

PIUS TEN HACKEN

THE MEANING OF NOMINALISATION

Nominalisation is a morphological process producing a noun on the basis of input of various possible categories. Here, I will concentrate on verbs and adjectives as input. The focus will be on the way nominalisation affects the meaning of its input. The examples I discuss are from Dutch. In section 1, I will start with a discussion of some of the crucial terms to be used. Section 2 introduces the basic assumptions I make about the framework in which morphological rules operate. Section 3 proposes a treatment of some central issues in nominalisation, accounting for its semantic effects. A specific problem that relates to the ambiguity of many nominalisations is addressed in section 4. Section 5 summarises the conclusions.

1. NOUNS AND NOMINALISATION

There are different traditions for the understanding of major word classes, using different types of criterion for their distinction. One, going back to Dionysius Thrax, uses the inflectional categories as a criterion. Nouns are determined by having case, gender and number, whereas verbs have person, number and tense. In this way, adjectives end up in the same word class as nouns and participles are a separate word class from verbs (cf. Robins 33–34).

Another tradition relates word classes to semantic categories. Nouns refer to substances or objects, adjectives to properties and verbs to states and processes.

Univ.-Prof. Dr. PIUS TEN HACKEN, Institut für Translationswissenschaft, Leopold-Franzens-Universität Innsbruck; e-mail: pius.ten-hacken@uibk.ac.at; ORCID: <https://orcid.org/0000-0002-6468-1891>.

Sechehaye (102) calls the three major categories *entité*, *qualité* and *procès*. He then makes the observation in (1).

- (1) Toute idée, quelle que soit sa catégorie naturelle au point de vue de la logique, peut être ramenée à la catégorie de l'entité.¹

If we take *entité* to be equivalent to *noun*, (1) states that concepts of any category can be expressed as a noun. The problem with the formulation in (1) is that names are assigned to logical categories, i.e. categories of meaning, but these names are used at the same time for word classes which share morphosyntactic properties. Mixing semantic and morphosyntactic criteria leads to a range of problems with mismatches.

The third tradition takes the word classes as syntactic categories. This tradition is much more recent and has only gained prominence in generative linguistics. It implies that whether something is a noun is determined exclusively by the syntactic constraints on its distribution, for instance its relationship to determiners. Although this view is prominent nowadays, traces of the two older traditions can still be found.

When adopting a syntactic approach to delimiting word classes, we can still observe certain generalisations about the correspondence between word classes and categories of meaning. Thus, verbs generally express actions, processes or states and adjectives mostly express properties or relationships. In particular for nouns, however, it is more difficult to generalise over their meaning. Although we can say that objects and substances are generally expressed by nouns, nouns can also express actions, processes, states, properties and relationships.

In the case of nominalisation, we have a noun as the outcome of a morphological process. Some Dutch examples of verbs and corresponding nouns are given in (2) and (3).

- (2) a. *jagen* 'hunt_V'
 b. *jager* 'hunter'
 c. *jacht* 'hunt_N'
- (3) a. *tellen* 'count_V'
 b. *teller* 'counter'
 c. *telling* 'count_N'

In (2a) and (3a), we have two Dutch verbs. They both express activities. The nouns in (2b) and (3b) are agent nouns. They are both formed with the highly productive

¹ "Any idea, whatever its natural category may be from a logical perspective, can be taken back to the category of entity" (my translation).

suffix *-er*. For (2b), the first meaning is a person actually or typically performing the activity of the verb in (2a).² In the case of (3b), person and instrument readings are equally possible. It also has the specialised meaning of the numerator of a fraction. The nouns in (2c) and (3c) are action nouns. The suffix *-t* in (2c) is unproductive (cf. de Haas and Trommelen 246). It triggers a change in the stem vowel that is not directly reflected in the spelling.³ The suffix *-ing* in (3c) is productive. Both nouns in (2c) and (3c) refer to the same action as the corresponding verbs in (2a) and (3a).⁴ The examples in (4) and (5) illustrate this.

- (4) a. *Dat de prins op tijgers jaagt is verwerpelijk.*
 that the prince on tigers hunts is reprehensible
 ‘that the prince hunts tigers is reprehensible’
 b. *De jacht van de prins op tijgers is verwerpelijk.*
 the hunt of the prince on tigers is reprehensible
- (5) a. *de stemmen handmatig tellen*
 the votes manually count
 ‘count the votes manually’
 b. *de handmatige telling van de stemmen*
 ‘the manual count of the votes’

In (4), we have two sentences with the same meaning. The verb in (4a) is embedded in a subordinate clause which is equivalent to the noun phrase in (4b). Both the clause and the noun phrase serve as the subject of the copula in (4). The differences in structure, in particular the article *de* before *jacht* and the preposition *van* in (4b), can be explained by the fact that *jaagt* is a verb form and *jacht* is a noun. This illustrates that (2a) and (2c) are syntactically different, but semantically equivalent.

