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## 134. Dutch

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### **Abstract**

*The two main processes of word formation in Dutch are compounding and derivation. Nominal and adjectival compounding are productive processes, unlike verbal compounding. Phrasal expressions may form constituents of compounds. Derivation is performed by prefixation (in most cases category-neutral), or by suffixation. Affixes have been borrowed on a large scale. Conversion of nouns to verbs is productive. Complex words may also arise through the processes of univerbation and grammaticalization. Various forms of word manufacturing play a role in modern Dutch word formation as well.*

## 1. Introduction

The study of the morphology of Dutch started with the work on the *Woordenboek der Nederlandsche Taal*, a scientific dictionary of Dutch (1864-1998) modeled after the *Deutsches Wörterbuch* of the Grimm brothers, and now on-line on the website of the Instituut voor Nederlandse Lexicologie ([www.inl.nl](http://www.inl.nl)). Morphological research on Dutch was boosted through the rise and influence of structuralism in which paradigmatic relations between words were of high importance. A paradigm example of this approach to word formation is Schultink's

dissertation on the morphological valence of the simplex adjective in Dutch (Schultink 1962). The paradigmatic approach to the word formation of Dutch can also be found in Van Marle (1985). A new impetus to morphological research was provided by generative grammar, in particular since the appearance of Mark Aronoff's dissertation (Aronoff 1976) which inspired Booij's dissertation on Dutch word formation (Booij 1977), in which Dutch word formation is analyzed in terms of word formation rules. The issue of whether word formation is a matter of rules, or rather to be seen as a form of analogy is discussed in Hüning (1999). Another point of debate in the study of Dutch word formation is how to deal with the differences in productivity between various word formation processes (Van Santen 1992). The Dutch linguist Harald Baayen developed a sophisticated theory of productivity, partially on the basis of Dutch data. A summary of his approach and references to his earlier work can be found in Baayen (2009). A survey of the history of morphological research on Dutch with many references is given by Schultink (2000).

A handbook on Dutch word formation written in Dutch is De Haas and Trommelen (1993). A concise handbook in English on the morphology of Dutch (including inflection) is (Booij 2002), from which the tables and many examples in this chapter are taken. A bibliographical survey of research on the morphology of Dutch up to 1998 is given in Booij (1999). A Dutch textbook on morphology is Booij and van Santen (1998).

Since in Dutch the morphological structure of words co-determines the way in which their constituents are realized phonetically, a description of Dutch word formation is not complete without a proper account of the interaction between morphology and phonology. For instance, there is a tendency for compounds to receive main stress on the first constituent, and complex words ending in a native suffix carry their main stress on the same syllable as the base word, as these suffixes are stress-neutral. The reader is referred to Booij (1995) for an overview of the relevant facts.

## **2. General overview**

The major word formation processes in Dutch are compounding and derivation. Derivation is performed by prefixation and suffixation. In addition, Dutch has derived words that reflect the Indo-Germanic process of Ablaut. That is, words may have been derived by vowel alternation, sometimes in combination with the addition of an affix. However, vowel alternation lost its productivity as a means of derivation long ago.

- (1)    aan-neem 'to suppose'            aan-nam-e 'hypothesis'

bind 'to bind'

band 'bond, tie'

sluit 'to close'

slot 'slot', sleut-el 'key'

(For the sake of clarity, verbs as bases of word formation are represented in their stem form in numbered examples, although the usual quotation form in running text is the infinitival form, for instance *aannem-en*, *bind-en*, *sluit-en*)

Compounding and affixation are not the only means of enrichment of the lexicon. Many complex words have been and are being borrowed from other languages, with consequences for the Dutch word formation system (section 6). Words may also have arisen through grammaticalization (the process in which words or lexical categories have become grammatical morphemes) and univerbation (the fusion of a word sequence into one word). An example of the emergence of a new grammatical word through grammaticalization is the change of the past participle *ge-zie-n* 'seen' into a preposition, as in *gezien dit argument* 'because of this argument'. Univerbation can be observed in a number of complex conjunctions such as *om-dat* 'lit. for-that, because' and *door-dat* 'lit. through-that, because'. The outputs of regular word formation processes belong to lexical categories, but grammaticalization and univerbation may lead to complex words of grammatical categories, such as conjunctions and prepositions. For instance, the preposition *boven-op* 'on top of' is a univerbation of the adverb *boven* 'above' and the preposition *op* 'on', as in *bovenop de auto* 'on top of the car'. There is no word formation process for making complex prepositions, as such processes only create words of lexical categories.

Conversion, the creation of new words on the basis of existing words without any overt morphological marking, is a productive process of Dutch as well (section 5).

In addition to regular compounding, Dutch allows for neo-classical compounding, in which one or both of the constituents is a root of Greek or Latin origin that does not occur as an independent word. For instance, the Greek root *bio-* 'life' is not only used in a borrowed word like *bio-logie* 'biology', but is also used in combination with Dutch words, since this root is also used as an abbreviation of the word *biologisch* 'biological, environment-friendly', as in *bio-afval* 'biological waste' and *bio-boer* 'organic farmer' (Meesters 2004). Various roots thus obtained a second life through their use in neo-classical compounds.

