to express aktionsart is thus limited (18a) (Karlík 2002, 21). This is yet another nominal property since nouns do not allow aktionsart either (18b).

18. a *Janova četba* / *\*dočetba* / *\*přečetba* / *\*pročetba* *knihy*  
 John’s reading / finishing reading / reading over / reading through book<sub>GEN</sub>  
*zabrala* *týden*.  
 take<sub>3rd.sg.fem.past</sub> week  
 ‘John’s reading of the book took a week.’

b *Janova nová kniha* / *\*dokniha* / *\*překniha* / *\*prokniha* *ležela* *na*  
 John’s new book / finishing book / book over / book through lie<sub>3rd.sg.fem.past</sub> on  
*stole*.  
 table.  
 ‘John’s new book was lying on the table.’

Also unlike N/T nominals discussed later, B/K nominals do not have iterative aspect, in other words the ability to express frequently repeated actions. In terms of iterativity, B/K nominals are simply neutral and without any iterative aspect distinction (Karlík 2002, 21). This is a nominal property because nouns in general do not distinguish iterativity either; only verbs do. The following example (19) is a B/K nominal of the verb *hrát* - ‘play’, which has

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<sup>22</sup> The only context in which negated nouns normally do appear in Czech are fairytales, where the repeated pairs are a stylistic means of expressing a long and difficult journey full of obstacles. These forms sometimes also appear in spoken language to express something similar. However, this is not the standard usage for all nouns. The following example of mine illustrates the phenomenon:

*Honza šel cestou necestou, polem nepolem, lesem nelesem...*  
 John went road<sub>INST</sub> not-road<sub>INST</sub> field<sub>INST</sub> not-field<sub>INST</sub> forest<sub>INST</sub> not-forest<sub>INST</sub>  
 ‘John plodded through roads and roads, fields and fields, forests and forests ...’

the iterative verbal counterpart *hrávat* - ‘play frequently’, but this verb does not allow a B/K nominalization.

19. *Janova hra / \*hráva na piáno byla slyšet v celém domě.*  
 John’s play / play frequently on piano be<sub>3rd.sg.fem.past</sub> heard in whole house  
 ‘John’s playing the piano was heard in the whole house.’

Furthermore, B/K nominals are never followed by reflexive pronouns (Karlík 2002, 15–19). Compare the following B/K nominalization of the verb *číst si* ‘read for yourself’ (20). This property is again nominal and indicates that B/K nominals are more nominal than N/T nominals, which can take reflexive pronouns as will be illustrated in the next subsection.

20. *\*Petr rád tráví večery četbou si.*  
 Peter<sub>NOM</sub> like<sub>3rd.sg.masc.pres.</sub> spend<sub>3rd.sg.pres.</sub> evenings reading<sub>INST.</sub> REFL.

In contrast to N/T nominals, which inherit the grammatical feature [+ ASPECT] from their verbal roots they are derived from, B/K nominals do not have this property. B/K nominals have lost this feature, and also for this reason they are often considered closer to regular nouns than N/T nominals. The following nominalization of the verb *číst* ‘read’ illustrates this phenomenon:

21. *Četba /\*dočetba knihy mu zabrala několik týdnů.*  
 reading / reading<sub>perf.</sub> book<sub>GEN</sub> he<sub>DAT</sub> take<sub>3rd.sg.fem.past</sub> several weeks  
 ‘The reading of the book took him several weeks.’

This is also visible in aspect marking prepositions, where unlike N/T nominals, B/K nominals are not sensitive to aspect marking prepositions, and so they can follow either *během* ‘during’ which must be followed by the imperfective aspect, or *po* ‘after’, which can

be followed by both perfective and imperfective aspect (22). Since B/K nominals do not have aspect, they are compatible with both prepositions.

22. *Během četby / po četbě děti usnuly.*

during reading<sub>GEN</sub> / after reading<sub>LOC</sub> children fall<sub>3rd.pl.past</sub> asleep

‘The children fell asleep during / after reading.’

So far we have seen that B/K nominals are either result or complex event nominals. As for their morphology, B/K nominals differ in gender but have full declension paradigms like other regular Czech nouns. If B/K nominals are result nominals, they are countable and modified by adjectives expressing some physical nominal quality, as are result nominals in Dutch (see section 3.2 in the Dutch chapter), English (see subsection 4.2.3 in the English chapter) and other languages. If they are complex event nominals, they look like uncountable mass nouns and are modified by adjectives expressing duration or frequency, as Grimsaw (1990, Ch. 3) predicted for complex event nominals in general. We can summarize the general properties of B/K nominals in the following way:

- no B/K nominals are negated;
- B/K nominals are limited in expressing aktionsart;
- B/K nominals do not express iterativity;
- B/K nominals do not take reflexive pronouns;
- B/K nominals do not inherit the grammatical feature [+ ASPECT] from the verbs they are derived from.

In conclusion, these properties of B/K nominalizations are basically the same or very similar to properties of complex event (sections 3.2. and 4.2.4.) and result nominals (sections 3.2. and 4.2.3.) in the other two languages we have discussed. All B/K nominals are primarily result nominals, and there is no B/K nominal which would have only the complex event nominal interpretation but would not have the result nominal interpretation.



Let's now look at my analysis of the internal tree structures of B/K nominals. Since they are primarily result and secondarily complex event nominals, these nominalizations must have two possible derivations as the same form can be generated in two different ways, as we have seen in the English chapter for the *-ing* suffix. But let's first briefly look at how different Czech linguists have tried to explain the mechanisms through which B/K and N/T nominals are generated and then contrast them with my approach.

First, within the lexicalist framework, Karlík and Nübler (1998), and then within the Modified Valency Framework, Karlík (2000, 2002, 2003, 2004, 2007), analyzed the two types of Czech nominalizations in line with Lees (1960) and Chomsky (1970) in two different ways – as transformations and lexical derivations. Thus within this framework B/K nominals are lexically derived, and N/T nominals are generated as transforms from passive structures (Karlík and Nübler 1998, 109). Among other arguments they claim that only passive structures allow for the agent to be expressed with the instrumental case.

In reaction to their analysis Veselovská (2001) uses Emonds's (2000) morphosyntactic model, with three levels of insertion of the nominalizing suffix *-ing* in English and claims that unlike English, Czech has only two levels of insertion – the underlying level and the syntactic level – but lacks the late insertion of the *-ing* suffix of English gerunds. She disagrees that the instrumental case is a solid argument for a transformation from passives, since the instrumental case is only one possible realization of agent. In many ways Veselovská is right but we also need to take into account that both B/K and N/T nominals allow result and complex event nominalizations even though each type has a more frequent realization of nominals, which complicates matters.

I propose to account for this by lexically listing these suffixes with uninterpretable  $uV$  features. In general, uninterpretable features  $uF$  and interpretable features  $F$  when they appear on sister cancel each other. Two sisters, e.g.  $[V]$  and  $[N, uV]$  thus become an  $N$  in a derivation.

The trees below show that a B/K nominal can be only a result nominal (e.g. *nadávka* 'an insult') or one form can be both a result and a complex event nominal (e.g. *čtba* 'reading'). This is due to the fact that open class lexical entries that form B/K nominals are

listed in the Lexicon in two different ways. Verbs such as e.g. *číst* ‘read’ are listed as (i) verbs that take the suffix *-ba/ka* which carries an optional uninterpretable *uV* feature, but verbs such as *nadávat* ‘insult’ are listed as (ii) verbs that take the suffix *-ba/ka* obligatorily carrying the uninterpretable *uV* feature:

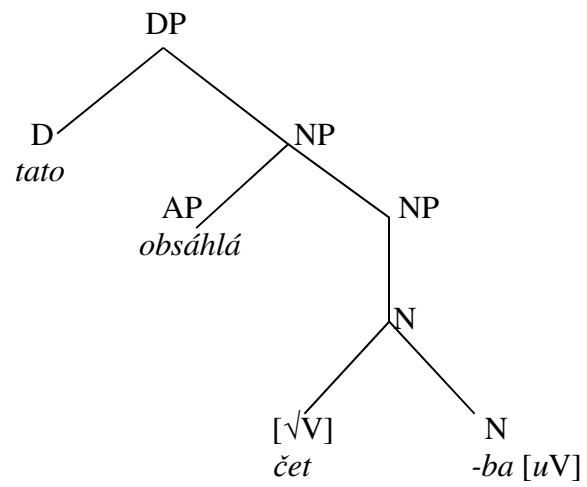
i) *číst*, V, (+\_\_\_\_\_ [ba, (uV)])

ii) *nadávat*, V, (+\_\_\_\_\_ [ka, uV])

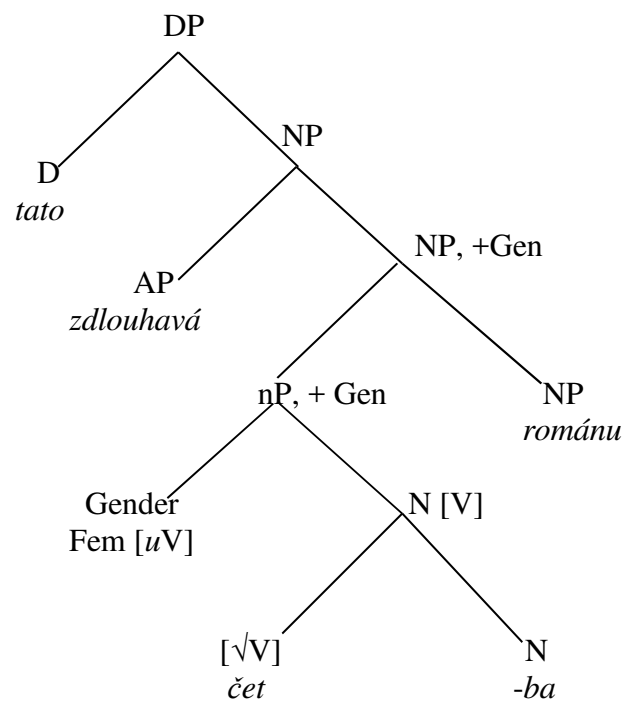
If *číst* ‘read’ forms a B/K result nominal such as *tato obsáhlá četba* ‘this extensive reading’ (23a), the uninterpretable *uV* feature is checked when the suffix *-ba/ka* merges with the verbal root and thus the verbal properties are unavailable already in the Lexicon and the construction becomes a B/K result nominal. Verbs like *nadávat* ‘insult’ take the suffix *-ba/ka* with an obligatory uninterpretable *uV* feature and the same mechanism is applied. With B/K result nominals gender doesn’t play an interpretable role.

But with complex event nominals I claim that if *číst* ‘read’ forms a B/K complex event nominal such as *tato zdlouhavá četba románu* ‘this longish reading of the novel’ (23b), the verbal root merges with the nominal suffix *-ba/ka* which lacks an uninterpretable *uV* feature, since this feature is in this case optional, and the V feature percolates to the N or NP level. During the derivation, gender, which expresses the *uV* feature and is the lowest functional head outside NP, merges with this NP, the feature is checked and as a result we get a B/K complex event nominal early in the derivation but the root is still visible.

23. (a) a B/K result nominal



(b) a B/K complex event nominal



However, it is necessary to say that the *-ba/ka* suffix is a non-productive way of forming complex event nominals, since B/K nominals are all primarily result nominals and only secondarily can they form complex event nominals.

Finally, let's look at how different types of verbs realize the argument structure in B/K nominals. First of all, we will discuss those B/K nominals which denote the result of the activity of the verb.

The first type of verbs is intransitive verbs such as *modlit se* 'pray'. This verb forms the B/K nominalization *modlitba* 'prayer'. In the example below the only verbal argument present is the external argument, the agent; however, in the nominalization the possessive pronoun, the prenominal possessive AP (24b) or the postnominal genitive NP (24c) are interpreted as the owner or possessor of the result nominal, but not a verbal argument in the true sense. As a modifier, which is optional and not obligatory, it can also be omitted without changing the grammaticality of the sentence (24d).

24. a *Petr se každý den modlí*

Peter<sub>NOM</sub> REFL. every day pray<sub>3rd.sg.pres.</sub>

'Peter prays every day.'

b *Jeho / Petrova modlitba byla vyslyšena.*

his / Peter<sub>POSS</sub> prayer be<sub>3rd.sg.fem.past</sub> answered

'His / Peter's prayer was answered.'

c *Modlitba Petra byla vyslyšena.*

prayer Peter<sub>GEN</sub> be<sub>3rd.sg.fem.past</sub> answered

'Peter's prayer was answered.'

d *Modlitba byla vyslyšena.*

prayer be<sub>3rd.sg.fem.past</sub> answered

'The prayer was answered.'

The second type of verbs are monotransitive verbs such as *malovat portrét* ‘paint a portrait’ which form the B/K result nominalization *malba* ‘painting’. This verb (25a) has two arguments, the external argument, the agent, and the internal argument, the patient. The possessive pronoun, the prenominal possessive AP (25b) or the postnominal genitive DP (25c) are again interpreted as the optional modifiers of the nominalization so they can also be omitted as in (25d). The internal argument of the verb, the patient, *must* be omitted in this B/K result nominal; otherwise the construction becomes ungrammatical (25e).<sup>23</sup> This fact is in agreement with Grimshaw’s (1990) generalization that result nominals do not take arguments obligatorily.