In (5), we have two phrases, a verb phrase in (5a) and a noun phrase in (5b). Again, the definite article before *telling* and the preposition *van* in (5b) depend on the nominal status of *telling*. Also the difference between the adverb *handmatig* in (5a) and the inflected adjective *handmatige* in (5b) depends on the syntactic category. The phrases in (5) have a different syntactic distribution, but they express the

² Alternative meanings refer to a type of ship (e.g. *torpedojager* ‘torpedo boat’) or a type of plane (e.g. *straaljager* ‘fighter jet’), but these readings require much more context to be activated, and *jager* is then often used as a shortened form of the compound.

³ In Dutch, /a/ is spelled ⟨a⟩ in open syllables and ⟨aa⟩ in closed syllables, so that the stem *jaag-* of *jagen* has the same vowel, whereas in the closed syllable of *jacht* the ⟨a⟩ stands for /a/.

⁴ The noun in (2c) also has the meaning of *yacht*. I will treat this as a morphologically unrelated homonym. Even though there may be an etymological relationship, there is no word formation rule involved.

same meaning, thus showing that (3a) and (3c) are syntactically different but semantically equivalent.

We find similar contrasts also for adjectives and their nominalised counterparts as in (6) and (7).

- (6) a. *eng* ‘creepy’
 b. *engerd* ‘creep’

- (7) a. *zacht* ‘soft’
 b. *zachtheid* ‘softness’

The suffix *-erd* in the sense illustrated in (6b) is productive according to de Haas and Trommelen (182), but the number of formations is not very high. It refers to a person having the property designated by the adjective it attaches to. The suffix *-heid* in (7b) is highly productive and forms nouns referring to the same property as the adjective it attaches to. The examples in (8) illustrate that the contrast in (7) behaves in a way similar to the one between the verbs and action nouns in (2) and (3).

- (8) a. *dat het bed zacht is*
 that the bed soft is
 ‘that the bed is soft’
 b. *de zachtheid van het bed*
 ‘the softness of the bed’

In (8a), we have a subordinate clause with a predicative adjective, in (8b) a noun phrase. They can be inserted in many of the same syntactic contexts. As in (4) and (5), it is the syntactic category of *zachtheid* which determines the article *de* and the preposition *van*, but the meaning is the same.

The discussion of the examples in (2)–(8) shows that there are two types of nominalisation. The first type changes the meaning of the input as well as its syntactic category. It is illustrated in (2b) and (3b) for deverbal and in (6b) for deadjectival nominalisations. In this type, we also find denominal nominalisations, as illustrated in (9).

- (9) a. *school scholier* ‘school—pupil’
 b. *leraar lerares* ‘teacher—female teacher’

The suffix *-ier* in (9a) forms nouns designating a person related to the input noun. According to de Haas and Trommelen (180), it is not productive, although there are a fair number of nouns derived in this way. In (9b), the suffix *-es* forms feminine

nouns on the basis of nouns that designate the masculine or unmarked counterparts. As indicated by de Haas and Trommelen (188–90), it is subject to several phonological and morphological restrictions, but within these constraints, it is productive.

The second type of nominalisation changes the syntactic category without changing the meaning. It is illustrated by (2c) and (3c) for deverbal and by (7b) for deadjectival nominalisations. In this type, no denominal nominalisations are possible. This type is traditionally called *transposition*, e.g. by Bally. Dokulil (209) proposes a threefold distinction between *Mutation*, *Modifikation* and *Transposition*. The distinction between the former two is that in a *Mutation* information is changed, whereas in a *Modifikation* information is added. All examples of the first type I have given so far are cases of *Mutation*, except (9b) if *leraar* is analysed as unmarked for sex rather than as masculine.

2. MEANING AND NOMINALISATION IN GENERATIVE MORPHOLOGY

In the history of generative morphology, nominalisation has been a central issue. Chomsky (“Remarks”) bases his argument for the Lexicalist Hypothesis on a discussion of the treatment of nominalisation. The reason for this is that in the discussions with Generative Semantics about the relationship between semantics and syntax, nominalisation had become a central phenomenon. Lees had proposed a transformational account of nominalisations, which indicated the perspective of an explanatory connection between semantic and syntactic representations. As the further history shows (cf. ten Hacken, “Early Generative Approaches”), this proposal inspired a search for an account that would observe stricter requirements of explanatory rigour, as well as some less constrained ideas that undermined this search. Chomsky (“Remarks”) proposed a return to a model in which syntax was the central component of the grammar and semantic interpretation would be derived from syntactic structure. In this model, complex semiregularities in the domain of nominalisation were assigned to the lexicon.