Another class of complex expressions that should be mentioned in this overview are particle verbs, also called separable complex verbs. An example is the particle verb *vóor-komen* 'lit. fore-come, to occur.' The difference between prefixed verbs and particle verbs is that particle

verbs can be split. For instance, in main clauses of Dutch the finite verb form appears in second position, whereas the particle is stranded at the end of the clause. This difference between prefixed verbs and particle verbs is illustrated in (2) where the particle verb *vóor-komen* contrasts with the prefixed verb *voor-kómen* ‘to prevent’ (the accents indicate the location of main stress):

- (2) a. Dit verschijnsel komt nauwelijks voor  
This phenomenon comes hardly for  
‘This phenomenon hardly occurs’
- b. Jan voor-kwam een ernstig ongeluk  
John for-came a serious accident  
‘John prevented a serious accident’

Therefore, particle verbs cannot be considered morphological constructs. Instead, they have to be seen as phrasal constructs (Blom 2005; Booij 2010; Los, Blom, Booij, Elenbaas and van Kemenade 2012). These phrasal verbs compete with prefixed verbs in the formation of various semantic subcategories of verbal predicates.

The issue of the proper demarcation of morphology and syntax also pops up in dealing with compounds. In Dutch, phrases such as *harde schijf* ‘hard disk’ are an alternative for compounds. Because such phrases are often lexicalized, one may be inclined to consider such phrases as words. However, this is incorrect as it confuses the notions ‘word’ and ‘lexical item’: all words are lexical items, but not all lexical items are words. Therefore, the construction of such phrasal expressions does not belong to morphology proper. The properties of these phrasal expressions are discussed in Booij (2010: Chapter 7).

### 3. Compounding

Compounding is a very productive process in Dutch. Compounds consist of a head word (simplex or complex) and another word or phrase. Dutch compounds are, with a few exceptions, endocentric and right-headed. The head word belongs to one of the categories N, V, A, whereas the constituent in initial position may also be an adverb, a quantifier, or a phrase. In addition, there are copulative compounds.

#### 3.1. Nominal compounds



- |    |                            |                                |
|----|----------------------------|--------------------------------|
| c. | de bal ‘the ball’          | het bal ‘the ball, dancing’    |
|    | de voet-bal ‘the football’ | het avond-bal ‘the night ball’ |

That the choice of the plural suffix is determined by the rightmost noun, is shown nicely by cases where the choice of a plural suffix is lexically determined. For instance, there are two homophonous words *portier*, each with its own gender, meaning, and plural suffix; the plural suffix choice is transferred to compounds with these words as rightmost constituents:

- |     |    |   |                      |
|-----|----|---|----------------------|
| (6) | a. | portier ‘doorkeeper’ (non-neuter)             | portier-s ‘pl’       |
|     |    | nacht-portier ‘night doorkeeper’ (non-neuter) | nachtpor-tier-s ‘pl’ |
|     | b. | portier ‘car door’ (neuter)                   | portier-en ‘pl’      |
|     |    | auto-portier ‘car door’ (neuter)              | auto-portier-en ‘pl’ |

Certain types of phrases can occur in the initial position of compounds, in particular (but not only) NPs that have a classifying function, and hence receive a generic interpretation:

- |     |  |  |   |
|-----|--|--|---|
| (7) | [[A N] <sub>NP</sub> N] <sub>N</sub>   | [[blote-vrouwen] <sub>NP</sub> [blad] <sub>N</sub> ] <sub>N</sub>                                | ‘nude women magazine’                               |
|     |  | [[hete-lucht] <sub>NP</sub> [ballon] <sub>N</sub> ] <sub>N</sub>                                 | ‘hot air balloon’                                   |
|     | [[Q N] <sub>NP</sub> ] <sub>N</sub>    | [[drie-landen] <sub>NP</sub> [punt] <sub>N</sub> ] <sub>N</sub>                                  | ‘three countries point, where three countries meet’ |
|     |  | [[vier-kleuren] <sub>NP</sub> [druk] <sub>N</sub> ] <sub>N</sub>                                 | ‘lit. four colours printing’                        |
|     | [S N] <sub>N</sub>                     | [[God is dood] <sub>S</sub> [theologie] <sub>N</sub> ] <sub>N</sub>                              | ‘God is dead theology’                              |
|     | [[N en N] <sub>NP</sub> ] <sub>N</sub> | [[[peper] <sub>N</sub> en [zout] <sub>N</sub> ] <sub>NP</sub> [stel] <sub>N</sub> ] <sub>N</sub> | ‘pepper and salt set’                               |

The phrase in initial position often denotes a form of (fictive) interaction (Pascual and Janssen 2004), as in:

- |     |  |                     |
|-----|--|---------------------|
| (8) | [[wie heeft het gedaan] <sub>S</sub> [vraag] <sub>N</sub> ] <sub>N</sub> | ‘whodunit question’ |
|-----|--|---------------------|

where the first constituent has the shape of a WH-question.

The first constituent of a compound can be a plural noun, as may be expected since phrases occur in non-head position, and bare plural nouns can function as phrases. Examples are given in (9):

- (9) lerar-en-kamer ‘teachers’ room’  
 glaz-en-wasser ‘windows cleaner’  
 sted-en-raad ‘cities’ council’

These examples show that syntax may feed word formation to a certain extent, as certain types of syntactic constituents may form building blocks of Dutch compounds.