25. a *Karel maluje portrét.*

Charles<sub>NOM</sub> paint<sub>3rd.sg.pres.</sub> portrait<sub>ACC</sub>

‘Charles is painting a portrait.’

b *Jeho / Karlova malba visí na stěně.*

His / Charles<sub>POSS</sub> painting hang<sub>3rd.sg.pres.</sub> on wall<sub>LOC</sub>

‘His / Charles’s painting is hanging on the wall.’

c *Malba Karla visí na stěně.*

painting Charles<sub>GEN</sub> hang<sub>3rd.sg.pres.</sub> on wall<sub>LOC</sub>

‘Painting of Charles is hanging on the wall.’

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<sup>23</sup> In some cases, however, the internal argument of the verb which for example carries the accusative case can appear in the B/K result nominal with a different case than the genitive (in the example below it is the dative), which would normally be expected of a postnominal modifier. The dative case is, however, selected here by the N, not by V.

1. a *USA se rozhodly finančně podpořit Afriku.*  
 USA<sub>NOM</sub> REFL. decide<sub>3rd.pl.past</sub> financially support Africa<sub>ACC</sub>  
 ‘The USA decided to support Africa financially.’

b *Finanční podpora Afriky přišla pozdě.*  
 financial support Africa<sub>DAT</sub> arrive<sub>3rd.sg.fem.past</sub> late  
 ‘The financial support for Africa arrived late.’

d *Malba visí na stěně.*  
 painting hang<sub>3rd.sg. pres.</sub> on wall<sub>LOC</sub>  
 ‘The painting hangs on the wall.’

e \**Malba portrétu visí na stěně.*  
 painting portrait<sub>GEN</sub> hang<sub>3rd.sg. pres.</sub> on wall<sub>LOC</sub>

It is quite difficult to find ditransitive verbs which form B/K nominals, but one of them is for example *ukázat* ‘show’ with the B/K result nominal *ukázka* ‘a trailer’. In the example (26a) the verb has three arguments, the agent, the patient (the direct object), and the recipient (the indirect object). In the B/K result nominal the prenominal possessive AP, or the possessive pronoun are again interpreted as an optional modifier (26b) so it can be omitted as in (26c). The internal arguments of the verb can be omitted in the nominalization without changing the grammaticality of the sentence (26c) because only complex event nominals have argument structure and take obligatory objects. Similarly in (26d) the postnominal NP *film* is not interpreted as an obligatory internal argument but as an optional postmodifier of the nominalization, as Grimshaw (1990, Ch.3 161) suggested for other transitive verbs which form result nominals. On the other hand, example (26e) where only the indirect object remains becomes unacceptable. And if both the internal arguments are present at the same time in either order, the B/K result nominalization becomes ungrammatical as in (26f,g), which again confirms the hypothesis that result nominals are not argument-taking in any language, certainly not in Czech, as predicted by Grimshaw (1990, Ch. 3) and summarized as generalization (33) in the English chapter.

26. a *Jan a Petr ukázali film divákům / divákům film.*  
 John and Peter show<sub>3rd.pl.masc. past</sub> film<sub>ACC</sub> spectators<sub>DAT</sub> / spectators<sub>DAT</sub> film<sub>ACC</sub>  
 ‘John and Peter showed the film to the spectators / the spectators the film.’

b *Jejich / Janova a Petrova ukázka byla uvedena do kin.*  
their / John<sub>POSS</sub> and Peter<sub>POSS</sub> trailer *be*<sub>3rd.sg.fem.past</sub> released to cinemas  
'Their / John and Peter's trailer was released in cinemas.'

c *Ukázka byla uvedena do kin.*  
trailer *be*<sub>3rd.sg.fem.past</sub> released to cinemas  
'The trailer was released in cinemas.'

d *Janova a Petrova ukázka filmu byla uvedena do kin.*  
John<sub>POSS</sub> and Peter<sub>POSS</sub> trailer film<sub>GEN</sub> *be*<sub>3rd.sg.fem.past</sub> released to cinemas  
'John and Peter's film trailer was released in cinemas.'

e *\*Janova a Petrova ukázka divákům byla uvedena do kin.*  
John<sub>POSS</sub> and Peter<sub>POSS</sub> trailer spectators<sub>DAT</sub> *be*<sub>3rd.sg.fem.past</sub> released to cinemas

f *\*Janova a Petrova ukázka filmu divákům byla uvedena do kin.*  
John<sub>POSS</sub> and Peter<sub>POSS</sub> trailer film<sub>GEN</sub> spectators<sub>DAT</sub> *be*<sub>3rd.sg.fem.past</sub> released to  
cinemas

g *\*Janova a Petrova ukázka divákům filmu byla uvedena do kin.*  
John<sub>POSS</sub> and Peter<sub>POSS</sub> trailer spectators<sub>DAT</sub> film<sub>GEN</sub> *be*<sub>3rd.sg.fem.past</sub> released to  
cinemas

Other types of verbs with clausal complements can possibly also form B/K result nominals, although they are not very frequent. One such verb might be *poznámenat* 'remark' as in example (27a) below. The prenominal possessive pronoun / possessive AP (27b), or the postnominal genitive NP (27c) are interpreted as optional modifiers. The clausal complement

can be omitted as in (27d), but it can optionally be realized too as a postnominal clausal modifier (27b,c).

27. a *Pavel poznamenal, že situace je složitá.*

Paul remark<sub>3rd.sg.masc.past</sub> that situation is complicated  
'Paul remarked that the situation was complicated.'

b *Jeho / Pavlova poznámka, že je situace složitá, byla přesná.*  
his / Paul<sub>POSS</sub> remark that be<sub>3rd.sg.</sub> situation complicated be<sub>3rd.sg.fem.past</sub> accurate  
'His / Paul's remark that the situation was complicated was accurate.'

c *Poznámka Pavla, že je situace složitá, byla přesná.*  
remark Paul<sub>GEN</sub> that be<sub>3rd.sg.</sub> situation complicated be<sub>3rd.sg.fem.past</sub> accurate  
'Paul's remark that the situation was complicated was accurate.'

d *Pavlova poznámka byla přesná.*  
Paul<sub>POSS</sub> remark be<sub>3rd.sg.fem.past</sub> accurate  
'Paul's remark was accurate.'

So far we have looked at B/K result nominals and their argument structures, and we have seen that B/K result nominals are not argument-taking and, that their verbal roots do not realize their argument structures obligatorily just as in other languages. The prenominal and postnominal modifiers are not interpreted as arguments of the verb, but merely as modifiers of the nominalization. This becomes obvious for example because when we omit the postnominal modifiers from the nominalizations the constructions still remain fully grammatical, which would not be possible if the postnominal modifiers were really obligatory internal arguments. In other words, result nominals in Czech behave with respect to argument structure in the same way as they do in other languages and confirm Grimshaw's (1990)



prediction as well as generalization (33) from the English chapter; RNs are not argument-taking.

Now we are going to look at B/K complex event nominals of different verbs and analyze how they realize their argument structure in comparison with B/K result nominals.

Let's start with the same monotransitive verb *modlit se* 'pray' that we have examined before, but this time the nominalization *modlitba* 'prayer' will be interpreted as a complex event nominal. The verb has only one argument and that is the agent (28a). As an external argument the agent can be realized as a possessive pronoun, a prenominal possessive AP (28b) or a postnominal genitive NP (28c), or it can be omitted without changing the grammaticality of the construction (28d), since external arguments are always optional. However, this time the possessive pronoun, the possessive AP and the genitive NP are not interpreted as the owner, possessor or modifier of the result of the action of the verb but as a real agent of the action expressed by the B/K complex event nominal.

28. a *Petr se každý den modlí.*

Peter REFL. every day pray<sub>3rd.sg.masc.pres.</sub>

'Peter prays every day.'

b *Jeho / Petrova modlitba obvykle trvá hodinu.*

his / Peter<sub>POSS</sub> prayer usually last<sub>3rd.sg.fem.pres</sub> hour

'His / Peter's prayer usually lasts an hour.'

c *Modlitba Petra obvykle trvá hodinu.*

prayer Peter<sub>GEN</sub> usually last<sub>3rd.sg.fem.pres</sub> hour

'Peter's prayer usually lasts an hour.'

d *Modlitba obvykle trvá hodinu..*

prayer usually last<sub>3rd.sg.fem.pres</sub> hour

'A prayer usually lasts an hour.'

Secondly, we can look at monotransitive verbs such as *vymalovat* ‘decorate’ which can also be nominalized as a B/K complex event nominal. In the nominalization below the external argument of the verb, the agent, is again realized as a possessive pronoun or a possessive AP (29a), but it can also be realized as a postnominal NP marked with the instrumental case (29b), or be omitted (29c) because it is optional. On the other hand, the internal argument, the patient, which has the accusative case in the verb phrase (29a), must be realized as a postnominal genitive NP (29d). If it is omitted, as in (29e), the construction is grammatically unacceptable because B/K complex event nominals, like all complex event nominals, realize internal arguments obligatorily. Since the genitive case is now reserved for the realization of the internal argument, the external argument cannot take the genitive case and has to be realized either prenominally by the possessive case or postnominally by the instrumental case, as has been described above. All of this follows from Grimshaw’s (1990, Ch.3) hypothesis that complex event nominals have argument structure.

29. a *Petr maluje pokoj.*

Peter decorate<sub>3rd.sg.pres.</sub> room<sub>ACC</sub>

‘Peter is decorating a room.’

b *Jeho / Petrova malba pokoje zabrala týden.*

his / Peter<sub>POSS</sub> decorating room<sub>GEN</sub> take<sub>3rd.sg.fem.past</sub> week

‘His / Peter’s decorating of the room took a week.’

c *Malba pokoje Petrem zabrala týden.*

decorating room<sub>GEN</sub> Peter<sub>INST</sub> take<sub>3rd.sg.fem.past</sub> week

‘The decorating of the room by Peter took a week.’

d *Malba pokoje zabrala týden.*

decorating room<sub>GEN</sub> take<sub>3rd.sg.fem.past</sub> week

‘The decorating of the room took a week.’

e \**Malba zabrala týden.*

decorating take<sub>3rd.sg.fem.past</sub> week

Finally, we will analyze some ditransitive B/K complex event nominals. *Ukázat* ‘show’ is a ditransitive verb with two internal arguments, the patient, marked with the accusative case, and the recipient marked with the dative case (30a,b). If we look at the order of the arguments in the verbal phrase, they can follow in either order, the dative case marked argument can follow the accusative case marked argument (30a), or the dative can precede the accusative (30b). When we nominalize this construction, the external argument, the agent, can be realized again as a possessive pronoun or a possessive NP (30c). The realization of the agent as the postnominal NP in the instrumental case (30d) is clumsy because of the accumulation of three postnominal NP’s.<sup>24</sup> The external argument can also be omitted without changing the grammaticality of the sentence (30e), for the same reasons as before.

30. a *Prodavačka ukázala šaty zákaznici.*

shop assistant show<sub>3rd.sg.fem.past</sub> dresses<sub>ACC</sub> customer<sub>DAT</sub>

‘The shop assistant showed the dresses to the customer.’

b *Prodavačka ukázala zákaznici šaty.*

shop assistant show<sub>3rd.sg.fem.past</sub> customer<sub>DAT</sub> dresses<sub>ACC</sub>

‘The shop assistant showed the customer the dresses.’

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<sup>24</sup> Note that in this respect Czech is less nominal than English and does not allow a series of nouns next to each other.

c *Her / Prodavaččina ukázka šatů zákaznici trvala půl hodiny.*  
 her / shop assistant<sub>POSS</sub> showing dresses<sub>GEN</sub> customer<sub>DAT</sub> take<sub>3rd.sg.fem.past</sub> half hour  
 ‘Her / The shop assistant’s showing of the dresses to the customer took half an hour.’

d ?*Ukázka šatů zákaznici prodavačkou trvala půl hodiny.*  
 showing dresses<sub>GEN</sub> customer<sub>DAT</sub> shop assistant<sub>INST</sub> take<sub>3rd.sg.fem.past</sub> half hour  
 ‘The shop assistant’s showing of the dresses to the customer took half an hour.’

e *Ukázka šatů zákaznici trvala půl hodiny.*  
 showing dresses<sub>GEN</sub> customer<sub>DAT</sub> take<sub>3rd.sg.fem.past</sub> half hour  
 ‘The showing of the dresses to the customer took half an hour.’

f *\*Prodavaččina ukázka zákaznici trvala půl hodiny.*  
 shop assistant<sub>POSS</sub> howing customer<sub>DAT</sub> take<sub>3rd.sg.fem.past</sub> half hour

g *\*Prodavaččina ukázka zákaznici šatů trvala půl hodiny.*  
 shop assistant<sub>POSS</sub> showing customer<sub>DAT</sub> dresses<sub>GEN</sub> take<sub>3rd.sg.fem.past</sub> half hour

h ?*Prodavaččina ukázka šatů trvala půl hodiny.*  
 shop assistant<sub>POSS</sub> showing dresses<sub>GEN</sub> take<sub>3rd.sg.fem.past</sub> half hour

i *\*Prodavaččina ukázka trvala půl hodiny.*  
 shop assistant<sub>POSS</sub> showing take<sub>3rd.sg.fem.past</sub> half hour

The first internal argument of the verb, the patient, expressed by the accusative case is realized as an NP in the genitive case and because it is obligatory it cannot be omitted (30f). The second internal argument, the recipient, does not change the case marking in the nominalization, it is still realized with the dative case and must follow the argument in the

genitive case as any other order would be unacceptable (30g). However, since the recipient is also an obligatory argument, it cannot be omitted, otherwise the construction would have a different reading (30h) (e.g. the shop assistant would be showing the dresses on herself). If both the patient and the recipient are omitted at the same time, the construction becomes ungrammatical, as expected, in the B/K complex event nominal reading (30i).