It should be kept in mind that throughout this discussion, *nominalisation* was often interpreted as a broader term than what I presented in section 1. Lees is remembered in particular as a theory of compounding. For him, nominalisation was one way of realising deep structures of kernel sentences, the alternative being a sentential realisation. Chomsky (“Remarks”) discusses mostly deverbal nominalisations, with a particular emphasis on action nouns. In subsequent work, the focus was on the argument structure of the resulting noun and its relation to that of the underlying verb. Action nouns are of course interesting in this respect. In the domain of compounding, synthetic compounds with a deverbal head attracted a lot of attention. Thus, Spencer’s introduction devotes a long chapter to grammatical relations and his chapter on compounding treats non-synthetic compounds only in a brief section.

The influence of syntax-based thinking on the treatment of morphology is also transparent in more recent theories that assign semantic aspects a more appropriate place. Lieber (*Morphology*) proposes a theory of word formation with an emphasis on semantic aspects, which Lieber (*English Nouns*) elaborates for nominalisations and calls the Lexical Semantic Framework (LSF). Lieber's central idea is that the semantics of a lexical item consists of a skeleton and a body. The skeleton is determined by a number of features that are syntactically active. The set of features in the skeleton is a language-specific selection from a universal set of possible features. One of these features is [+/- material], defined as in (10).⁵

- (10) [+/- **material**]: The presence of this feature defines the conceptual category of SUBSTANCES/THINGS/ESSENCES, the notional correspondent of the syntactic category Noun. The positive value denotes the presence of materiality, characterising concrete nouns. Correspondingly, the negative value denotes the absence of materiality; it defines abstract nouns.

As defined in (10), [+/- material] has two tasks. Its value distinguishes concrete and abstract nouns. Its presence distinguishes nouns from other categories. Although the latter task is presented as defining a conceptual category, this conceptual category is extremely loosely characterised in semantic terms: SUBSTANCES/THINGS/ESSENCES. For a proper understanding of this category, it is essential that it is correlated to the syntactic category of noun. Lieber does not state in (10) that *noun* is a conceptual category, but the only way to understand the conceptual category she proposes is to see it as all and only what is expressed by a noun. Purely syntactic contrasts of the type illustrated in (4), (5) and (8) are then also expressed in semantics. In my view, this does not do justice to the syntactic nature of the category of noun.

A more radical approach to the organisation of components in a grammar is proposed by Jackendoff (*Foundations*) in his Parallel Architecture (PA). He proposes that phonological structure, syntactic structure and conceptual structure are each generated by their own set of rules and connected by linking rules. This means that the representations of syntax and semantics are independent, but connected. In this way, we can restrict the representation of all and only syntactic contrasts to syntactic structure and the representation of all and only semantic contrasts to conceptual structure.⁶

⁵ The same statement is found in Lieber (*Morphology* 24; *English Nouns* 94) and other publications (bold in the original).

⁶ Jackendoff (*Semantics* 16–22) argues that there is no distinction between semantic and conceptual structure. Cf. ten Hacken ("On the Distinction") for a more detailed discussion.

Linking rules play a crucial role in PA. Basic linking rules are lexical entries. A word like *zacht* ('soft') has a phonological realisation /zaxt/, a syntactic realisation as an adjective and a conceptual realisation as a property. What makes *zacht* a linking rule is that these three pieces of information are linked to each other. A speaker who knows this word has an entry for *zacht* in their mental lexicon. The phonological and conceptual realisations are based on prototypes. In the case of phonological structure, the prototype makes it possible to recognise different pronunciations as falling within the scope of a particular representation. For conceptual structure, the prototype indicates a focus of the meaning and determines how less typical instances are recognised as less good examples of the concept. Each speaker has their own mental lexicon with their own entry for *zacht* and their own prototypes governing the expected pronunciation and meaning.

Jackendoff (*Foundations* 152–82) gives an elegant argument for the idea that there is no theoretical distinction between words and rules. Some crucial points of this argument can be illustrated with the example in (11).

- (11) *Dit is voor hem echt een zacht eitje.*
 this is for him really a soft egg_{DIM}
 'For him, this is really a piece of cake.'

The words *dit* 'this' and *hem* 'him' are function words that have no conceptual meaning of their own. Their reference is determined contextually on the basis of syntactic features. Although they have a reference in the context in which (11) is used, this reference does not depend on conceptual information specified in their lexical entry. Arguably, their conceptual structure as specified in the lexicon is empty.

The idiom *een zacht eitje* in (11) can only be understood as a non-compositional expression. It must have a lexical entry so that the meaning can be specified, but it behaves syntactically as a noun phrase and consists of three phonological words. This means that not only the conceptual representation, but also the phonological and syntactic information specified for a lexical entry can be structured.