### 3.2. Adjectival compounds

Adjectival compounds form a productive category of Dutch compounds. The left constituent can be N, A, Adv or V:

- (10) NA [[auto]<sub>N</sub>[vrij]<sub>A</sub>]<sub>A</sub> ‘car-free’  
 [[peper]<sub>N</sub>[duur]<sub>A</sub>]<sub>A</sub> ‘lit. pepper-expensive, very expensive’  
 AA [[jong]<sub>A</sub>[getrouwd]<sub>A</sub>]<sub>A</sub> ‘lit. young-married, married young’  
 [[licht]<sub>A</sub>[grijs]<sub>A</sub>]<sub>A</sub> ‘light-grey’  
 AdvA [[niet]<sub>Adv</sub>[productief]<sub>A</sub>]<sub>A</sub> ‘non-productive’  
 [[wel]<sub>Adv</sub>[bekend]<sub>A</sub>]<sub>A</sub> ‘well known’  
 VA [[kots]<sub>V</sub>[misselijk]<sub>A</sub>]<sub>A</sub> ‘lit. vomit-sick, very sick’  
 [[spil]<sub>V</sub>[ziek]<sub>A</sub>]<sub>A</sub> ‘lit. waste-sick, wasteful’

The adjectival head can be either simplex or complex (including present and perfect participles). Examples of words with complex heads are the following:

- (11) [[adem]<sub>N</sub>[benem-end]<sub>A</sub>]<sub>A</sub> ‘breath-tak-ing’  
 [[computer]<sub>N</sub>[ge-stuur-d]<sub>A</sub>]<sub>A</sub> ‘computer-controll-ed’  
 [[milieu]<sub>N</sub>[vriend-elijk]<sub>A</sub>]<sub>A</sub> ‘environment-friend-ly’  
 [[vrouw]<sub>N</sub>[vijand-ig]<sub>A</sub>]<sub>A</sub> ‘lit. woman-enemy-SUFFIX, misogynic’

The non-head position can also be occupied by quantifiers and adverbs:

- (12) *quantifiers*: drie-dimensioneel ‘three-dimensional’, drie-dubbel ‘lit. three-double, triple’;  
*adverbs*: door-nat ‘very wet’, in-triest ‘very sad’, over-gelukkig ‘very happy’, boven-natuurlijk ‘supra-natural’

A special class of adjectival compounds is formed by synthetic compounds such as *blauw-og-ig* ‘blue-eye-d’. They are called synthetic because compounding and derivation (with the suffix *-ig*) seem to apply simultaneously here. There is no existing adjective *og-ig* ‘eyed’, nor a compound *blauw-oog* ‘blue-eye’ from which *blauwogig* could have been derived by means of suffixation. Hence, one may assume one of the following three structures for such synthetic compounds:

- (13)    [[blauw]<sub>A</sub> [oog]<sub>N</sub> ig]<sub>A</sub>  
            [[[blauw]<sub>A</sub> [oog]<sub>N</sub>]<sub>N</sub> ig]<sub>A</sub>  
            [[blauw]<sub>A</sub> [[oog]<sub>N</sub> ig]<sub>A</sub>]<sub>A</sub>

A discussion of the choice between one of these three options can be found in the literature of Dutch synthetic compounds (Booij 2002; Hoeksema 1984; Van Santen 1992).

### 3.3. Verbal compounds

The category of verbal compounds is not productive in Dutch. What we do find are verbal conversions of nominal compounds, such as [[[voet]<sub>N</sub>[bal]<sub>N</sub>]<sub>V</sub> ‘lit. foot-ball, play soccer’. A second source of verbal compounds is back formation. For instance, the compound verb *stof-zuig* ‘lit. dust-suck, to vacuum-clean’ has been back-formed from the NN compound [[[stof]<sub>N</sub>[[zuig]<sub>ver</sub>]<sub>N</sub>]<sub>N</sub>, in which the head *zuiger* is a deverbal noun. This compound has been reinterpreted as an *-er*-derivation of the NV compound *stof-zuig*.

A second, closed class of verbal compounds is formed by verbs such as the following (Weggelaar 1986):

- (14)    [[klapper]<sub>V</sub> [tand]<sub>N</sub>]<sub>V</sub> ‘rattle-tooth, to have chattering teeth’  
            [[stamp]<sub>V</sub> [voet]<sub>N</sub>]<sub>V</sub> ‘stamp-foot, to stamp one’s feet’

These compounds are left-headed as far as semantic interpretation and word class is concerned. However, the inflection appears at the right periphery of these verbs. For instance, the past tense sg. forms of the verbs in (14) are *klappertand-de* and *stampvoet-te*.