Other transitive B/K complex event nominals are very rare or hard to find, but the data confirm that they behave just like complex event nominals in the other languages we have discussed and according to Grimshaw's (1990, Ch.3) predictions, repeated for convenience:

- complex event nominals have argument structure
- all obligatory XP's of the verb must be realized in the complex event nominal as well

To sum up, Czech B/K complex event nominals behave like complex event nominals (CENs) in English and Dutch, and other languages, in the sense that they have the argument-taking properties of their root verbs, so their internal arguments must be realized obligatorily and are still interpreted as arguments, not noun modifiers. The external argument, the agent, is optional and can be realized prenominally as a possessive pronoun / AP, or postnominally as an NP in the genitive or the instrumental case, but it can also be omitted. The internal argument, the patient, which is in the accusative case in the verbal phrase, takes the genitive case in the nominalization and is still obligatory because it is selected by the verb. All other internal arguments remain in the same case as in the underived VP (e.g. a recipient in the dative case, etc.), must follow the patient in the genitive case and cannot be omitted. This again confirms Grimshaw's (1990, Ch.3) prediction as well as generalization (46) from Chapter 4 on English nominalizations, to the effect that CEN's are argument-taking and must satisfy argument structure of their root verb obligatorily.

In this subsection we have seen that Czech B/K nominals are primarily result and secondarily complex event nominals and that their behavior is similar to the behavior of result and complex event nominals in English and Dutch or other languages. I have also proposed how B/K result and complex event nominals are generated, and although I haven't probably fully formally integrated everything concerning B/K complex event nominals, this is the best

treatment I have come up with that indicates the differences between internal V and N properties.

### 5.2.3. The N/T Nominalizations

The second type of Czech nominalizations I will discuss are the *-ní/tí* nominalizations, and therefore I will refer to them as N/T nominals.

Let's first look at the word-formation process of N/T nominals. These nominals are formed regularly from almost all lexical verbs by adding the suffixes *-ní/-tí* to the verbal root (e.g. *číst* 'write' – *čtení* 'writing', *stavět* 'build' – *stavění* 'building', *procházet* 'walk' – *procházení* 'walking', *hrát* 'play' – *hraní* 'playing', *sklízet* 'harvest' – *sklizení* 'harvesting', etc.). This is still formally a productive process, even new words referring to for instance new technology which have recently been borrowed from other languages, such as English, form N/T nominals (e.g. *skenovat* 'scan' – *skenování* 'scanning', *lajkovat* 'like' – *lajkování* 'liking', *googlovat* 'google' – *googlování* 'googling', etc.). Strictly speaking, N/T nominals can be formed from almost all verbs, however, the formation process is restricted semantically for the following classes of verbs (Petr 1986, 101–102):

- a) modal verbs (e.g. *muset* 'must' – *\*musení*, *moci* 'can' – *\*mocení*, *mít* 'should' – *\*mítí*, etc.)
- b) copula verbs (e.g. *být učitelem* 'be a teacher' – *\*bytí učitelem*, etc.)
- c) stative verbs of belonging (e.g. *patřit k* 'be part of' – *\*patření k*, *náležet k* 'belong to' – *\*náležení k*, etc.)
- d) some verbs of speaking (e.g. *říct* 'say' – *\*říkání*, *pravit* 'remark' – *\*pravení*, *odpovědět* 'answer' – *\*odpovědění*, etc.)

N/T nominals have traditionally always been classified according to the suffix they take as *-ní/tí* nominalizations, but if we look at them in detail it becomes obvious that they are not a homogenous group and that, following Grimshaw's (1990) classification, they are again complex event and result nominals in the true sense.

Thus, those N/T nominals which are complex event nominals have an argument structure and refer to a process that takes place in real time (31):

31. a *Psaní dopisu zabralo Petrovi hodinu.*  
 writing letter<sub>GEN</sub> take<sub>3rd.sg. neut.past</sub> Peter<sub>DAT</sub> hour<sub>ACC</sub>  
 ‘Writing a letter took Peter an hour.’

b *Balení vánočních dárků probíhalo večer před Štědrým dnem.*  
 wrapping up Christmas presents<sub>GEN</sub> take place<sub>3rd.sg.neut.past</sub> evening before Christmas  
 Eve<sub>INST</sub>  
 ‘Wrapping up Christmas presents took place the evening before Christmas Eve.’

All N/T nominals are primarily interpreted as complex event nominals but sometimes exactly the same form can be a result nominal. On the other hand, there is no N/T result nominal that does not have the complex event nominal counterpart. In this respect N/T nominals are the mirror image of B/K nominals.

If the N/T nominal is a result nominal, it cannot occur in time or over time because it refers to the result of the activity. The postnominal genitive complement is either excluded as in (32a) or not interpreted as an internal argument or a patient but a postnominal modifier as in (32b) because result nominals in general do not have argument structures (Grimshaw 1990, Ch.3). Compare the following N/T result nominal examples (32) with the previously discussed N/T complex event nominals of the same form under (31).

32. a *Modré psaní (\*dopisu) leželo na stole.*  
 blue writing (letter<sub>GEN</sub>) lie<sub>3rd.sg.neut.past</sub> on table  
 ‘Some blue writing was lying on the table.’

b *Nové moderní balení léků se Evě nelíbilo.*  
 new modern packaging pills<sub>GEN</sub> REFL. Eve<sub>DAT</sub> not-like<sub>3rd.sg.neut.past</sub>  
 ‘Eve did not like the new modern packaging of pills.’

From the diachronic perspective the analysis of N/T nominals has been changing. Traditional Czech grammars from Trávníček (1951) to Petr (1986), the Lexicalist Framework of Karlík and Nübler (1998), and the Modified Valency Framework (Karlík, 2000; 2002; 2003; 2004; 2007) regarded N/T nominals as derived from the passive participles of the verbs, due to the similarity of the nominal form and the corresponding passive participle. Thus, for illustration consider the following past participles and N/T nominals:

33. a *číst* ‘write’ – *čteno* ‘written’ – *čtení* ‘writing’  
 b *stavět* ‘build’ – *stavěno* ‘built’ – *stavění* ‘building’  
 c *procházet* ‘walk’ – *procházeno* ‘walked’ – *procházení* ‘walking’  
 d *hrát* ‘play’ – *hráno* ‘played’ – *hraní* ‘playing’

Nevertheless, Petr (1986) correctly points out the fact that *-ní/tí* nominalizations exist also for verbs which do not have the passive participle. For example:

34. a *lézt* ‘climb’ – *\*lezeno* ‘climbed’ – *lezení* ‘climbing’  
 b *stát* ‘stand’ – *\*stáno* ‘stood’ – *stání* ‘standing’  
 c *výt* ‘howl’ – *\*vyto* ‘howled’ – *vytí* ‘howling’

But he assumes that N/T nominals are only historically and genetically related to the passive participles so that nowadays, synchronically, it is possible to derive N/T nominals from most verbs by adding the *-ní/tí* suffixes. Also Karlík (2004a, 36) notes that verbs which are reflexive cannot form passive participles (e.g. *učit se* ‘learn’ – *\*učeno se*, *hrát si* ‘play’ – *\*hráno si*, etc.), although they can form N/T nominals (*učení se* ‘learning’, *hraní si* ‘playing’, etc.). This is another argument for the hypothesis that N/T nominals are not formed by passive



transformations. I am going to explain why this derivation is not necessary in Czech as it is not necessary in English.

The traditional linguists did not use any comprehensive syntactic theory to explain how N/T nominals are formed and only stated that they have some specific nominal and verbal properties. It was first Karlík and Nübler (1998) who adopted the transformationalist approach for nominalizations (Lees, 1960), generally accepted in the early stages of generative grammar almost forty years before, for Czech N/T nominals. Karlík and Nübler also claimed that the nominalization process follows the transformation of active into passive sentences. Generative grammar in its later stage as Minimalism was adopted most prominently by Veselovská (2001), in line with Emonds (2000).

In this chapter, as in the previous chapters, I will look at the internal structure of N/T nominals in more detail and try to find a systematic analysis of the grammatical processes in which N/T nominals are formed. The internal structure of N/T nominals will be examined in more detail further on in this subsection.

Now we are going to look at the internal nominal and verbal properties of N/T nominals. Despite being derived from verbs, N/T nominals exhibit mostly nominal properties and since Czech is a synthetic language with rich morphology, some specific features which are not observable with nominalizations in other languages do appear on Czech N/T nominals.

All Czech N/T nominals have a single gender, neuter, and are declined according to the declension paradigm of *stavení* ‘a building’, which is relatively poor, so that the case inflection is visible only in the instrumental and in the plural form also in the dative and the locative case. This is unlike all the other declension paradigms, which all vary the endings in more cases. Compare the examples below where *psaní* ‘writing’ is an N/T nominal.

Table 3: N/T nominal declension paradigm of *psaní* ‘writing’.

CASE	declension paradigm (sg.)	an N/T nominal (sg.)	declension paradigm (pl.)	an N/T nominal (pl.)
NOM	<i>stavení + Ø</i>	<i>psaní + Ø</i>	<i>stavení + Ø</i>	<i>psaní + Ø</i>
GEN	<i>stavení + Ø</i>	<i>psaní + Ø</i>	<i>stavení + Ø</i>	<i>psaní + Ø</i>
DAT	<i>stavení + Ø</i>	<i>psaní + Ø</i>	<i>stavení + m</i>	<i>psaní + m</i>
ACC	<i>stavení + Ø</i>	<i>psaní + Ø</i>	<i>stavení + Ø</i>	<i>psaní + Ø</i>
LOC	<i>stavení + Ø</i>	<i>psaní + Ø</i>	<i>stavení + ch</i>	<i>psaní + ch</i>
INSTR	<i>stavení + m</i>	<i>psaní + m</i>	<i>stavení + mi</i>	<i>psaní + mi</i>

Another nominal property of N/T nominals is that although Slavic Czech does not have articles like Germanic English and Dutch, N/T nominals can be premodified by demonstratives, possessives and other determiners, just like other Czech nouns (Veselovská 2001, 19-20):

35. *Toto / takové / nějaké / jeho zkoušení může trvat i přes hodinu.*  
 this / that / some / his examining can take even over hour<sub>ACC</sub>  
 ‘This / that / some / his examining can take even over an hour.’

As for their countability, N/T nominals are uncountable and considered to be abstract mass nouns if they are interpreted as complex event nominals (36a). However, they become countable if they are understood as result nominals, although the ending remains the same as in the singular, only the numeral which is acceptable here, shows the plurality (36b). This confirms the fact that result nominals are countable like other regular nouns but complex event nominals refer to the process and thus are uncountable. Compare the following examples:

36. a \**Dvě balení těch léků ho unavila.*  
 two packaging<sub>NOM</sub> those pills<sub>GEN</sub> he<sub>ACC</sub> tired

b *Dvě balení těch léků byla v ledniče.*  
 two packages those pills<sub>GEN</sub> be<sub>3rd.pl.neut.past.</sub> in fridge  
 ‘Two packages of those pills were in the fridge.’

Like all nouns, N/T nominals are normally modified by adjectives and not adverbs. However, if N/T nominals are interpreted as complex event nominals, these adjectives must be adjectives related to the activity of the verb or adjectives, which presuppose the logical existence of a subject/agent, and not adjectives actually expressing a physical quality of the nominal (37a). Some N/T complex event nominals can even be postmodified by adverbs, although this is certainly not a standard style acceptable with all N/T complex event nominals (37b).

37. a *Rychlé / záměrné / \*modré balení těch léků do krabiček  
 zabralo dvě hodiny.*  
 quick / intentional / blue packaging the pills<sub>GEN</sub> into boxes  
 take<sub>3rd.sg.neut.past</sub> two hours  
 ‘The quick / intentional packaging of the pills into boxes took two hours.’

b ?*Vyčištění obleku snadno a rychle vám zajistí čistírna.*  
 cleaning suit<sub>GEN</sub> quickly and easily you<sub>DAT</sub> ensure<sub>3rd.sg.neut.pres</sub> dry cleaners  
 ‘Our cleaning ensures cleaning your suit quickly and easily.’

As our hypothesis predicts, if N/T nominals are interpreted as result nominals the adjectives expressing the duration or frequency of the activity and adjectives presupposing the existence of a subject/agent are excluded. Instead adjectives which modify the physical quality of the result nominal are allowed (38a). Adverbs are ungrammatical too (38b):

38. a \**Rychlé / \*záměrné / modré balení těch léků bylo v ledniče.*  
 quick / intentional / blue packaging the pills<sub>GEN</sub> be<sub>3rd.sg.neut.past</sub> in fridge  
 ‘The blue packaging of the pills was in the fridge.’

b \**Balení těch léků snadno a rychle bylo v ledniče.*  
 packaging the pills<sub>GEN</sub> quickly and easily be<sub>3rd.sg.neut.past</sub> in fridge

This is due to the fact that in complex event nominals the verbal structure is still visible, while result nominals take the nominalizing suffix earlier, in the underlying deep structure, so that they have more nominal properties. More attention will be paid to these mechanisms later in this chapter.