If we can have both empty and structured information in the individual slots, formation rules, e.g. rules of syntax, can be encoded as lexical entries with structured information in one slot (in this case syntax) and no information in the others (in this case phonological and conceptual structure). From this argument, Jackendoff draws the conclusion that there is just one uniform format for all rules and lexical entries. The lexicon contains all information that is needed for the production and understanding of linguistic expressions.

The representation of interconnected phonological, syntactic and conceptual structures is used in PA for two different types of expression. On one hand, lexical

entries such as the one for *jagen* in (2a) have information for each of the three structures that is encoded in the mental lexicon. On the other hand, sentences such as the one in (4a), which includes the verb *jagen*, have a representation that encodes the information that is available for a phonological, syntactic and conceptual understanding. The sentence in (4a) is unlikely to be stored in any speaker's mental lexicon. Instead, the construction of a full set of three connected representations is necessary in order to produce or interpret them. These representations are constructed on the basis of the information taken from the stored lexical entries used in the sentence. We can link this contrast straightforwardly to the traditional Chomskyan distinction between *competence* and *performance* (*Aspects* 4). Lexical entries constitute a speaker's competence. Sentences such as (4a) are elements of interpreted performance.⁷

The distinction between the mental lexicon and the interpreted performance highlights the special status of word formation rules. Entries of the mental lexicon are used to produce interpreted performance. Thus, the entry for *jagen* is used in the full structure for (4a). Rules are also entries in the mental lexicon. Thus, the rule combining the determiner and the noun in *de prins* 'the prince' in (4a) is a lexical entry of the same basic type as the one for *jagen*. When we consider the rule producing *jager* 'hunter' in (2b) from *jagen*, however, we note that it does something else. Rather than (directly) producing a component of the sentence, this rule creates a new lexical entry.

The difference between creating a new lexical entry and producing an utterance is highlighted by the phenomenon of *onomasiological coercion*, a concept explained in (12), from ten Hacken (*Word Formation* 64).

- (12) Onomasiological coercion means that the naming function of word formation uses available rules to come up with a name for a concept, while using the concept to come up with underspecified elements of meaning.

In ten Hacken ("Semiproductivity"), I illustrated the idea in (12) with the example of *blackbird*. The word formation rule for *blackbird* constrains the meaning, but it does not determine the species. The reason why *blackbird* refers to the species *Turdus merula* and not to a crow is that the starting point for naming was the species to be named. The fact that crows are actually more black than blackbirds, because crows have a black beak, does not play a role in the naming of *Turdus merula*. In

⁷ Following the argument in ten Hacken (*Chomskyan Linguistics* 42–46), I take *performance* to be the actual output found in speech or text, as it can be recorded in a corpus. In this sense, it is only a form. I use *interpreted performance* for the form with phonological, syntactic and conceptual structures attached to it, as it is produced by the speaker before the actual utterance and constructed by the hearer in interpretation.

naming, speakers do not evaluate which species best fits the name, but, given a particular concept, they look for a name that is appropriate.

Agent nouns such as *jager* in (2b) also reflect (12). The starting point is the concept of a particular type of person. That this type of person is characterised by an activity (viz. hunting) makes it reasonable to use the rule for agent noun formation and the verb *jagen* to come up with a name. Agent nouns can refer to people or to instruments. The choice between these options is not determined by a rule, but by the concept. The lexical entry for *jager* encodes this connection between the concept and the name. This lexical entry is stored in the mental lexicon of the speakers who know the word.

For a sentence such as (4a), the meaning is also underspecified in certain respects. In particular, the reference of *de prins* needs to be determined on the basis of the context. However, the interpretation process is different from that of *jager* in two crucial respects. First, in the case of *de prins* we look for a referent, not for a concept. Second, there is no reason to store the result in the mental lexicon. In the case of *de prins*, the search for a referent is performance-focused, whereas for *jager*, the interpretation as a concept extends the speaker's competence. This is the basic argument in ten Hacken (*Word Formation*) why word formation should be a separate component, distinguished from lexical entries for words and rules.

3. NOMINALISATIONS, WORD FORMATION AND TRANSPOSITION

Lexical entries in PA specify what they add to a representation for an expression in which they occur. Word formation rules produce new lexical entries by changing the input they take. For such rules, we can specify which of the three parallel structures of their input they change. In principle, for each of the structures, the decision whether anything is changed is independent of what happens in the other structures. Therefore, we can divide rules that change their input into the classes in table 1.

Type	Phon	Synt	Conc
VII	1	1	1
VI	1	1	0
V	1	0	1
IV	1	0	0
III	0	1	1
II	0	1	0
I	0	0	1

Table 1. Seven types of word formation rule in PA

In table 1, whether a particular structure is modified or not is indicated by a 1 or 0 in the columns for each structure. The type number in the first column results from the interpretation of the 1s and 0s as a binary number. In principle, there would be an eighth type with three 0s, but this would be a rule that cannot change anything, so it would be of no use.