A third class of verbal compounds are the so-called immobile verbs such as *zee-zeilen* ‘to sea-sail, sail on sea’. These compound verbs are called immobile because the two parts cannot be

split in main clauses where the finite part of a verbal predicate appears in second position, after the first constituent. Immobile verbs are not defective verbs, i.e. verbs without finite forms, because the finite forms do appear in embedded clauses:

- (15) a. Mijn vader { \*zee-zeilt vaak / \*zeilt vaak zee }  
 My father { \*sea-sails often / \*sails sea often }  
 b. ... dat mijn vader vaak zee-zeilt  
 ... that my father often sea-sails

These compounds can be considered syntactic compounds, with the following structure:

- (16)  $[[\text{zee}]_N^0 [\text{zeil}]_V^0]_V^0$

Since they are syntactic compounds, they cannot be split in main clauses, as this is forbidden by the principle of Lexical Integrity that stipulates that syntactic rules cannot move parts of words (i.e. structures dominated by  $X^0$  nodes) (Booij 2010: Chapter 4). On the other hand, they do not appear in second position in main clauses, as they are not one word morphologically (cf. 15a).

A final class of expressions that look like verbal compounds is the class of separable complex verbs mentioned in section 2. The first part of these complex verbs is a particle, an adjective, or a noun. The adjectives and nouns involved are non-projecting words, that is, words that do not project a phrase. For instance, the adjective *wit* in *witwassen* cannot be modified by an adverb, witness the ungrammaticality of the verb phrase *het geld helemaal wit wassen* ‘to completely white-wash the money’. Hence, they cannot be modified. Examples are:

- (17)  $[[\text{door}]_P [\text{fietsen}]_V]_V$  ‘to continue cycling’  
 $[[\text{wit}]_A [\text{was}]_V]_V$  ‘lit. white-wash, money-laundering’  
 $[[\text{deel}]_N [\text{neem}]_V]_V$  ‘lit. part take, participate’

As these word sequences can be split in main clauses, they must be considered phrasal in nature, and hence, their dominating node is  $V'$ . In addition, the first part can be optionally incorporated, thus giving rise to syntactic compounds of the type illustrated in (16). In their incorporated form, they can appear after raising verbs such as *willen* ‘to want’, and thus we get the following type of word order variation (Booij 2010: Ch. 5):

(18) ... dat ik {wil door-fietsen / door wil fietsen} ‘that I want to continue cycling’

The availability of these types of verbal construction compensates for the absence of a productive process of verbal compound formation.

The NV sequence *stof-zuigen* ‘to vacuum clean’ mentioned above has been reinterpreted either as a verbal compound, or as a separable complex verb. In the first interpretation, this compound verb is inflected regularly, whereas in the second interpretation, with a separate verb *zuigen* ‘to suck’, the irregular Ablaut inflection is preserved. Hence we can get both *Jan stofzuigde* and *Jan zoog stof* as the Dutch equivalent of *John vacuum-cleaned*.

### 3.4. Numerals and copulative compounds

Certain subsets of numerals in Dutch are formed by means of compounding, coordination, or a combination thereof:

(19)	compounding	vijf-tien ‘five-ten, 15’ (addition)
		drie-honderd ‘three-hundred, 300’ (multiplication)
	coordination	drie-en-negentig ‘three-and-ninety, 93’ (addition)
		honderd-en-drie ‘hundred-and-three, 103’ (addition)
	asyndetic coordination	honderd-drie ‘hundred-three, 103’ (addition)
	cooordination + compounding	drie-honderd-(en)-drie ‘three-hundred-(and) three, 303’ (multiplication and addition)

Numerals ending in *tien* ‘ten’ receive an additive interpretation. In the compound numerals > 100, the right constituent is the head noun (*honderd* ‘100’, *duizend* ‘1000’ etc.), and the modifier is the multiplier. The use of syntactic coordination for numerals below 100 is subject to the constraint that the lower digit has to precede the higher digit (as in *drie-en-negentig* ‘93’), whereas the reverse order applies for numerals higher than 100; for instance, *drie-en-honderd* is not a possible form for the numeral 103. Moreover, it is only in numerals > 100 that the conjunction *en* can be omitted. The phonetic realization of *en* varies: in numbers < 100 it is realized as [ən], but as [ɛn] in numerals > 100 (Booij 2010: Chapter 8).

Asyndetic coordination is also used in the construction of copulative compounds (also called co-compounds), and in the non-head constituent of a right-headed nominal compound:

(20) a. *copulative compounds*

[[prins]<sub>N</sub>[gemaal]<sub>N</sub>]<sub>N</sub> ‘prince-spouse’

[[rood]<sub>A</sub>[wit]<sub>A</sub>[blauw]<sub>A</sub>]<sub>A</sub> ‘red-white-blue (colour of the Dutch flag)’

[[hoeste]<sub>V</sub>[proesten]<sub>V</sub>]<sub>V</sub> ‘cough-sneeze, cough and sneeze’

b. *coordinated constituents in initial position*

[[maag]<sub>N</sub>[darm]<sub>N</sub>]<sub>NP</sub>[kanaal]<sub>N</sub>]<sub>N</sub> ‘stomach-intestine-canal, gastro-intestinal tract’

[[[zit]<sub>V</sub>[slaap]<sub>V</sub>]<sub>VP</sub>[kamer]<sub>N</sub>]<sub>N</sub> ‘sit-sleep room, bed-sitting room’

[[los]<sub>A</sub>[vast]<sub>A</sub>]<sub>AP</sub>[relatie]<sub>N</sub>]<sub>N</sub> ‘loose-fast relation, unstable relationship’

In the compounds in (20a) there is no semantic head. For instance, the first example denotes a person who is both a prince and a spouse. The inflection is always on the right periphery as illustrated by the phrase *de rood-wit-blauw-e vlag* ‘the red-white-blue-flag’, in which the inflectional ending *-e* is only present in the last constituent *blauwe*.