N/T complex event nominals can be negated with the negative prefix *ne-* (39a), which also negates verbs, so this is another verbal property. N/T result nominals do not allow negation (39b):

39. a *Nečtení knih studenty přispívá k jejich špatné slovní zásobě.*  
 not-reading books students<sub>INST</sub> contribute<sub>3rd.sg.neut.pres</sub> to their poor vocabulary  
 ‘Not reading books by students contributes to their poor vocabulary.’

b \**Modré nepsaní leželo na stole.*  
 blue not-writing lie<sub>3rd.sg.neut.past</sub> on table

Additionally, N/T complex event nominals take several prefixes and can thus express aktionsart to a great extent, just as verbs do: e.g. *číst* ‘read’ – *dočíst* ‘finish reading’ – *přečíst* ‘read over’ – *pročíst* ‘read through’, etc. With B/K nominals this property is much more limited (section 5.2.2. example (18)) and nouns, in general, do not have it.

40. a *Janovo čtení / dočtení / přečtení / pročtení spisů*  
 John's reading / finishing reading / reading over / reading through documents  
*trvalo skoro celý den.*  
 take<sub>3rd.sg.neut.past</sub> almost whole day  
 'John's reading / finishing reading / reading over / reading through documents took  
 almost whole day.'

b *Papírové \*zabalení / \*dobalení / \*přebalení bylo*  
 paper packaging over / finishing packaging / packaging again be<sub>3rd.sg.neut.past</sub>  
*přede dveřmi.*  
 in front of door<sub>INST</sub>

Another verbal property of N/T complex event nominals is their iterative aspect, which they inherit from verbs, for example *hrát* 'play' – *hrávat* 'play frequently' (41a). N/T result nominals (41b), B/K nominals and nouns do not express the iterative aspect.

41. a *Janovo hraní / hrávání na koncertech zabírá spoustu času.*  
 John's playing / playing<sub>iterative</sub> at concerts take<sub>3rd.sg.pres.</sub> a lot of time  
 'John's playing / playing frequently at concerts takes a lot of time.'

b *Nové stavení / \*stavívání stálo na rohu.*  
 new building / building<sub>iterative</sub> stand<sub>3rd.sg.neut.past</sub> on corner<sub>LOC</sub>  
 'The new building stood on the corner.'

Karlík (2002, 15–19) points out that N/T nominals also take reflexive pronouns if they are interpreted as complex event nominals (42a), which is another verbal property because normally only verbs are reflexive. Nouns, N/T result nominals (42b), and B/K nominals do not allow reflexive pronouns. The following example shows that the verb *číst* 'read', which is

reflexive if a person reads to him/herself, forms a nominalization together with the reflexive pronoun.

42. a *Petr rád tráví večery čtením si.*  
 Peter<sub>NOM</sub> like<sub>sg.masc.pres</sub> spend<sub>3rd.sg.pres.</sub> evenings<sub>ACC</sub> reading<sub>REFL</sub>.  
 ‘Peter likes spending evenings reading for himself.’

b \**Modré psaní si leželo na stole.*  
 blue writing yourself lie<sub>3rd.sg.neut.past</sub> on table<sub>LOC</sub>

Verbs in Czech distinguish for [+ ASPECT] as one of their grammatical features, and N/T complex event nominals share the ability to inherit it from the verbs they are derived from (43a), which is again something that lexical nouns, N/T result nominals (43b) and B/K nominals do not do. Veselovská (2000, 21) considers this an argument for the late insertion of the nominalizing suffix (discussed below as part of the internal structure of N/T complex event nominals). The following nominalization of the verb *psát* ‘write’ illustrates the perfective/imperfective aspect distinction:

43. a *Psaní / napsání knihy mu zabralo dva roky.*  
 writing<sub>imperf.</sub> / writing<sub>perfect.</sub> book<sub>GEN</sub> he<sub>DAT</sub> take<sub>3rd.sg.neut.past</sub> two years

b \**Nové dostavění stálo na rohu.*  
 new building<sub>perfect</sub> stand<sub>3rd.sg.neutr.past</sub> on corner<sub>LOC</sub>

This grammatical feature is also reflected with respect to the ability of N/T nominals to be combined with certain prepositions in PP’s. So unlike B/K nominals, N/T complex event nominals are sensitive to aspect marking prepositions such as *během* ‘during’, which must be followed by the imperfective aspect (44a), and *po* ‘after’, which can be followed by both perfective and imperfective aspect (44b). Since N/T result nominals do not express an activity

and do not exhibit any aspect distinction, they cannot follow these prepositions either (44c). Compare the following perfective and imperfective N/T nominalizations of the verb *číst* ‘read’:

44. a *Během \*dočtení / čtení lidé byli potichu.*  
 during reading<sub>perf.</sub> / reading<sub>imperf.</sub> people be<sub>3rd.pl.masc.past</sub> quiet  
 ‘People were quiet during the reading.’

b *Po dočtení / čtení lidé kladli otázky.*  
 after reading<sub>perf.</sub> / reading<sub>imperf.</sub> people ask<sub>3rd.pl.masc.past</sub> questions<sub>ACC</sub>  
 ‘After the reading people asked questions.’

c *\*Během papírového balení / \*po papírovém balení jsme si zpívali*  
 during paper packaging / after paper packaging be<sub>1st.pl. REFL.</sub> sing<sub>pl.past</sub>

So far we have seen that N/T nominals are nouns as a part of speech, but unlike regular Czech nouns they have got some special properties which set them apart. Unlike other nouns they share some verbal properties with the verbs from which they are derived. However, we have seen that it is necessary to distinguish N/T result versus complex event nominals because their nominal and verbal properties differ as the following table illustrates:

Table 4: Nominal and verbal properties of N/T nominals

<b>nominal and verbal properties</b>	<b>N/T result nominals</b>	<b>N/T complex event nominals</b>
countability	YES	NO
adjectives expressing a physical quality	YES	NO
adjectives expressing frequency or duration	NO	YES

adjectives like <i>deliberate</i> or <i>intentional</i>	NO	YES
negation	NO	YES
reflexive pronouns	NO	YES
aspect	NO	YES
aktionsart	NO	YES
iterativity	NO	YES

N/T result nominals are countable, take adjectives expressing physical quality but do not take adjectives expressing duration or frequency or adjectives like *deliberate* or *intentional* which presuppose the existence of a subject/agent. They are not negated, do not take reflexive pronouns and do not inherit aspect from the verbs. On the other hand, N/T complex event nominals have more verbal properties, i.e. they behave like uncountable mass nouns, take adjectives expressing duration or frequency, are negated, express aktionsart and iterativity, take reflexive pronouns and inherit the verbal grammatical feature aspect. All of these data indicate that N/T result and complex event nominals must be formed in two different ways, as we have seen with B/K nominals in the previous subsection.

First, we will look at N/T complex event nominals, which are the regular case. In (45a) we can see the internal structure of an N/T complex event nominal *toto rychlé balení léků* ‘this quick packaging of the pills’. In this structure the V is enlarged up to the VP level so the N/T nominals take reflexives and negation, are iterative, express aktionsart and have verbal aspect. Late in the derivation, after the VP has been formed and interpreted, the VP merges with the functional head n with feature Event expressed by the *-ní/tí* suffix with an uninterpretable *uV* feature so that the interpretable V feature on the verb is checked. However, with N/T complex event nominals the suffix is realized not in its canonical position as a functional head left of the VP but in its alternatively realized position (Emonds 2000, Ch.4) right on the V itself. The ‘alternative realization’ takes place at the moment when its ‘canonical realization’ would merge with the VP. In order for the canonical realization (CR)

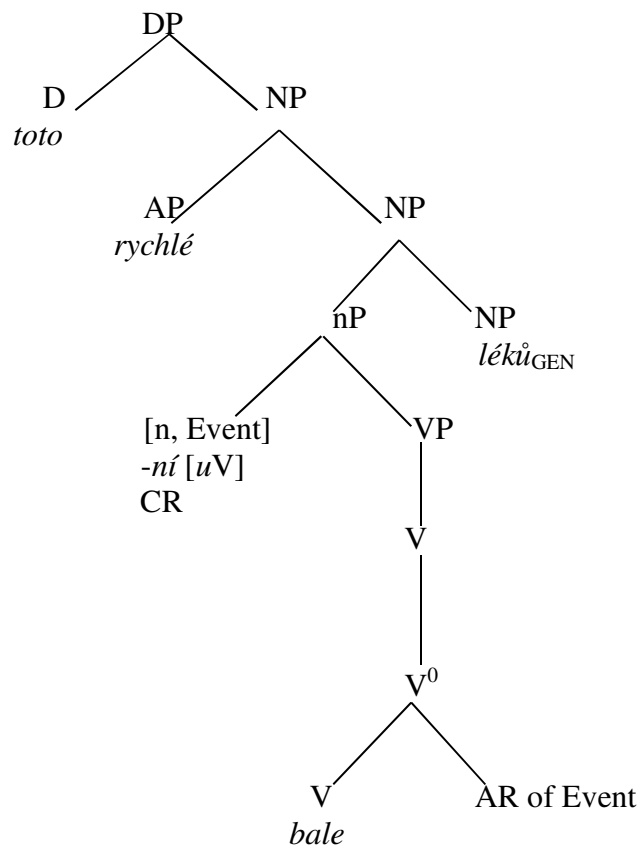


to license the alternative realization (AR), the projection of the canonical features has to be a sister of the projection of alternatively realized features as justified by Emonds (2000, Ch.4).

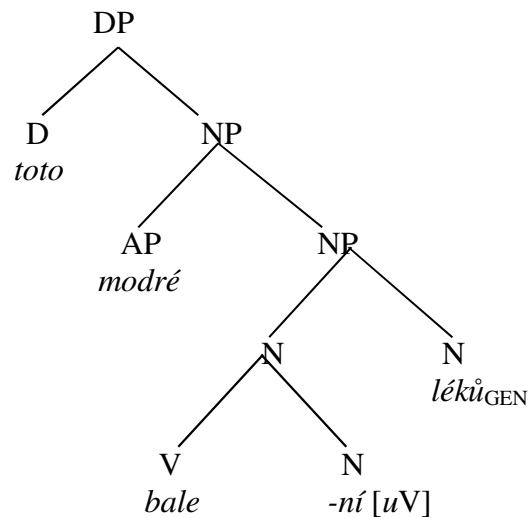
Analogous to B/K nominals, example (45b) shows the internal structure of N/T result nominals, which are infrequent and slightly marked, as all N/T nominals are complex event nominals. In this internal structure of the N/T result nominal *toto modré balení léků* ‘this blue packaging of the pills’, the V, and not just the verbal root, merges in the Lexicon with the nominal suffix *-ní/tí* which carries the uninterpretable *uV* feature. The *uV* feature is checked and the nominal has got a nominal behaviour all the way up to the DP level. Compare:

45.

(a) an N/T complex event nominal



(b) an N/T result nominal



The two mechanisms explain why N/T nominals, just like B/K nominals, are not a homogenous type. In fact, the N/T nominals with the same suffix internally behave differently and therefore have different properties. The fact that the same suffix is used in different types of nominalizations is not a language particular phenomenon, since for example in English the *-ing* suffix can be used to form result nominalizations (*blue writing*), complex event nominalizations (*the slow writing of the book*) as well as gerunds (*John's slowly writing the book*). In these examples the *-ing* suffix is inserted at three different levels (Emonds 2000, Ch. 4), at the deep level in case of result nominals, during syntactic derivation with complex event nominals, and through late insertion of the suffix with gerunds.

Now we are going to consider the argument structures of N/T result and complex event nominals. N/T result nominals can be formed from intransitive, monotransitive and also ditransitive verbs. However, we will see that the complements of transitive verbs are never realized as obligatory complements of the N/T result nominalizations but are optional nominal modifiers.

Not many intransitive verbs form N/T result nominals; one such verb is *šít* 'sew' which forms an N/T result nominal *šítí* 'sewing'. In the nominalization below the possessive

pronoun, prenominal possessive AP (46b) or the postnominal genitive NP (46c), express the possessor of the resulting object and not the agent. Since the modifier is a possessor and not the agent, it can be omitted and the nominalization still remains fully grammatical (46d).

46. a *Maruška šije každý večer.*

Mary<sub>NOM</sub> sew<sub>3rd.sg.pres.</sub> every evening

‘Mary sews every evening.’

b *Její / Maruščino šití zůstalo na stole.*

her / Mary<sub>POSS</sub> sewing stay<sub>3rd.sg.neut.past</sub> on table<sub>LOC</sub>

‘Her / Mary’s sewing stayed on the table.’

c *Šití Marušky zůstalo na stole.*

sewing Mary<sub>GEN</sub> stay<sub>3rd.sg.neut.past</sub> on table<sub>LOC</sub>

‘Mary’s sewing stayed on the table.’

d *Šití zůstalo na stole.*

sewing stay<sub>3rd.sg.neut.past</sub> on table<sub>LOC</sub>

‘The sewing stayed on the table.’