In section 1, we found two main types of nominalisation. In one type, illustrated by *jager* ‘hunter’ in (2b), *teller* ‘counter’ in (3b) and *engerd* ‘creep’ in (6b), nominalisation adds a suffix and changes the syntactic category as well as the conceptual category of the base. Whereas *jagen* and *tellen* are verbs and actions, *jager* and *teller* are nouns and things (persons or objects). In the case of *engerd*, the base is an adjective denoting a property and the output is a noun denoting a type of person. As the suffix also changes the phonological form, these rules belong to Type VII in table 1.

The other type is illustrated by *jacht* in (2c), *telling* in (3c) and *zachtheid* ‘softness’ in (7b). Here, we also have a suffix and a change of syntactic category, but the conceptual category remains the same. *Jacht* denotes the same action as *jagen*, *telling* the same action as *tellen* and *zachtheid* the same property as *zacht*. Therefore, these examples belong to Type VI.

In the examples in (9), the syntactic category is not changed, so that they may be candidates for Type V. However, the changes introduced by the word formation rule do have other effects that are syntactically relevant. Whereas *leraar* in (9b) is grammatically masculine, *lerares* is grammatically feminine. Dutch does not distinguish masculine and feminine gender in most contexts, but for personal nouns, there is a distinction between the pronouns *hij* (‘he’) for *leraar* and *zij* ‘she’ for *lerares*. Similarly, there is the distinction between *wie* ‘who’ and *wat* ‘what’ that differentiates questions for people and things, which requires a syntactic distinction between *school* and *scholier* (‘pupil’) in (9a). Therefore, the rules for suffixation by *-ier* and *-es* illustrated in (9) rather belong to Type VII.

A better candidate for a rule in Type V is the prefixation rule illustrated in (13).

- (13) a. *bisschop* *aartsbisschop* ‘bishop—archbishop’
 b. *vijand* *aartsvijand* ‘enemy—archenemy’

De Haas and Trommelen (45–46) distinguish two rules of *aarts*-prefixation. They claim that the one illustrated in (13a) is not productive, but the one illustrated in (13b) is. They call the former “rangaanduidend” ‘denoting rank’ and the latter “versterkend” ‘reinforcing’. The distinction is rather subtle and I suspect that in a theory with onomasiological coercion as in (12), it is not necessary to distinguish them. Here we have a rule which changes form and meaning, but does not affect the syntactic classification.

Type III is what is conventionally called *conversion*. The most salient property of conversion is that the phonological form is not changed. According to Marchand (360), Sweet was the first to use the term *conversion*. Sweet describes it as a process by which we “make [a word] into another part of speech without any other modification or addition, except, of course, the necessary change of inflection, etc.” (38). A Dutch example of a nominalisation is given in (14).

- (14) *Ik was erg benieuwd naar de afloop van de wedstrijd.*
 ‘I was very curious about the result of the match.’

The noun *afloop* ‘result’ is a conversion from the verb *aflopen* ‘come to an end’. The only difference in form is the absence of the inflectional ending *-en* marking the infinitive of the verb. As such, conversion can be seen as the counterpart to transposition. Both *conversion* and *transposition* have been interpreted in different ways, but here I will assume Sweet’s interpretation of conversion and the definition of transposition from ten Hacken (“Transposition” 196), quoted in (15).

- (15) Transposition is a process that:
- a. changes the syntactic category of a word,
 - b. does not change its semantic category, and
 - c. does not modify, add or delete any semantic features.

Both conversion and transposition change the syntactic category. Whereas conversion does not change the phonological information, transposition does not change the conceptual information.

In section 2, I argued for a separate word formation component in PA. A crucial argument is based on onomasiological coercion as defined in (12). New words are formed to provide a new name for a concept. The concept to be named determines the meaning of the new word. It is the change of semantic values that justifies the inclusion of a rule in the word formation component. As a consequence, transposition rules do not qualify. Transposition rules belong to the even-numbered types in table 1, i.e. those types with no conceptual change. They can be treated as lexical entries in the same way as inflection rules. Rules in the word formation component can, in principle, belong to Types VII, V, III and I. We have seen examples of the first three of these types in this section.

4. TRANSPOSITION AND CHANGE OF MEANING

In discussing action nouns, Chomsky (“Remarks”) draws attention to a number of irregularities. Such irregularities often depend on an ambiguity between two readings of the type illustrated for Dutch in (16).

- (16) a. *De vertaling duurde langer dan verwacht.*
 ‘The translation lasted longer than expected.’
- b. *De vertaling is langer dan het origineel.*
 ‘The translation is longer than the original.’