### 3.5. Affixoids

Compounds may form word families with a common first or last constituent. For instance, there is a large number of adjectival compounds ending in *vrij* ‘free’, such as *belasting-vrij* ‘tax-free’, *lood-vrij* ‘lead-free’, and *zuur-vrij* ‘acid-free’. The adjective *vrij* as head of a compound has acquired a specific recurrent and productive meaning ‘without’. Another example of this kind of productive lexicalization is the class of adjectival compounds headed by *arm* ‘poor’ with the meaning ‘having a low quantity of’, as in *vet-arm* ‘lit. fat-poor, reduced in fat’. The occurrence of such productive lexicalized meanings of words embedded in complex words is referred to with the term ‘affixoid’ or ‘semi-suffix’. This phenomenon is the historical source of derivational suffixes, which often originate from words used as the right constituent of a compound. In the same way, prefixes may originate from left constituents of compounds (Booij 2010: Chapter 3). An example of a prefixoid is the noun *hoofd* ‘head’ used with the meaning ‘main’ as in *hoofd-bezwaar* ‘main objection’. A parallel development can be observed for German, where the equivalent of Dutch *hoofd*, the word *Haupt*, is usually qualified as a prefix, as in *Haupt-sache* ‘main issue’. The German word *Haupt* is an archaic word for ‘head’, and has been replaced with the noun *Kopf*, and this is why *Haupt* is analysed as a prefix.

### 3.6. Linking elements

The two constituents of a compound may be linked by the sounds [s] or [ə]. These sounds are remnants of old case suffixes or word endings. They mainly occur in NN and NA compounds. However, they also occur after the verb in some VN compounds which confirms that synchronically they do not have the status of case suffixes anymore:

(21)	NN	dorp-s-gek	village-LINK-idiot	‘village idiot’
	NN	per-e-boom	pear-LINK-tree	‘pear tree’
	VN	scheid-s-rechter	separate-LINK-judge	‘referee’
	VN	hebb-e-dingetje	have-LINK-thing	‘gadget’
	AN	witt-e-brood	white-LINK-bread	‘white bread’
	NA	ap-e-trots	monkey-LINK-proud	‘very proud’

As pointed out in section 3.1., plural nouns can appear in the initial position of compounds as well. The plural suffix *-en* /ən/ is realized phonetically as [ə] by many speakers, and therefore language users may interpret this sound as a linking element as well. In order to avoid uncertainty as to how to spell compounds, the spelling rules of Dutch require to spell the sound [ə] between the two parts of a compound as *-en*, unless the noun has both a plural form in *-(e)n* and one in *-s* (e.g. *kade* ‘quay’ with the two plural forms *kade-s* and *kade-n*, hence *kade-muur* ‘quay-wall’, not *kaden-muur*) or the noun is singular for semantic reasons (as in *man-e-schijn* ‘moon-shine’ since this Dutch spelling rule presupposes that there is only one relevant moon).

One may wonder to what extent the occurrence of a linking element can be predicted. There appears to be no simple rule. What is certain is that the linking element [ə] can only appear after a noun if that noun selects *-en* as its plural suffix. Furthermore, analogy appears to play an important role: when coining a new compound, with a high degree of probability the same linking element is chosen as that of existing compounds with the same initial noun (Krott 2001; 2009).

#### 4. Derivation

Derivation of complex words in Dutch is possible by means of prefixation or suffixation. In addition, we find remnants of the old Indo-European Ablaut system in some lexicalized deverbal nouns. Infixation does not occur. Reduplication is marginal, and only plays a role in playful language such as children’s songs.

A well-known generalization is that suffixation tends to determine the category of the output word, whereas prefixation is category-neutral. This generalization might be captured by assuming a Right-hand Head Rule for both affixation and compounding in Dutch (Trommelen and Zonneveld 1986). This tendency reflects the historical development of head constituents of right-headed compounds into derivational suffixes. A number of verbalizing prefixes such as *be-*, *ont-* and *ver-*, however, are category-determining, as they may turn adjectives and nouns into verbs, and may also change the syntactic valency or argument selection of base verbs:

(22)	<i>input word</i>	<i>derived word</i>
a.	bos ‘wood’	be-bos ‘to afforest’
	zat ‘drunk’	be-zat ‘to drink excessively’
	kijk ‘to look’	be-kijk ‘to watch, to look at’
b.	kurk ‘cork’	ont-kurk ‘to uncork’
	eigen ‘own’	ont-eigen ‘to expropriate’
	bind ‘to bind’	ont-bind ‘to dissolve’
c.	geel ‘yellow’	ver-geel ‘cause to become yellow’
	pand ‘pawn’	ver-pand ‘to pawn’
	drink ‘to drink’	ver-drink ‘to drown’

The tendency for prefixation to be category-neutral can also be seen in the following summary of the category-changing potential of affixation in Dutch:

(23)	a.	A → N suffixation:	schoon ‘beautiful’	schoon-heid ‘beauty’
		prefixation	--	
		V → N suffixation	spreek ‘to speak’	sprek-er ‘speaker’
		prefixation	praat ‘to talk’	ge-praat ‘talking’
		N → N suffixation	moeder ‘mother’	moeder-schap ‘motherhood’
		prefixation	zin ‘sense’	on-zin ‘nonsense’
	b.	N → A suffixation	meester ‘master’	meester-lijk ‘masterly’
		prefixation	--	
		V → A suffixation	lees ‘to read’	lees-baar ‘readable’
		prefixation	---	
		A → A suffixation	blauw ‘blue’	blauw-ig ‘bluish’
		prefixation	gewoon ‘common’	on-gewoon ‘uncommon’

c.	N → V suffixation	analyse ‘analysis’	analys-eer ‘to analyze’
	prefixation	huis ‘houser’	ver-huis ‘to move house’
	A → V suffixation	kalm ‘calm’	kalm-eer ‘to calm down’
	prefixation	bleek ‘pale’	ver-bleek ‘to turn pale’
	V → V suffixation	krab ‘to scratch’	krabb-el ‘to scratch’
	prefixation	rijd ‘to ride’	be-rijd ‘to ride on’

As this summary shows, there are a few gaps in the possibilities of category change with prefixes, which reflects the fact that prefixes tend to be category-neutral. The following table lists the category-neutral native prefixes:

<i>Prefix</i>	<i>meaning</i>	<i>base category</i>	<i>example</i>
aarts-	intense	A	aarts-lui ‘very lazy’
		N	aarts-schurk ‘enormous crook’
	hierarchy	N	aarts-bisschop ‘arch-bishop’
her-	re-	V	her-schrijf ‘to rewrite’
niet-	non-	N	niet-roker ‘non-smoker’
		A	niet-Christelijk ‘non-Christian’
oer-	intense	A	oer-gezond ‘very healthy’
	original	N	oer-mens ‘primitive man’
on-	negative	A	on-gezond ‘unhealthy’
		N	on-zin ‘nonsense’
opper-	‘upper’	N	opper-hoofd ‘chief’
oud-	‘ex-’	N	oud-student ‘former student’

Table 134.1: Category-neutral native prefixes

## 4.1. Nominal derivation

The only nominal prefix is the deverbal suffix *ge-*. In addition, there is a circumfix *ge-te* that creates collective nouns:

- (24) a.    zeur ‘to nag’                    ge-zeur ‘nagging’  
           kots ‘to puke’                   ge-kots ‘continuous / repeated puking’
- b.    berg ‘mountain’               ge-berg-te ‘mountain chain’

steen ‘stone, rock’      ge-steen-te ‘rocks’

As mentioned above, there are no adjective-creating prefixes in Dutch.

Dutch suffixes are category-determining. This is also the case for the very productive diminutive suffix *-tje* (and its allomorphs *-je*, *-kje*, *-pje*, and *-etje*). Although it is mainly affixed to nouns, it can also be attached to words of other lexical classes, as illustrated in Table 2. The output word is always a neuter noun that selects the plural suffix *-s*:

<i>category</i>	<i>base</i>	<i>diminutive</i>
N	vrouw ‘woman’	vrouw-tje ‘small woman, sweetheart’
A	lief ‘sweet’	lief-je ‘sweetheart’
V	dut ‘to nap’	dut-je ‘nap’
Num	tien ‘ten’	tien-tje ‘10 guilder note’
Adv	uit ‘out’	uit-je ‘outing’
NP	twalf uur ‘12 o'clock’	twalfuur-tje ‘wrapped lunch’
PP	onder ons ‘between us’	onderons-je ‘private chat’
Pronoun	dit en dat ‘this and that’	ditjes en datjes ‘odds and ends’

Table 134.2: Diminutives

Deverbal nominalizing suffixes are used for the creation of person-denoting nouns, agent, instrument and object nouns, and for action nouns. A survey of types of person-denoting nouns with native suffixes is given in Table 3.

<i>suffix</i>	<i>base category</i>	<i>base</i>	<i>example</i>
-aar	V	wandel ‘to walk’	wandel-aar ‘walker’
	N	zonde ‘sin’	zond-aar ‘sinner’
	A	eigen ‘own’	eigen-aar ‘owner’
-aard	A	wreed ‘cruel’	wreed-aard ‘cruel person’
	N	Spanje ‘Spain’	Spanj-aard ‘Spaniard’
-der	V	bestuur ‘to govern’	bestuur-der ‘governor’
	N	Langweer ‘id.’	Langweer-der ‘inhabitant of L.’
-enaar	N	schuld ‘debt’	schuld-enaar ‘debtor’
		Utrecht ‘id.’	Utrecht-enaar ‘inhabitant of U.’
-er	V	werk ‘to work’	werk-er ‘worker’