Monotransitive verbs such as *psát* ‘write’, *číst* ‘read’, *balit* ‘pack’, etc. can also form N/T result nominalizations. In example (47) below *writing* refers to the result of the activity, that is the letter. Again the possessive pronoun or the possessive AP (47b), or the postnominal genitive NP (47c), are not interpreted as the agent of the original verb but as the prenominal possessive modifier which can be omitted (47d). In line with the prediction of Grimshaw (1990, Ch. 3), the verbal complement, i.e. the thing written, must be omitted in this case as in (47b,c,d), otherwise, the nominalization becomes ungrammatical in its result reading (47e).

47. a *Petr píše dopis.*

Petr<sub>NOM</sub> write<sub>3rd.sg.pres</sub> letter<sub>ACC</sub>

‘Peter is writing a letter.’

b *Jeho / Petrovo psaní je v obálce.*

his / Peter<sub>POSS</sub> writing is in envelope<sub>LOC</sub>

‘His / Peter’s writing is in the envelope.’

c *Psaní Petra je v obálce.*

writing Peter<sub>GEN</sub> is in envelope<sub>LOC</sub>

‘His / Peter’s writing is in the envelope.’

d *Psaní je v obálce.*

writing is in envelope<sub>LOC</sub>

‘The writing is in the envelope.’

e *\*Petrovo psaní dopisu je v obálce.*

Peter<sub>POSS</sub> writing letter<sub>GEN</sub> is in envelope<sub>LOC</sub>

We can also examine ditransitive verbs such as e.g. *oznámit* ‘announce’, which can form a result nominalization *oznámení* ‘announcement’, in which both the internal arguments can be omitted (48b,c). However, if they appear in the nominalization, they are interpreted as optional postnominal modifiers, and it is the noun which takes them, not the verb (48d,e). This follows from Grimshaw’s (1990, Ch 3. 161) claim that nouns do not have argument structure with obligatory arguments. Moreover, example (48f) shows that if both arguments of the verb appear at the same time, the construction becomes ungrammatical.

48. a *Professor oznámil studentům výsledky.*

professor<sub>NOM</sub> announce<sub>3rd.sg. masc..past</sub> students<sub>DAT</sub> results<sub>ACC</sub>

‘The professor announced the results to the students.’

b *Jeho / Profesorovo oznámení viselo na nástěnce.*

his / professor<sub>POSS</sub> announcement hang<sub>3rd.sg. neut.past</sub> on noticeboard<sub>LOC</sub>

‘His / professor’s announcement hung on the noticeboard.’

c *Oznámení profesora viselo na nástěnce.*

announcement professor<sub>GEN</sub> hang<sub>3rd.sg. neut..past</sub> on noticeboard<sub>LOC</sub>

‘Professor’s announcement hung on the noticeboard.’

d *Profesorovo oznámení studentům viselo na nástěnce.*

professor<sub>POSS</sub> announcement students<sub>DAT</sub> hang<sub>3rd.sg.neut.past</sub> on noticeboard<sub>LOC</sub>

‘Professor’s announcement to the students hung on the noticeboard.’

e *Profesorovo oznámení výsledků viselo na nástěnce.*

professor<sub>POSS</sub> announcement results<sub>GEN</sub> hang<sub>3rd.sg.neut.past</sub> on noticeboard<sub>LOC</sub>

‘Professor’s announcement of results hung on the noticeboard.’

f *\*Profesorovo oznámení studentům výsledků viselo na nástěnce.*

professor<sub>POSS</sub> announcement students<sub>DAT</sub> results<sub>GEN</sub> hang<sub>3rd.sg.neut.past</sub> on noticeboard<sub>LOC</sub>

Finally, some verbs which take sentential complements can also be nominalized as N/T result nominals. In fact, these verbs can only form result nominals and never complex event nominals. Such verbs are e.g. *prohlásit* ‘state’, *oznámit* ‘announce’, *vyhlásit* ‘proclaim’, etc. but if the sentential modifiers appear in the nominalization, they are again interpreted as optional postnominal modifiers and not obligatory arguments (49b,c), so they can be omitted

because they are not selected by the verb (49d) as Grimshaw (1990, Ch.3 161) predicted. *Vláda* ‘government’ is not interpreted as an agent in the nominal but as a prenominal possessive AP modifier (49b) or postnominal genitive NP modifier (49b), or it can be completely omitted too (49d).

49. a *Vláda* *prohlásila*, *že zvýší* *daně*.  
 government<sub>NOM</sub> declare<sub>3rd.sg.fem.past</sub> that increase<sub>3rd.sg.fut</sub> taxes<sub>ACC</sub>  
 ‘The government declared that it will increase taxes.’

b *Vládní prohlášení, že zvýší daně, bylo v*  
 government<sub>POSS</sub> declaration that increase<sub>3rd.sg.fut</sub> taxes<sub>ACC</sub> be<sub>3rd.sg.neut.past</sub> in  
*novinách*.  
 newspapers  
 ‘The governmental declaration that it will increase taxes was in the newspapers.’

c *Prohlášení vlády, že zvýší daně, bylo v*  
 declaration government<sub>GEN</sub> that increase<sub>3rd.sg.fut</sub> taxes<sub>ACC</sub> be<sub>3rd.sg.neut.past</sub> in  
*novinách*.  
 newspapers  
 ‘The declaration of the government that it will increase taxes was in the newspapers.’

d *Prohlášení bylo v novinách*.  
 declaration be<sub>3rd.sg.neut.past</sub> in newspapers  
 ‘The declaration was in the newspapers.’

So far I have examined N/T result nominals which refer to the result of the activity of the verb. We have seen that externally they behave like lexical nouns and internally they are the same as result nominals in English and Dutch, that they are countable [+ CONCRETE]

nouns, are modified by adjectives expressing physical quality, not as adverbs or adjectives expressing duration or frequency, that they do not satisfy the verbal argument structure obligatorily because the postnominal NPs or other complements are interpreted as optional modifiers of the nominalization and not true arguments, exactly claimed by Grimshaw (1990, Ch. 3) and expressed as generalization (33) in the chapter on English nominalizations.

In the next few paragraphs I am going to analyze process or complex event nominals and show how they realize their argument structures. I will start with the same intransitive verb *šít*. In the nominalization (50) below we can see that the nominalization expresses the activity as a process, although the form of the nominal is the same as the result nominal in (46). In example (50b) *Mary* or *her* is not the possessor of the object but is interpreted as the true agent of the action. The agent can also be realized as the postnominal genitive NP as in (50c) or, since it is an external argument of the verb which is always optional, it can also be omitted and the sentence remains grammatical (50d).

50. a *Maruška šije*                      *každý večer.*

Mary<sub>NOM</sub> sew<sub>3rd.sg.pres.</sub> every evening

‘Mary sews every evening.’

b *Její / Maruščino šití*    *trvalo*            *celý večer.*

her / Mary<sub>POSS</sub> sewing take<sub>3rd.sg.past</sub> whole evening

‘Her / Mary’s sewing took the whole evening.’

c *Šití*    *Marušky* *trvalo*            *celý večer.*

sewing Mary<sub>GEN</sub> take<sub>3rd.sg.past</sub> whole evening

‘Mary’s sewing took the whole evening.’

d *Šití*    *trvalo*            *celý večer.*

sewing take<sub>3rd.sg.past</sub> whole evening

‘Sewing took the whole evening.’

The same monotransitive verbs which form N/T result nominals can also form N/T complex event nominals. Thus monotransitive verbs such as *psát* ‘write’, *číst* ‘read’, *balit* ‘pack’, *assign* ‘zadat’, etc. can be nominalized as N/T nominals. To examine the behavior of monotransitive N/T complex event nominals, I will choose a different verb than *write* as in example (47) above so that the verb does not allow any possible reading or interpretation other than that of a monotransitive verb. Since the monotransitive verb selects a complement obligatorily, which is realized by the accusative case, the complement cannot be omitted in the complex event nominalization either, although it is realized by a different case; otherwise, the construction becomes ungrammatical (51e). The genitive case which is assigned by the nominal is reserved for the internal argument, the patient (51b,c,d), so the agent must be realized as a possessive pronoun or possessive prenominal AP (51b) or a postnominal instrumental NP (51c), which is the equivalent of the English *by*-phrase and the Dutch *door*-phrase. The agent can also be omitted without changing the grammaticality of the sentence (51d).

51. a *Profesor zadal zkoušku.*

professor<sub>NOM</sub> assign<sub>3rd.sg.masc.past</sub> exam<sub>ACC</sub>

‘The professor assigned the exam.’

b *Jeho / Profesorovo zadání zkoušky proběhlo v přednáškovém sále.*

His / professor<sub>POSS</sub> assignment exam<sub>GEN</sub> happen<sub>3rd.sg.neut.past</sub> in lecture hall

‘His / Professor’s assignment of the exam took place in the lecture hall.’

c *Zadání zkoušky profesorem proběhlo v přednáškovém sále.*

assignment exam<sub>GEN</sub> professor<sub>INST</sub> happen<sub>3rd.sg.neut.past</sub> in lecture hall

‘The assignment of the exam by the professor took place in the lecture hall.’



d *Zadání zkoušky proběhlo v přednáškovém sále.*

assignment exam<sub>GEN</sub> happen<sub>3rd.sg.neut.past</sub> in lecture hall

‘The assignment of the exam took place in the lecture hall.’

e\* *Professorovo zadání proběhlo v přednáškovém sále.*

professor<sub>POSS</sub> assignment happen<sub>3rd.sg.neut.past</sub> in lecture hall

‘Professor’s assignment of the exam took place in the lecture hall.’

The examples in (51) show a case in which both the agent and the patient of the monotransitive verb are realized, however, one might come across examples such as (52) where there is only one argument and its interpretation is ambiguous. *Pavel* can be interpreted as the patient or agent in both (52a) and (52b), even though different authors differ here in their judgements. According to Karlík (2004, 41-42), only the prenominal possessive AP is truly ambiguous because the postnominal genitive is reserved for an internal object. He admits that examples such as *týrání vojáků* ‘torturing of soldiers’ are ambiguous in their reading. In addition, Veselovská (2001a, 19-20) claims that the preferred reading in (52b) will be that of patient because of its canonical position. However, the semantic roles become disambiguated if both arguments are present at the same time as in (52c) and (52d).

52. a *Pavlovo<sub>agent/patient</sub> kritizování ostatní studenty odradilo.*

Pavel<sub>POSS</sub> criticizing other students<sub>ACC</sub> discourage<sub>3rd.sg.neut.past</sub>

b *Kritizování Pavla<sub>agent/patient</sub> ostatní studenty odradilo.*

criticizing Pavel<sub>GEN</sub> other students<sub>ACC</sub> discourage<sub>3rd.sg.neut.past</sub>

c *Professorovo kritizování Pavla ostatní studenty odradilo.*

professor<sub>POSS</sub> criticizing Pavel<sub>GEN</sub> other students<sub>ACC</sub> discourage<sub>3rd.sg.neut.past</sub>

‘Professor’s criticizing of Pavel discouraged other students.’

d *Kritizování Pavla profesorem ostatní studenty odradilo.*  
 criticizing Pavel<sub>GEN</sub> professor<sub>INST</sub> other students<sub>ACC</sub> discourage<sub>3rd.sg.neut.past</sub>  
 ‘The criticizing of Pavel by the professor discouraged other students.’

All other monotransitive verbs which take complements in cases other than the accusative must realize their internal arguments in the N/T complex event nominalizations as well, and the complements retain the original cases (53).

53. a *Petr píše na počítači.*  
 Peter<sub>NOM</sub> write<sub>3rd.sg.pres.</sub> on computer<sub>LOC</sub>  
 ‘Peter is writing on a computer.’

b *Petrovo psaní na počítači ostatní rušilo*  
 Peter<sub>POSS</sub> writing on computer<sub>LOC</sub> others disturb<sub>3rd.sg.neut.past</sub>  
 ‘Peter’s writing on a computer disturbed the others.’

Finally, I will look at ditransitive verbs. If we examine the examples below it becomes obvious that the verb *odkázat* ‘leave’ here requires two internal arguments (54a). Both of these arguments, the patient and the recipient, must be satisfied in the nominalization (54b), otherwise, the nominalization becomes ungrammatical (54c,d). The inanimate patient, which has the accusative case in the original VP (54a), is realized with the genitive case assigned by the nominalization as in the examples before, but the other internal argument, in this case the recipient, retains the dative case as in the verbal clause (54a). In other words, the second internal argument does not depend in its form on the construction and in the active, passive as well as nominal structures, the case remains the same (Karlík 2000, 184). The agent can be realized only as the prenominal possessive pronoun or AP (54b), and it cannot be realized with the instrumental case because an the accumulation of postnominal NPs is excluded (54e).