In (16), *lang* ‘long’ refers to a measure that can be spatial or temporal. The verb *dueren* ‘last’ in (16a) requires a temporal interpretation as it refers to duration. Therefore, *vertaling* ‘translation’ in (16a) must refer to the process. In (16b), *origineel* ‘original’ refers to an object. Therefore, *lang* must have a spatial interpretation. Because of the direct comparison, *vertaling* in (16b) must also have an interpretation as an object with spatial measures. It refers to the target text. This means that *vertaling* is a transposition in (16a), but not in (16b).

The type of ambiguity illustrated in (16) also occurs for nominalisations of adjectives. An example is (17).

- (17) a. *Het gebrek aan objectiviteit doet geen afbreuk aan de
 the lack of objectivity does no damage to the
 bezienswaardigheid van de tentoonstelling.
 BEZIENSWAARDIGHEID of the exhibition
 ‘Although the exhibition is not objective, this does not make it any less worth
 visiting.’*
- b. *De nieuwste bezienswaardigheid van de stad is het spectaculaire concertgebouw.
 ‘the latest place_of_interest of the city is the spectacular concert_hall’*

The noun *bezienswaardigheid* is the nominalisation of the adjective *bezienswaardig*. Especially in its use in (17a), it is difficult to translate this noun in isolation. The adjectival base is composed of the verb *bezien* ‘see, consider’, the linking element *-s-* and the adjective *waardig* ‘worth’. One can say of a place that it is *bezienswaardig* ‘worth a visit’. In (17a), this adjective is nominalised in *bezienswaardigheid*. The transferred reading in (17b) refers to an object that has this property. In this sense it can be pluralised and it often occurs in expressions of the type *de*

bezienswaardigheden van X ‘the main sights of X’. Therefore, *bezienswaardigheid* is a transposition in (17a), but not in (17b).

The existence of two readings for *vertaling* in (16) and for *bezienswaardigheid* in (17) raises the question of how to account for the relationship between them. De Haas and Trommelen (241) treat the ambiguity in (16) as a property of the suffix *-ing*. Such an analysis makes it difficult to classify the suffix *-ing* in terms of the classes in table 1. In their discussion of the suffix *-heid* they do not address the meaning (247–49). This suggests that the ambiguity of the suffix, as illustrated for *bezienswaardigheid* in (17), would be an idiosyncratic or exceptional case.

As I will argue, however, the type of ambiguity exemplified in (16) and (17) is not a property of the suffixes, because it also occurs for other suffixes with a similar use. We find the same ambiguity as in (16) also for nouns in *-atie*, e.g. *organisatie* ‘organisation’ in (18).

- (18) a. *De organisatie van een toelatingsexamen moet de*
 the organisation of an admission_exam must the
capaciteitsproblemen reduceren.

capacity_problems reduce

‘Organising an admissions exam should reduce capacity problems.’

- b. *De organisatie besloot het festival af te blazen.*
 the organisation decided the festival off to blow

‘The organisation decided to cancel the festival.’

In (18a), we have a process reading for *organisation* and in (18b) it refers to a group of people. For English, Sweet (39) also mentions such an ambiguity for conversions, e.g. *walk* in *take a walk* and *gravel walk*. In Dutch, we find this in examples such as (19).

- (19) a. *Het begin van de film is om half acht.*
 the start of the film is at half eight

‘The film starts 19:30.’

- b. *Wanneer je een nieuwe bol wol hebt, kan het best*
 when you a new ball wool have can it quite
lastig zijn om het begin van de draad te vinden.

tricky be OM the start of the thread to find

‘When you have a new ball of wool, it can be quite tricky to find the start.’

In (19a), the noun *begin* ‘start’ refers to a point in time, equivalent to the verb *beginnen*. In (19b), *begin* refers to a part of the thread, i.e. a thing. The fact that the same ambiguity exists for process nouns in *-ing*, process nouns in *-atie* and process nouns resulting from conversion suggests that the reading as a thing related to the process is not dependent on any specific word formation rule that produces the process noun, but on the process noun as such.

A similar situation can be found for deadjectival nominalisations. Alongside *-heid*, Dutch has the competing suffixes *-iteit* and *-te*. The suffix *-iteit* is an alternative to *-heid* in cases such as (20).

- (20) a. *Het is de ambiguïteit van de situatie, die de*
 it is the ambiguity of the situation that the
pandemie uiterst geschikt maakt voor een roman.
 pandemic extremely appropriate makes for a novel.
 ‘It is the ambiguity of the situation that makes the pandemic very suitable
 for a novel.’
- b. *Zijn juristen melken juridische ambiguïteiten uit en*
 his legal_experts milk legal ambiguities out and
kiezen hun woorden zorgvuldig.
 choose their words carefully
 ‘His legal experts exploit legal ambiguities and choose their words carefully.’