	N	schip ‘ship’	schipp-er ‘skipper’
	Num	tien ‘ten’	tien-er ‘teenager’
	S	doe het zelf ‘do it yourself’	doe-het-zelv-er ‘do-it-yourself-er’
-erd	A	vies ‘dirty’	viez-erd ‘dirty person’
-erik	A	vies ‘dirty’	viez-erik ‘dirty person’
-ier	N	winkel ‘shop’	winkel-ier ‘shopkeeper’
-(e)ling	V	zuig ‘to suck’	zuig-eling ‘infant’
	N	stad ‘city’	sted-eling ‘city dweller’
	A	stom ‘stupid’	stomm-eling ‘idiot’
	Num	twee ‘two’	twee-ling ‘twins’

Table 134.3: Native suffixes for person-denoting nouns

Agent and instrument nouns are derived by means of the suffix *-er* and its allomorphs, the suffixes *-der* and *-aar*. Such deverbal nouns in *-er* express a variety of meanings. These suffixes attach to both nouns and verbs:

(25) a. *with base verbs*

fiets ‘to cycle’	fiets-er ‘cyclist’
begin ‘to begin’	beginn-er ‘beginner, freshman’
breek ‘to break’	brek-er ‘breaker, wave that breaks’
bijsluit ‘enclose’	bijsluit-er ‘enclosure’
gil ‘to scream’	gill-er ‘event of screaming’

b. *with base nouns*

Amsterdam ‘Amsterdam’	Amsterdamm-er ‘inhabitant of Amsterdam’
wetenschap ‘science’	wetenschapp-er ‘scientist’

The suffix *-sel* is used to create subject, object, and instrument names:

(26) aanslib ‘to deposit’	aanslib-sel ‘deposit’
aanhang ‘to append’	aanhang-sel ‘appendix’
schep ‘to create’	scheps-el ‘creature’
stijf ‘to starch’	stijf-sel ‘starch’

Nomina actionis are formed by a variety of suffixes, some of which are unproductive (*-nis* and its allomorphs *-enis* and *-tenis*, *-st*, and *-t*). Note that when *-atie* is used, it replaces the suffix *-eer*.

<i>suffix</i>	<i>base word</i>	<i>derived word</i>
-atie	organis-eer 'to organize'	organis-atie 'organization'
-erij	vlieg 'to fly'	vlieg-erij 'flying business'
	heks 'witch'	heks-erij 'witchcraft'
-ing	meet 'to measure'	met-ing 'measurement'
	bewapen 'to arm'	bewapen-ing 'armament'
-nis	stoor 'to disturb'	stoor-nis 'disturbance'
-enis	verrijst 'to rise'	verrijz-enis 'resurrection'
-tenis	gebeur 'to happen'	gebeur-tenis 'happening'
-st	kom 'to come'	kom-st 'coming'
-t	teel 'to grow'	teel-t 'growing'

Table 134.4: Action nouns

Dutch has quite a number of suffixes for the creation of nouns denoting female persons:

<i>suffix</i>	<i>condition</i>	<i>male noun</i>	<i>female noun</i>
-e	----	fotograaf 'photographer'	fotograf-e
-es	---	voogd 'guardian'	voogd-es
	base in -aar	zond-aar 'sinner'	zondar-es
	base in -er	zang-er 'singer'	zanger-es
-esse	base in -aris	secret-aris 'secretary'	secretar-esse
-euse	base in -eur	mass-eur 'massagist'	mass-euse
-ica	base in -icus	historic-us 'historian'	historic-a
-ière	base in -ier	cabaret-ier 'comedian'	cabaret-ière
-in	----	leeuw 'lion'	leew-in
-ix	base in -or	rect-or 'rector'	rect-rix
-rice	base in -eur	ambassad-eur 'ambassador'	ambassad-rice
-ster	base in -aar	wandel-aar 'walker'	wandelaar-ster
	base in -ier	winkel-ier 'shopkeeper'	winkelier-ster
	base in -er	VVD-er 'member of VVD'	VVD-ster

Table 134.5: Female personal nouns

The choice between these competing suffixes is governed by the morphological shape of the base noun. The suffix *-e* is considered to be the default choice in Van Marle (1985). Unlike what is the case for German, where *-in* is a very productive suffix for female personal nouns, in Dutch novel female noun are seldom coined.

Dutch features a number of suffixes used for the creation of abstract nouns from nouns and adjectives: *-dom*, *-heid*, *-te*, *-schap*:

(27)	christen <sub>A</sub> ‘christian’	christen-dom ‘christianity’
	schoon <sub>A</sub> ‘beautiful’	schoon-heid ‘beauty’
	leeg <sub>A</sub> ‘empty’	leeg-te ‘emptiness’
	dronken <sub>A</sub> ‘drunk’	dronken-schap ‘drunkenness’
	vriend <sub>N</sub> ‘friend’	vriend-schap ‘friendship’

The deadjectival suffix *-te* is attached to simplex adjectives only, whereas deadjectival *-heid* can be attached to complex adjectives as well. The suffix *-dom* is used to form nouns that denote a group of people, and can be affixed to plural nouns, as in *leerling-en-dom* ‘body of pupils’.

## 4.2. Adjectival derivation

Prefixed adjectives can be derived by means of one of the category-neutral prefixes listed in Table 1. The derivation of adjectives by means of suffixation is far more elaborated. Qualitative, property denoting adjectives are created by means of the suffixes listed in Table 6.