54. a *Marie odkázala dědictví charitě.*

Mary leave<sub>3rd.sg.fem.past</sub> inheritance<sub>ACC</sub> charity<sub>DAT</sub>

‘Mary left her inheritance to a charity.’

b *Její / Mariino odkázání dědictví charitě všechny šokovalo.*

her / Mary<sub>POSS</sub> leaving inheritance<sub>GEN</sub> charity<sub>DAT</sub> everyone<sub>ACC</sub> shocked

‘Her / Mary’s leaving her inheritance to a charity shocked everyone.’

c *\*Mariino odkázání dědictví všechny šokovalo.*

Mary<sub>POSS</sub> leaving inheritance<sub>GEN</sub> everyone<sub>ACC</sub> shocked

d *\*Mariino odkázání charitě všechny šokovalo.*

Mary<sub>POSS</sub> leaving charity<sub>DAT</sub> everyone<sub>ACC</sub> shocked

e *\*Odkázání dědictví charitě Marií všechny šokovalo.*

leaving inheritance<sub>GEN</sub> charity<sub>DAT</sub> Mary<sub>INST</sub> everyone<sub>ACC</sub> shocked

Notice that verbs which take sentential complements e.g. *prohlásit* ‘state’, *oznámit* ‘announce’, *vyhlásit* ‘proclaim’, etc., can become N/T nominals too, but as discussed above, they will always be interpreted as N/T result nominals and never as N/T complex event nominals, which is what Grimshaw (1990, Ch.3) predicted for English verbs with clausal complements.

In this part of the chapter I have looked at N/T complex event nominals and we have seen that they behave like complex event nominals in English and Dutch. N/T complex event nominals denote the activity of the verb as a process, they are uncountable mass nouns, are modified by adjectives expressing duration or frequency, not adjectives expressing physical quality, and possibly adverbs. As Grimshaw (1990, Ch. 3) predicted and as generalization (46) in chapter 4 on English nominalizations confirms, Czech N/T complex event nominals are also argument-taking, which means that they satisfy their argument structure obligatorily.

We have also seen that N/T nominals always denote the activity of the verb as a process, and sometimes they also denote the result of the action of the verb, but there is no N/T result nominal which would not have an N/T complex event nominal counterpart. In other words, the default interpretation of the *-ní/tí* suffix is that of a process just as the *-ing* suffix is the default form of process/complex event nominals in English (subsection 4.2.4 on English nominalizations).

### 5.3. Chapter Summary

In this chapter I have analyzed the two types of Czech nominalizations, the B/K nominals and the N/T nominals, which both appear to be nouns from the external perspective of syntax forming NP/DP's and also internally, as a part of speech, are nouns, although they also have some verbal properties.

In terms of classification, both B/K and N/T nominals can form result and complex event nominals in line with Grimshaw's (1990) distinction. In general B/K nominals are primarily result nominals and sometimes the same form can represent a complex event nominal too. N/T nominals are in this respect the mirror image of B/K nominals.

B/K and N/T result nominals are countable, modified by adjectives expressing a nominal quality, and are not argument-taking. This means that they do not have an argument structure, and the prenominal and postnominal modifiers are interpreted as modifiers and not arguments.

B/K and N/T complex event nominals are uncountable, modified by adjectives expressing duration and frequency or possibly even adverbs and are argument-taking. In other words, they satisfy verb's argument structure obligatorily, so the prenominal and postnominal NPs are still interpreted as arguments and not as modifiers. The external argument which is optional can be realized as a prenominal possessive pronoun or a possessive AP, postnominally as an NP in the genitive case, or an NP with the instrumental case (parallel to an English *by*-phrase). The first internal argument, the patient, is always realized as an NP in

the genitive case and all other arguments will remain in the same cases as in the original VP. This also means that if only one postnominal NP in the genitive case is present, its interpretation can be ambiguous, wavering between that of agent or patient, even though Veselovská (2001a, 19-20) claims that this position is canonical for the patient. The nominalization, however, becomes disambiguated if both the external and the internal arguments are present at the same time, as the genitive case is reserved for the patient.

Nevertheless, N/T nominals have some special morphosyntactic properties, so their declension paradigm is poor. Moreover, unlike B/K nominals, N/T complex event nominals:

- take reflexive pronouns
- express aktionsart to a great extent
- express iterativity
- are negated
- inherit the perfective/imperfective aspect distinction from the verbs they are derived from.

The perfective/imperfective aspect distinction is something neither English nor Dutch have, since verbs in these languages are not morphologically marked for aspect.

All of this indicates that the verbal structure is more visible with N/T complex event nominals than with B/K complex event nominals and therefore their derivation must be different, as diagrams (23b) and (45a) illustrate. Unlike complex event nominals, both B/K and N/T result nominals are formed already in the Lexicon as (23a) and (45b) show.

Thus, so far we have seen that although B/K and N/T nominals have been traditionally analyzed according to their suffixes, neither type of Czech nominals is a homogenous group. In fact, they behave in many ways like result and complex event nominals in English and Dutch and it would be useful to refer to them using Grimshaw's (1990) terminology. Finally, the default form of Czech process/complex event nominals is the *-ní/í* suffix just as the *-ing* suffix is the default form of complex event nominals in English.

## **6. A Cross-linguistic Comparison of the Nominalization Process**

### **6.1. Chapter Introduction**

In this chapter I will compare and contrast the previous three chapters on nominalizations in English, Dutch, and Czech and identify their similarities and differences to draw some cross-linguistic conclusions.

The chapter will be divided into three sections. After the introduction, I will overview the four main types of nominals in English, Dutch and Czech. The first subsection will compare result nominals, the second subsection complex event nominals and the last subsection will deal with nominal infinitives and gerunds. Finally, I will summarize this chapter and the results of the cross-linguistic analysis of nominals discussed in this thesis.

As we have seen in the preceding chapters, from the point of view of their external syntax all types of nominals prove to be nouns or NPs. They appear in all the main syntactic functions where nouns or NPs normally appear, they fulfill the syntactic roles of subjects, direct objects, PP objects and adverbials. The various categorial tests such as the coordination test, the cleft focus test, and the appearance after Ps which select P [+NP], also show that nominalizations are nouns or noun phrases.

However what is different are the types of nominals in the three languages and some of their nominal and verbal properties. Therefore, in each of the following subsections I will focus on what they have in common as well as on their unique properties in each individual language.

### **6.2. The Four Main Types of Nominals**

#### **6.2.1. Result Nominals**

The first main type of nominals that Grimshaw (1990) identifies (section 4.2.3 of my thesis) and that appears in all the three languages are result nominals. The fact that result nominals denote the concrete result of the action of the verb, and not the process or activity, determines their properties.

As we have seen, result nominals have mainly nominal properties so they can be determined by definite as well as indefinite determiners, quantified, counted and pluralized like other regular countable nouns because they have the semantic feature [+ CONCRETE]. Furthermore, RNs like all other regular countable nouns can be modified by adjectives expressing some physical quality, but unlike complex event nominals, rule out frequency adjectives *constant* or *frequent* as modifiers. In all the three languages RNs, like typical lexical nouns, do not accept adjectives expressing the sense of time and duration. Verbal modifiers such as *deliberate* and *intentional* are not allowed either, because result nominals do not refer to voluntary activities but to the results of these actions. Compare the nominal and verbal properties of Dutch ING- (1a) and GE-nominalizations (1b), English result nominals (1c), and Czech B/K (1d) and N/T (1e) result nominals below:

1. a *Hij heeft een / de / dat / één / lange / \*regelmatig(e) vertaling geschreven.*  
 he has a / the / that / one / long / frequent(frequent) translation written

b *Ik heb een / het / dat / één / kort / \*voortdurend(e) gedicht geschreven.*  
 I have a / the / that / one / short / constantly(constant) poem written

c *There is a / the / one / smudged / \*frequent / \*intentional / \*slowly writing from your boss.*

d *Na stěně visela nějaká / tato / jedna / nová / \*záměrná / \*pravidelná /*  
 on wall hang<sub>3rd.sg.fem.past</sub> a<sub>fem.</sub> / this<sub>fem.</sub> / one<sub>fem.</sub> / new / intentional / frequent /  
 \*rychle malba.

quickly painting

‘There was a / this / one / new painting hanging on the wall.’

e Na rohu je nějaké / to / jedno / dřevěné / \*časté / \*pomalu stavení.  
on corner is a<sub>neut.</sub> / that<sub>neut.</sub> / one<sub>neut.</sub> / wooden / frequent / slowly building  
‘On the corner there is a / that / one wooden building.’

On the other hand, RNs do not have verbal properties such as adverbial modification and negation, they do not take reflexive pronouns and Czech result nominals do not have aspect, actionsart, and iterativity. Result nominals in all the three languages have nominal properties because they are formed in the Lexicon, as Emonds (2000, Ch4.) shows. In his morphosyntactic model, which has been used in my thesis, the suffix that forms a result nominal is inserted in the deep structure, before syntax.

Finally, all the result nominals discussed here are not argument-taking and do not have an argument structure, which is formulated as generalization (33) in chapter 4 on English nominalizations. RNs can have pre- and postmodifiers, but these are not true arguments of the verb from which they are derived. If the modifiers look the same as the arguments of the verb, it is a matter of coincidence, because it is the category N, not V, which takes them. The following table comprises the nominal and verbal properties of RNs in all the three languages.

Table 5: Nominal and verbal properties of RNs.

<b>nominal and verbal properties</b>		<b>Dutch ING-nominals</b>	<b>Dutch GE-nominals</b>	<b>English -ment, -(a)tion, -ing, etc. result nominals</b>	<b>Czech B/K result nominals</b>	<b>Czech N/T result nominals</b>
<b>nominal</b>	definite determiners	YES	YES	YES	YES	YES
	indefinite determiners	YES	YES	YES	YES	YES



	quantifiers	YES	YES	YES	YES	YES
	pluralization	YES	YES	YES	YES	YES
	adjectives expressing a physical quality	YES	YES	YES	YES	YES
<b>verbal</b>	adjectives expressing frequency or duration	NO	NO	NO	NO	NO
	adjectives like <i>deliberate</i> or <i>intentional</i>	NO	NO	NO	NO	NO
	adverbs	NO	NO	NO	NO	NO
	negation	NO	NO	NO	NO	NO
	reflexive pronouns	NO	NO	NO	NO	NO
	aspect	-	-	-	NO	NO
	aktionsart	-	-	-	NO	NO
	iterativity	-	-	-	NO	NO

These properties are exactly what Grimshaw (1990, Ch.3) predicted and showed for English (see section 4.2.3.), and the data in the other two languages (sections 3.2.2., 3.2.3., 5.2.2., and 5.2.3.) confirm it.

In conclusion, we have seen that result nominals exist in all the three studied languages and that they have basically the same properties that Grimshaw (1990) identified for English result nominals. However, these properties are realized in each of the analyzed

languages with different morphology. In the next subsection, we are going to overview complex event nominals.

### 6.2.2. Complex Event Nominals

Complex event nominals are the second type of nominals which Grimshaw (1990) identifies and which have been analyzed in this thesis. Unlike result nominals, complex event nominals refer to the action of the verb as a process or event. As Emonds (2000, Ch. 4) argues and as the data here have confirmed, the derivational suffix is inserted later than in result nominals, and therefore CENs have more verbal properties which they retain from the verbs they are derived from.

CENs are modified only by definite, not indefinite determiners and they cannot be counted and pluralized because they are not regular countable nouns but act like uncountable mass nouns.

As for their verbal properties, they are still modified by adjectives, not adverbs, however, CENs cannot be modified by adjectives describing some physical quality but by adjectives describing frequency and duration, and adjectives of volition such as *deliberate* or *intentional*. The following examples of Dutch ING- (2a) and GE-nominalizations (2b), English complex event nominals (2c), and Czech B/K (2d) and N/T (2e) complex event nominals illustrate these properties.

2. a \**Een / de / die / één / lange / regelmatige / regelmatig verhoging van de*  
a / the / that / one / long / frequent / frequently increase of the  
*prijzen veroorzaakte paniek.*  
prices caused panic  
'The / that / frequent increasing of the prices caused panic.'

b \*Een / het / dat / \*één / \*nieuwe / voortdurende / ?voortdurend getreiter van zijn  
a / the / that / one / new / constant / constantly bullying of his  
klasgenoot is verschrikkelijk.

classmate is awful

‘The / that / constant bullying of his classmate is awful.’

c \*A / the / that / \*one / \*new / deliberate / frequent / \*frequently writing of reports  
was annoying.

d \*Nějaká / tato / \*jedna / \*obsáhlá / záměrná / pravidelná / \*pravidelně četba  
a<sub>fem</sub> / this<sub>fem.</sub> / one<sub>fem.</sub> / extensive / deliberate / regular / regularly reading  
knih zlepšuje slovní zásobu.

books improves vocabulary

‘That / deliberate / regular reading books improves vocabulary.’

e \*Nějaké / toto / \*jedno / \*papírové / záměrné / časté / \*často /  
vyplňování

a<sub>neut.</sub> / this<sub>neut.</sub> / one<sub>neut.</sub> / paper / deliberate / frequent / frequently / filling in  
formulářů mě rozčiluje.

forms me irritates.

‘This deliberate / frequent filling in forms irritates me’

As for their verbal properties, most CENs do not take negation, except for Czech N/T complex event nominals. No other language analyzed in this thesis has the grammatical feature [+ ASPECT] apart from Czech, only N/T, and not B/K, complex event nominals are marked for the perfective vs. imperfective aspect distinction. Moreover, out of the three studied languages only N/T complex event nominals take reflexive pronouns, express actionsart and distinguish iterativity. All of this indicates that there has to be a slightly different mechanism involved in the formation of Czech N/T complex event nominals, as

indicated in example (45a) in chapter 5, and that there is a bigger portion of the V, or VP, structure than in the other complex event nominals in Dutch (see examples (14a), (24a) in the Dutch chapter) and English (see example (45) in chapter 4).