De Haas and Trommelen (261) consider *-iteit* productive, but it is restricted to non-Germanic bases. In (20), *ambiguïteit* ‘ambiguity’ is the nominalisation of *ambigu* ‘ambiguous’. In (20a), we have a property reading, so that *de ambiguïteit van de situatie* is equivalent to *dat de situatie ambigu is* ‘that the situation is ambiguous’, in a way we have also seen in (8). In (20b), however, *ambiguïteiten* refers to the individual realisations of the property. In the legal context, this means positions in a text. It is only in this reading that *ambiguïteit* has a plural.

The suffix *-te* is not productive according to de Haas and Trommelen (250), but there are quite a few adjectives with a nominalisation of this type. An example is *hoogte* ‘height’, where the suffix *-te* is attached to the adjective *hoog* ‘high’. Two readings of *hoogte* are illustrated in (21).

- (21) a. *De hoogte van de muur zorgt voor stabiliteitsproblemen.*
 the height of the wall cares for stability_problems
 ‘The height of the wall leads to problems with its stability.’
- b. *Het kasteel staat op een hoogte buiten de stad.*
 the castle stands on a height outside the city
 ‘The castle is located on an elevation outside the city.’

In (21a), *hoogte* refers to a property of the wall. In (21b), the same word refers to a hill, i.e. something having this property.

From the data in (16)–(21) we can conclude that there exists a systematic ambiguity for these nominalisations. For deverbal nouns expressing a process, there is also a reading referring to a thing. This is independent of the suffix involved. It applies equally to *vertaling* ‘translation’, *organisatie* ‘organisation’ and *begin* ‘start’. For deadjectival nouns expressing a property, there is a further reading designating a thing. Also in this case, this is independent of the suffix, as illustrated by *bezienswaardigheid* ‘being worth seeing’, *ambigüiteit* ‘ambiguity’ and *hoogte* ‘height’. Given that these additional readings do not depend on individual suffixes, it would be unattractive to attribute the appearance of the additional readings to the suffixes. A better way to state the relationship is to start from the conceptual category. As the rules leave the form and the syntactic category unaffected while changing the conceptual category, they belong to Type I in the classification of table 1. This fills exactly the void we had for the types of rule that can, in principle, be in the word formation component.

The proposal is, then, that the ambiguity of *vertaling*, *organisatie* and *begin* arises through the application of two separate rules. The first rule belongs to Type VI in the case of *vertaling* and *organisatie*, Type II in the case of *begin*. Such rules are not in the word formation component, as they are transposition rules. Formally, they are a lexical entry of basically the same type as the one for *car* or for the nominal plural *-s* in English. These rules produce the process readings in (16a), (18a) and (19a). The second rule is a word formation rule of Type I. It changes the conceptual structure in a uniform way, but individual applications are subject to onomasiological coercion, which accounts for idiosyncratic aspects of the resulting meanings, as is typical for word formation rules. This second rule produces the readings in (16b), (18b) and (19b).

I propose an analogous analysis for the ambiguity of *bezienswaardigheid*, *ambigüiteit* and *hoogte*. In these cases, we have only Type VI rules in the first step, as all of them involve a suffix. They produce the property readings in (17a), (20a) and (21a). The conceptual structure remains unchanged, so that these rules are not in the

word formation component. In the second step, we have a Type I rule which changes the property into a thing. This is a word formation rule and its output is again subject to onomasiological coercion. It produces the readings in (17b), (20b) and (21b).

What this analysis predicts is that the thing readings are dependent on the process and property readings. As outlined in ten Hacken (*Word Formation* 74–82), there is empirical evidence for this effect for English and French *-ation*. Quantitative data about the recording of process and thing readings in these languages suggest that forming the thing reading when the process reading is in use requires an additional step, whereas if the process reading is formed after the thing reading it is an intermediate step that gets lexicalised.

5. CONCLUSION

In the discussion of the meaning of nominalisation, it is first of all important to realise that *noun*, the characterisation of the output of nominalisation, is a syntactic category, not a morphological or semantic category. This means that only syntactic properties can be used to determine whether something is a noun. There is no semantic characterisation of the category, only partial generalisations.

Jackendoff's (*Foundations*) Parallel Architecture offers a good framework for expressing the syntactic nature of the category. However, for an adequate account of word formation, it is necessary that word formation rules are distinguished from lexical entries. Whereas lexical entries are used to build up an expression in interpreted performance, word formation rules are used to create new lexical entries in naming. Naming is subject to onomasiological coercion.

Nominalisation rules can be divided into two types. One type belongs to word formation. It is exemplified by *jager* 'hunter' and *engerd* 'creep'. The other type is transposition. It is exemplified by *jacht* 'hunt_N' and *zachtheid* 'softness'. Transposition rules are not in the word formation component.