Finally, the examples presented in each of the previous chapters confirm that CENs, unlike RNs, are argument-taking and obligatorily satisfy verb's argument structure, as predicted by Grimshaw (1990, Ch.3) and summarized as generalization (46) in chapter 4 on English nominalizations. This means that CENs realize their complements obligatorily and if these complements are omitted, the whole nominal construction becomes ungrammatical.

Table 6: Nominal and verbal properties of CENs.

<b>nominal and verbal properties</b>		<b>Dutch ING-nominals</b>	<b>Dutch GE-nominals</b>	<b>English <i>-ment</i>, <i>-(a)tion</i>, <i>-ing</i>, etc. complex event nominals</b>	<b>Czech B/K complex event nominals</b>	<b>Czech N/T complex event nominals</b>
<b>nominal</b>	definite determiners	YES	YES	YES	YES	YES
	indefinite determiners	NO	NO	NO	NO	NO
	quantifiers	NO	NO	NO	NO	NO
	pluralization	NO	NO	NO	NO	NO
	adjectives expressing a physical quality	NO	NO	NO	NO	NO

<b>verbal</b>	adjectives expressing frequency or duration	YES	YES	YES	YES	YES
	adjectives like <i>deliberate</i> or <i>intentional</i>	YES	YES	YES	YES	YES
	adverbs	NO	NO	NO	NO	NO
	negation	NO	NO	NO	NO	YES
	reflexive pronouns	NO	NO	NO	NO	YES
	aspect	-	-	-	NO	YES
	aktionsart	-	-	-	NO	YES
	iterativity	-	-	-	NO	YES

As we can observe from the data in the table above, CENs are more verbal than result nominals. In fact, complex event nominals are a nominal construction with mixed nominal and verbal properties and they behave as Grimshaw (1990, Ch.3) predicted. However, Czech N/T complex event nominals are somewhat different with more verbal grammatical features, which must be reflected in the syntactic mechanism through which they are formed (as summarized in section 5.2.3.).

### 6.2.3. Nominal Infinitives and Gerunds

In the third subsection, I am going to compare two types of nominalizations that exist only in Dutch and English and do not have a parallel in Czech. The first construction is Dutch nominal infinitives and the second construction is English gerunds. Just like CENs, all of these constructions refer to the activity of the verb as a process, and not to the result of it like RNs, and take place in real time. These nominals have also been traditionally difficult to analyze and gerunds are described as “mixed constructions” by Chomsky (1970).

We have seen that Dutch nominal infinitives are of two types. The first type is bare nominal infinitives without any determiner (NI-Bs) (section 3.3.2.), the second type is determined nominal infinitives with the definite determiner *het* (NI-Ds) (section 3.3.3.). What makes their analysis more complicated is the fact that both types of nominal infinitives have two possible word orders, one verbal with the NP complement preceding the verbal head and one nominal with the complement following the verbal head as a *van*-phrase. Let's now look at them in more detail. The following examples show a Dutch NI-B (3a) and an NI-D (3b) with their preferred word orders:

3. a \**Het / \*een / \*één / frequent bomen kappen door de industrie is schadelijk.*  
 the / a / one / frequently trees cut by the industry is harmful  
 'Cutting trees frequently by the industry is harmful.'

b *Het / \*een / \*één / ?frequente / frequent kappen van bomen door de industrie is schadelijk.* (NI-Ds)  
 harmful  
 'The frequent cutting of trees by the industry is harmful.'

Unlike regular countable nouns, NI-Bs have no definiteness, and they cannot be pluralized and quantified. They are modified by adverbs, possibly even adjectives (because the ending *-e* distinguishing adjectives from adverbs is not visible in them), and they can have the grammatical feature [+ ASPECT]. NI-Bs inherit argument structure from the verb and their complement will be realized as an NP preceding the verbal head (example (46a) in chapter 3), although its realization as a postnominal *van*-phrase is also possible (see example (46b) in chapter 3), but it is the less preferred and more marked option. As we can observe from the data in section 3.3.2., NI-Bs are a construction with a verbal lexical head and mostly verbal properties indicated also by the preferred verbal word order.

On the other hand, NI-Ds are obligatorily definite so they do not take the indefinite determiner, they cannot be quantified and pluralized like mass nouns. NI-Ds are also modified by adverbs and not adjectives, and they can have the grammatical feature [+ ASPECT] as well. Just like NI-Bs, NI-Ds also inherit the argument structure from the verb, the internal complement will preferably be realized as a postnominal *van*-phrase as is typical of NPs. The verbal word order with an NP complement preceding the verbal head is also acceptable, although less preferred and less economical. Other internal arguments will basically copy the preferred nominal word order. This shows that unlike NI-Bs, this construction has mixed both nominal and verbal properties. Look again at the two possible word orders of each type of the nominal infinitive in examples (59a) and (59b) in chapter 3 on Dutch nominalizations.

Let's now compare nominal infinitives with English gerunds. Gerunds are a construction which does not appear in Dutch or Czech and which has more verbal properties than result and complex event nominals discussed in the previous two subsections. Gerunds do not take definite or indefinite determiners but they appear with demonstratives, possessive or object form of pronouns and possessive NPs. They are not counted and pluralized either. As for their verbal properties, gerunds are modified by adverbs, not adjectives, and their complement will be in the object form, just as with verbs, and not realized as an *of*-phrase as with CENs. Just like nominal infinitives, gerunds can also take the grammatical feature [+ ASPECT]. All of this indicates that gerunds are internally VPs with all the verbal properties on the right side of the construction, although the left side looks nominal with its possessive modifiers.

4. \*A / \*the / \*one / that / John's / \*constant criticizing (having criticized) the book / \*of the book constantly resulted in a lack of interest.

In conclusion, nominal infinitives and gerunds are somewhat similar but not the same construction. Although, gerunds existed in Middle Dutch where they were inflected in the genitive and the dative case and its remnants are still visible in expressions involving *tot ... toe* such as *tot vervelens toe* 'until boredom set in', *tot bloedens toe* 'until bleeding occurred',

etc., they do not exist in present day Dutch any more. However, in my analysis I propose that they can be unified by the same operation combining Categorical Switch and Merge into a single step, which provides a systematic solution for constructions which have long puzzled linguists (see subsections 3.3.2., 3.3.3. and 4.2.5.).

Table 7: Nominal and verbal properties of Dutch nominal infinitives and English gerunds.

<b>nominal and verbal properties</b>		<b>Dutch NI-Bs</b>	<b>Dutch NI-Ds</b>	<b>English gerunds</b>
<b>nominal</b>	definite determiners	-	YES	NO
	indefinite determiners	-	NO	NO
	other determiners	-	YES	YES
	quantifiers	NO	NO	SOME ( <i>any, no</i> )
	pluralization	NO	NO	NO
	complement in the postnominal genitive case	YES, but less preferred	YES	NO
<b>verbal</b>	adjectival modification	?	?	NO
	adverbial modification	YES	YES	YES
	NP complement in the object case	YES	YES, but less preferred	YES



### 6.3. Chapter Summary

In this chapter I have summarized the results of my previous analysis again. We have seen that result nominals and complex event nominals exist in all the three languages, while nominal infinitives and gerunds appear only in Dutch and English, respectively. We have also seen that RNs are purely nominal and very close to regular countable nouns, CENs behave more like mass nouns and have retained more verbal properties, and Dutch nominal infinitives and English gerunds still remain mainly verbal with only few nominal properties.

The data have confirmed that Grimshaw (1990) was right in her distinction of simple event, result and complex event nominals, and especially about systematically listing their nominal and verbal properties, although she did not explain well how the constructions are generated. Therefore, my main contribution was in capturing formally how the differences between the nominal and verbal properties of the four main types of nominals in each language are reflected in the process of their formation discussed in detail in the previous chapters. The whole thesis as well as the first two subsections of this chapter has shown that all the main syntactic generalizations concern the contrasts between CENs and RNs, regardless of the suffixes used to express them. They almost never concern individual suffixes, as the more traditional approaches suggest.

In the last subsection we overviewed nominal infinitives and gerunds, which are constructions that exist in Dutch and English, although I am aware of other languages such as for example Spanish, where nominal infinitives exist as well and where my analysis combining Categorical Switch and Merge into one step could possibly be applied too. However, this is not within the scope of this thesis, as it would require more thorough and detailed research.

## 7. Conclusion

In this dissertation I have discussed nominalizations in three different languages – English, Dutch and Czech. Firstly, in Chapter 2, I revised the basic concepts and their historical development as well as the main approaches to the analysis of nominalizations. The crucial term ‘argument structure’ was explained and we saw that it was first associated only with verbs, since nouns, except for nominalizations, do not have it. Throughout the dissertation, argument structure has appeared to be one of the crucial properties for their classification.

Secondly, in Chapter 3, we looked at Dutch nominalizations. We saw that Dutch ING- and GE-nominalizations are in fact complex event and result nominals, as Grimshaw (1990) classifies them, although the terms were not previously used in the literature on Dutch nominalizations. The two types were by traditional linguists (e.g. Broekhuis et.al, 2012) classified according to their suffixes and presented in such a way that each type had “some” nominal and “some” verbal properties, without any reference to the terminology which is used in formal linguistics with respect to nominals in other languages. After looking at the ING- and GE-nominalizations in detail, we can conclude that the majority of them are complex event nominals in the true sense; some can also be interpreted as result nominals.

As regards their internal tree structures, I used the same morphosyntactic model as Emonds (2000, Ch.4) uses for English result and complex event nominals. In this model, one suffix can be inserted at three different levels in English. Result nominals are formed by the deep insertion of the nominalizing suffix, complex event nominals are formed by inserting the suffix in syntax, and gerunds by the late insertion of the suffix. It thus depends on the level of insertion, and not on the suffix itself, which properties the nominal has and which type it is.

Then we considered Dutch nominal infinitives of two types, each of which has two possible word orders. Nominal infinitives do not appear in any other language analyzed in this thesis and they have been described as “notoriously difficult to analyze” (Schoorlemmer, 2001). We saw that bare nominal infinitives have more verbal properties and the preferred word order is the verbal one, with the complement preceding the verbal head, since Dutch is an SOV language. Determined nominal infinitives have mixed nominal and verbal properties and the preferred word order is the nominal one, with the complement following the head as a

*van*-phrase (the Dutch equivalent of the English *of*-phrase). Both of these types of NIs inherit verb's argument structure.

Further on in this section, I proposed a formal device that combines Categorical Switch (Panagiotidis and Grohmann, 2009) and Merge into a single step. The category D with an uninterpretable [*u*V] feature triggers Categorical Switch and the infinitive changes from an N to a V. This mechanism appears to be the most elegant solution since the two possible word orders naturally come out right and we avoid superfluous steps and operations.

Thirdly, in Chapter 4, we discussed English nominalizations and we saw that Grimshaw's (1990) classification of nominalizations into simple event, result and complex event nominals as well as her lists of nominal and verbal properties prove to be very useful for classifying nominalizations in general. I observed that simple event and result nominals behave like countable nouns, while complex event nominals lack some nominal properties and behave like mass nouns. We also saw that only complex event nominals inherit the verb's argument structure, which was formulated as Generalization (46) in the English chapter, but result nominals are not argument-taking (see above Generalization (33) in Chapter 4). On the other hand, Grimshaw did not explain how these three types of nominals are generated. It was Emonds (2000) with his morphosyntactic model that used Grimshaw's classification to show how English result nominals, complex event nominals and gerunds are derived. I took over his analysis for result and complex event nominals; however, I propose a different treatment of gerunds. Gerunds are a construction with mixed nominal and verbal properties, the left side of the construction is nominal and the right side is verbal, but the same operation which combines Categorical Switch and Merge can be used to generate gerunds too. In gerunds, however, it is the *-ing* morpheme, and not the D, which carries the uninterpretable [*u*V] feature and triggers Categorical Switch. Last but not least, Anderson's (1982) proposal that *-ing* complex event nominals are the default form of English complex event nominals proved right in this chapter.

Fourthly, Chapter 5 analyzed Czech nominalizations of two types – the B/K nominals, which end in the *-ba/ka* and other suffixes, and the N/T nominals, which end in suffixes *-ní/tí*. Once again, we saw that B/K nominals are mostly result nominals and some of them can be

interpreted as complex event nominals too, while N/T nominals are primarily complex event nominals and sometimes also result nominals. As result nominals both B/K and N/T nominals have the same properties as result nominals in other languages. However, B/K and N/T complex event nominals slightly differ and N/T complex event nominals have more verbal properties. N/T complex event nominals take reflexives and negation, are iterative, express aktionsart, and have verbal aspect, which has to be reflected in the mechanisms through which B/K and N/T nominals are formed, as is explained in more detail in sections 5.2.2. and 5.2.3.

We can conclude that all the data shows that B/K and N/T nominals are not homogenous groups, that each of them can represent both result and complex event nominals, even though one type is the primary one. Moreover, N/T complex event nominals seem to be the productive default form of complex event nominals in Czech.

Finally, the last chapter reviewed the verbal and nominal properties of each type of nominals and summarized my proposal for a new treatment of nominal infinitives and gerunds.

Throughout the dissertation we have seen that it appears to be useful to distinguish result and complex event nominals, since they appear across languages. Moreover, the verbal and nominal properties that Grimshaw (1990) distinguished and the term argument structure prove to be necessary for describing other types of nominal constructions as well. An important contribution of this PhD thesis is my devise for generating Dutch nominal infinitives and English gerunds and perhaps it could be applied in other languages where these constructions exist too.

## Bibliography

- Abney, Steven P. 1987. *The English Noun Phrase in Its Sentential Aspect*. Ph.D. dissertation, Cambridge, Mass: MIT Press.
- Anderson, Stephen. 1982. "Where's Morphology?" *Linguistic Inquiry* 13 (4): 571-612.
- Baker, Mark C. 1988. *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.
- Börer, Hagit. 1993. *Derived Nominals*. Amherst: University of Massachusetts.
- Börer, Hagit. 1997. "The Morphology-Syntax Interface: A Study of Autonomy." In *Advances in Morphology*, edited by U. Dressler, M. Prinzhorn, and J. R. Rennison, 5-30. Berlin: Mouton de Gruyter.
- Börer, Hagit. 2013. "Derived Nominals and the Domain of Content." *Lingua* 141: 71-96.
- Bresnan, Joan. 1997. "Mixed Categories as Head Sharing Constructions." In *Proceedings of the LFG97 Conference*, edited by M. Butt and T. Holloway King. Stanford, Calif.: CSLI Publications.
- Broekhuis, Hans, and Marcel den Dikken. 2012. *Syntax of Dutch*. Amsterdam: Amsterdam University Press.
- Chomsky, Noam. 1957. *Syntactic Structures*. The Hague: Mouton.
- Chomsky, Noam. 1964. *Current Issues in Linguistic Theory*. The Hague: Mouton.
- Chomsky, Noam. 1965. *Aspects of the Theory of Syntax*. Cambridge, Mass.: The MIT Press.
- Chomsky, Noam. 1970. "Remarks on Nominalization." In *Readings in English Transformational Grammar*, edited by R. A. Jacobs and P.S. Rosenbaum, 184–221. Waltham, MA.: Ginn.
- Chomsky, Noam. 1981. *Lectures on Government and Binding: The Pisa Lectures*. Berlin: Mouton de Gruyter.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Daneš, František, Miloš Dokulil, and Jaroslav Kuchař. 1967. *Tvoření slov v češtině 2*.
- Daneš, František. 1971. "Pokus o strukturní analýzu slovesných významů". *Slovo a Slovesnost* 37: 193-207.
- Dokulil, Miloš. 1962. *Tvoření slov v češtině 1. Teorie odvozování slov*. Praha: Academia.

- edited by Antonio Zampolli, 55 – 82. Amsterdam: North Holland Publishing Company.
- Emmon Bach and Robert T. Harms, 1-88. London: Holt, Rinehart and Winston.
- Emonds, Joseph E. 2007. *Discovering syntax: clause structures of English, German, and Romance*. Berlin: Walter de Gruyter.
- Emonds, Joseph. 1976. *A Transformational Approach to English Syntax: Root, Structure-preserving, and Local Transformations*. Cambridge, Massachusetts: Academic Press.
- Emonds, Joseph. 2000. *Lexicon and grammar: The English syntacticon*. Berlin: Mouton de Gruyter.
- Emonds, Joseph. 2014. “Gerunds vs. Infinitives in English: Not Meaning but Form.” In *From Theory to Practice 2013*, edited by G. J. Bell, K. Nemčokova and B. Wojcik. Zlin: Tomas Bata University Press.
- Emonds, Joseph. 2014. “Gerunds vs. Infinitives in English: Not Meaning but Form.” In *From Theory to Practice 2013*, edited by G. J. Bell, K. Nemčokova and B. Wojcik. Zlin: Tomas Bata University Press.
- Fillmore, Charles J. 1968. “The Case for Case.” In *Universals in Linguistic Theory*, edited by Emmon Bach and Robert T. Harms. London: Holt, Rinehart and Winston.
- Fillmore, Charles. 1977. “Scenes-and-frames Semantics.” In *Linguistic Structure Processing*, edited by Antonio Zampolli. Amsterdam: North Holland Publishing Company.
- Fillmore, Charles. 1977. “Topics in Lexical Semantics.” In *Current Issues in Linguistic Theory*, edited by Robert W. Cole. Bloomington: Indiana University Press.
- Fraser, Bruce. 1970. “Some remarks on the action nominalization in English.” In *Readings in English Transformational Grammar*, edited by R. Jacobs and P. Rosenbaum. Waltham, Mass.: Ginn and Company.
- Fu, Jingqui, Thomas Roeper, and Hagit Börer. 2001. “The VP within Process Nominals: Evidence from Adverbs and the VP Anaphor Do-So.” *Natural Language & Linguistic Theory* 19 (3): 549-582.
- Grepl, Miroslav, and Petr Karlík. 1998. *Skladba češtiny*. Olomouc: Votobia.
- Grimshaw, Jane. 1990. *Argument Structure*. Cambridge, MA: MIT Press.

- Haegeman, Liliane. 1991. *Introduction to Government and Binding Theory*. Oxford: Blackwell.
- Hajič, Jan, et.al. 2003. PDT-VALLEX: Creating a Large-coverage Valency Lexicon for Treebank Annotation: In *Proceedings of the Second Workshop on Treebanks and Linguistic Theories*. Vaxjo: Vaxjo University Press.
- Havránek, Bohuslav, and Alois Jedlička. 1960. *Česká mluvnice*. Praha: SPN.
- Hoekstra, Teun, and Pim Wehrmann. 1985. "De Nominale Infinitief." *GLOT* 8 (3): 257-274.
- Hoekstra, Teun. 1999. "Parallels between Nominal and Verbal Projections." In *Specifiers: Minimalist Approaches*, edited by D. Adger, S. Pintzuk, B. Plunkett, and G. Tsoulas, 163-187. Oxford: Oxford University Press.
- Jackendoff, Ray. 1990. *Semantic Structures*. Cambridge, MA: MIT Press.
- Jelínek, Milan. 1967. "Jména dějová." In *Tvoření slov v češtině 2. Odvozování podstatných jmen*, edited by F. Daneš, M. Dokulil, and J. Kuchař, 562–653. Praha: Academia.
- Karlík, Petr, and Norbert Nübler. 1998. "Poznámky k nominalizaci v češtině." *Slovo a Slovesnost* 59 (2): 105-112.
- Karlík, Petr. 2000. "Hypotéza modifikované valenční teorie." *Slovo a Slovesnost* 61 (3): 170-189.
- Karlík, Petr. 2000. "Valence substantiv v modifikované valenční teorii." In *Čeština – Univerzália a specifika 2*, edited by Z. Hladká and P. Karlík, 181–192. Brno: Masarykova univerzita.
- Karlík, Petr. 2002. "Ještě jednou k českým deverbálním substantivům." In *Čeština – Univerzália a specifika 4*, edited by Z. Hladká and P. Karlík, 13–23. Brno: Masarykova univerzita.
- Karlík, Petr. 2003. "Poznámka k rozboru dějových jmen." *Sborník prací filozoficko-přírodovědecké fakulty SU v Opavě D3*: 154–167.
- Karlík, Petr. 2004a. "Mají dějová substantiva slovesný rod?" In *Čeština – univerzália a specifika 5*, edited by Z. Hladká and P. Karlík, 33–46. Praha: NLN.
- Karlík, Petr. 2004b. "Mikrosyntax českých deverbálních jmen." *Sborník prací Filozofické fakulty brněnské univerzity A52*, 71–81.

- Karlík, Petr. 2004c. “Pasivum v češtině.” *Slovo a slovesnost* 65 (2): 82–113.
- Karlík, Petr. 2007a. “Mixed Nominals in Czech.” In *Czech in Generative Grammar*, edited by M. Dočekal and P. Karlík, 105–117. München: Lincom.
- Karlík, Petr. 2007b. “Několik drobných poznámek k dějovým jménům.” *Sborník prací Filozofické fakulty brněnské univerzity - Linguistica Brunensia* 56 (A55): 235–246.
- Komárek, Miroslav. 1978. *Příspěvky k české morfologii*. Praha: SPN.
- Labov, William. 1973. “The boundaries of words and their meanings.” In *New Ways of Analyzing Variation in English*, edited by C.J. Bailey and R.W. Shuy. Washington: Georgetown University Press.
- Lakoff, George. 1972. “Hedges: A Study in Meaning Criteria and the Logic of Fuzzy Concepts.” In *Papers from the Eighth Regional Meeting of the Chicago Linguistic Society (= CLS)*, edited by P.M. Peranteau, J.N. Levi, and G. C. Phares. Chicago: CLS.
- Lees, Robert. 1960. *The Grammar of English Nominalizations*. Indiana: Indiana University, Research Center in Anthropology, Folklore, and Linguistics.
- Looyenga, Sietze. 1992. “A Syntactic Analysis of Dutch Nominal Infinitives.” In *Linguistics in the Netherlands*, edited by R. Bok-Bennema and R. van Hout, 173–184. John Benjamins Publishing Company.
- Moulton, Keir. 2014. “Simple event nominalizations: roots and their interpretation.” In *Cross-linguistic Investigations of Nominalization Patterns*, edited by P. Ileana. Amsterdam: John Benjamins.
- Nekula, Marek, Zdenka Rusínová, Miroslav Grepl, and Petr Karlík. 2012. *Příruční mluvnice češtiny*. Praha: Nakladatelství Lidové noviny.
- Novotný, Jiří. 1980. *Valence dějových substantiv v češtině*. Praha: SPN.
- Odvozování podstatných jmen*. Praha: Academia.
- Panagiotidis, Phoevos, and Kleanthes K. Grohmann. 2009. “Mixed Projections: Categorical Switches and Prolific Domains.” *Linguistic Analysis* 35: 141-161.
- Panevová, Jarmila. 1999. “Valence a její univerzální a specifické projevy.” In *Čeština – univerzália a specifika 1*, edited by Z. Hladká, and P. Karlík: 29-37. Brno: Masarykova univerzita.



- Panevová, Jarmila. 2000. "Poznámky k valenci podstatných jmen." In *Čeština – univerzália a*
- Petr, Jan, Miroslav Komárek, et. al. 1986. *Mluvnice češtiny (2), Tvarosloví*. Praha: Academia.
- Reuland, Eric. 1983. "Governing -ing." *Linguistic Inquiry* 14 (1): 101-136.
- Reuland, Eric. 2011. "What's Nominal in Nominalizations." *Lingua* 121 (7): 1283-1296.
- Ross, John Robert. 1967. "Constraints on Variables in Syntax." PhD diss., MIT.
- Schoorlemmer, Maaïke. 2001. *Dutch Nominalised Infinitives As Non-Identical Twins*.  
Utrecht: Utrecht Inst. of Linguistics OTS.
- Sgall, Petr. 1998. "Teorie valence a její formální zpracování." *Slovo a slovesnost* 59 (1): 15-29.
- Sgall, Petr. 2006. "Valence jako jádro jazykového systému." *Slovo a slovesnost* 67 (3): 163-178.
- Šmilauer, Vladimír. 1972. *Nauka o českém jazyku*. Praha: SPN.
- specifika 2*, edited by Z. Hladká, and P. Karlík, 173–181. Brno: Masarykova
- Stehlíková, Lucie. 2010. "Morfosyntaktické vlastnosti deverbálních jmen na -ní/-tí-." PhD diss., Masarykova univerzita.
- Tesnière, Lucien. 1959. *Éléments de syntaxe structurale*. Paris: Klincksieck.
- Theory*, edited by Robert W. Cole, 76 – 138. Bloomington: Indiana University Press.
- Transformational Grammar*, edited by R. Jacobs and P. Rosenbaum. Waltham, Mass.: Ginn and Company.
- Trávníček, František. 1951. *Mluvnice spisovné češtiny I*. Praha: Slovanské nakladatelství. univerzita.
- Veselovská, Ludmila. 2001. "K analýze českých deverbálních substantiv." In *Čeština: Univerzália a specifika 3*, edited by Z. Hladká and P. Karlík, 11–27. Brno: Masarykova univerzita.
- Veselovská, Ludmila and Joseph Emonds. 2015. "Categorial Status of Infinitives and Gerunds in English and Czech." In *From Theory to Practice 2014: Proceedings of the Sixth International Conference on Anglophone Studies*, edited by J. G. Bell and K. Nemčoková, 13-43. Tomas Bata University Press.

Wasow, Thomas, and Thomas Roeper. 1972. "On the Subject of Gerunds." *Foundations of Language: International Journal of Language and Philosophy* 8 (1): 44–61.

Williams, Edwin. 1981. "On the notions 'lexically related' and 'head of a word'." *Linguistic Inquiry* 12 (2): 245-274.

Zubizarreta, Maria L. 1987. *Levels of representation in the lexicon and in the syntax*.  
Dordrecht: Foris Publications.

Zubizarreta, Maria Luisa, and Ton van Haaften. 1988. "English -ing and Dutch -en nominal constructions: a case of simultaneous nominal and verbal projections." In *Morphology and Modularity*, edited by M. Everaert, A. Evers, R. Huybregts and M. Trommelen, 361-393.  
Dordrecht: Foris Publications.