Many nominalisations can be used either as a transposition or as the result of word formation, e.g. *vertaling* 'translation' and *bezienswaardigheid* (cf. the discussion of (17)). In section 4, I proposed an account in which the reading where the conceptual category is changed is derived from the transpositional reading by a word formation rule of a type that is predicted by the typology in table 1. This explains that the same type of change occurs for nouns resulting from different transposition rules. Therefore, these cases do not provide counterevidence to the account proposed here, but actually support it.

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THE MEANING OF NOMINALISATION

Summary

Nominalisation is a morphological process producing a noun on the basis of an input that may belong to various categories. As *noun* is a syntactic category, whether something is a noun can only be decided on the basis of syntactic evidence, not on the basis of its meaning or morphological behaviour.

As a theoretical framework, I use Jackendoff's Parallel Architecture (PA) as a basis, but I argue for a separate word formation component. The central difference between word formation rules and regular lexical entries is that the latter contribute to the production of the representation of interpreted performance, whereas the former produce new lexical entries, thus changing competence. As a consequence, an expression in interpreted performance needs the identification of a reference in the communicative context, whereas word formation needs the identification of a concept in a speaker's knowledge, which involves onomasiological coercion.

A distinction can be made between two types of nominalisation, which I illustrate with Dutch examples. In one type, the meaning is changed, e.g. *jager* 'hunter' from *jagen* 'hunt_v', in the other it is not, e.g. *telling* 'count_n' from *tellen* 'count_v'. Nominalisations of the latter type are transpositions. This distinction can be made both for deverbal and for deadjectival nouns.

Rules changing representations in PA can be classified in seven types according to which of the structures they modify. Only those that change conceptual structure qualify for being part of the word formation component. This excludes transpositions. Many nouns can be interpreted as either a transposition or a result of word formation. An example is *vertaling* 'translation', which can refer to the process or the result of translation. I argue that there is a word formation rule that produces the second reading on the basis of the first, and show that this rule belongs to a type that is predicted by the typology of rules for modifying representations in PA.

Keywords: transposition; word formation rules; onomasiological coercion; Parallel Architecture; process–result alternation.

ZNACZENIE NOMINALIZACJI

Streszczenie

Nominalizacja jest procesem morfologicznym, tworzącym rzeczownik w oparciu o bazę, która może reprezentować różne kategorie gramatyczne. Ponieważ *rzeczownik* jest kategorią syntaktyczną, tylko na podstawie danych syntaktycznych, nie zaś na podstawie jego znaczenia, czy morfologicznego zachowania, można stwierdzić, czy słowo jest rzeczownikiem.

Jako podstawy modelu teoretycznego używam Paralelnej Architektury Jackendoffa (2002), jednak optuję za oddzielnym komponentem słowotwórczym. Podstawowa różnica pomiędzy regułami słowotwórczymi i regularnymi jednostkami leksykalnymi polega na tym, że te drugie biorą udział w tworzeniu reprezentacji zinterpretowanej performancji, natomiast te pierwsze tworzą nowe jednostki językowe, zmieniając przez to kompetencję językową. W konsekwencji wyrażenie w zinterpretowanej performancji wymaga identyfikacji referencji w kontekście komunikacyjnym, natomiast słowotwórstwo wymaga identyfikacji danego konceptu w zakresie wiedzy spikera, co pociąga za sobą koercję onomazjologiczną.

Można wyróżnić dwa typy nominalizacji, które to rozróżnienie ilustruję niderlandzkimi przykładami. W jednym typie zmienia się znaczenie, np. *jager* 'łowca', słowo pochodzące od *jagen* 'łowić, polować'. W drugim typie znaczenie pozostaje niezmienione, np. *telling* 'liczenie', od *tellen* 'liczyć'.

Nominalizacje drugiego rodzaju są transpozycjami. To rozróżnienie można przeprowadzić zarówno dla rzeczowników dewerbalnych, jak i odprzymiotnikowych.

Reguły zmieniające reprezentacje w PA mogą być przypisane do siedmiu klas, w zależności od tego, jakie struktury podlegają modyfikacji. Tylko te reguły, które zmieniają strukturę konceptualną należą do komponentu słowotwórczego. Takie podejście wyklucza z tego komponentu transpozycje. Wiele rzeczowników może być interpretowanych jako transpozycje, lub jako produkty słowotwórstwa. Przykładem może być *vertaling* ‘tłumaczenie’, która to forma może odnosić się do procesu i rezultatu tłumaczenia. Dowodzę, że istnieje reguła słowotwórcza, która owocuje tym drugim znaczeniem, tworzonym na bazie pierwszego. Pokazuję także, że ta reguła należy do typu, którego istnienie przewiduje typologia reguł modyfikujących reprezentacje w PA.

*Przekład angielskiego streszczenia
Anna Malicka-Kleparska*

Słowa kluczowe: transpozycja; słowotwórstwo; koercja onomazjologiczna; Paralelna Architektura; alternacja proces–rezultat.