<i>suffix</i>	<i>stem</i>		<i>derived adjective</i>
-achtig	N	rots ‘rock’	rots-achtig ‘rocky’
	V	weiger ‘to refuse’	weiger-achtig ‘refusing persistently’
	A	groen ‘green’	groen-achtig ‘greenish’
-baar	V	draag ‘to carry’	draag-baar ‘portable’
	N	vrucht ‘fruit’	vrucht-baar ‘fruitful’
-elijk	N	god ‘god’	godd-elijk ‘divine’
	V	erf ‘to inherit’	erf-elijk ‘hereditary’
	A	bang ‘afraid’	bang-elijk ‘timid’
-erig	N	hout ‘wood’	hout-erig ‘stiff’

	V	bijt 'to bite'	bijt-erig 'biting'
	A	groen 'green'	groen-erig 'sort of greenish'
-ig	N	bloed 'blood'	bloed-ig 'bloody'
	V	nalaat 'to neglect'	nalat-ig 'negligent'
	A	groen 'green'	groen-ig 'greenish'
-loos	N	naam 'name'	naam-loos 'nameless'
-zaam	N	deugd 'virtue'	deugd-zzaam 'virtuous'
	V	werk 'to work'	werk-zzaam 'active'
	A	lang 'long'	lang-zzaam 'slow'

Table 134.6: Native adjectival suffixes for qualitative adjectives

A second class of complex adjectives is formed by the set of relational adjectives. For instance, the adjective *atomair* in *atomaire fysica* 'nuclear physics' does not denote an inherent quality of *fysica* 'physics' but denotes its relation to the world of atoms. In this relational use, adjectives cannot be modified, and in most cases they can only be used attributively. The following table lists the suffixes, both native and non-natives ones, that are being used for the formation of relational adjectives.

<i>suffix</i>	<i>base</i>	<i>noun phrase with relational adjective</i>
-aal	muziek 'music'	muziek-aal talent 'musical talent'
-air	atom 'atom'	atom-aire fysica 'nuclear physics'
-eel	structuur 'structure'	structur-ele analyse 'structural analysis'
-en	zilver 'silver'	zilver-en ring 'silver ring'
-er	Edam 'id.'	Edamm-er kaas 'Edam cheese'
-ief	educatie 'education'	educat-ief verlof 'educational sabbatical'
-iek	periode 'period'	period-ieke controle 'periodical check'
-ig	toekomst 'future'	toekomst-ige man 'to-be husband or future husband'
-isch	filosofie 'philosophy'	filosof-ische discussie 'philosophical debate'
-lijk	vader 'father'	vader-lijk gezag 'paternal authority'
-ling	mond 'mouth'	monde-ling examen 'oral examination'
-oir	emancipatie 'emancipation'	emancipat-oire activiteiten 'emancipatory activities'
-s	buitenland 'abroad'	buitenland-s beleid 'foreign policy'

Table 134.7: Suffixes for relational adjectives

Relational adjectives can be interpreted as qualitative adjectives through type coercion. For instance, when the adjective *muzikaal* ‘musical’ is modified, as in *een heel muzikale vader* ‘a very musical father’, we are forced to interpret *muzikaal* as denoting a property of the head noun.

### 4.3. Verbal derivation

#### 4.3.1. Prefixation

There are three productive category-changing prefixes that create verbs: *be-*, *ver-*, and *ont-*. In addition, there are a few verbs with the unproductive prefixes *ge-* and *-er*:

<i>prefix</i>	<i>class of base</i>	<i>base word</i>	<i>prefixed verb</i>
be-	N	dijk ‘dike’	be-dijk ‘to provide with a dike’
	A	zat ‘drunken’	be-zat ‘to drink excessively’
	V	kijk ‘to look’	be-kijk ‘to watch’
ver-	N	film ‘film’	ver-film ‘to film’
	A	bleek ‘pale’	ver-bleek ‘to bleach’
	V	koop ‘to buy’	ver-koop ‘to sell’
ont-	N	kurk ‘cork’	ont-kurk ‘to uncork’
	A	eigen ‘own’	ont-eigen ‘to expropriate’
	V	bind ‘to bind’	ont-bind ‘to dissolve’
ge-	V	leid ‘to lead’	ge-leid ‘to guide’
er-	V	ken ‘to know’	er-ken ‘to recognize’

Table 134.8: Verbal category-changing prefixes

A second class of verbalizing prefixes is formed by prefixes that correspond to Dutch words. For instance, the morpheme *aan* ‘at’ is both a prefix and a preposition. Yet, we consider these morphemes prefixes, as they have special meanings when used in complex words, and do not carry main stress (if they were words, they would form compounds and hence carry the main stress of the complex word).

<i>prefix</i>	<i>base word</i>	<i>prefixed verb</i>
---------------	------------------	----------------------

aan-	bid ‘to pray’	aan-bid ‘to worship’
achter-	haal ‘to fetch’	achter-haal ‘to find out’
door-	snijd ‘to cut’	door-snijdt ‘to cut through’
	spek ‘pork’	door-spek ‘to interlard with’
mis-	vorm ‘to form’	mis-vorm ‘to deform’
om-	sluit ‘to close’	om-sluit ‘to enclose’
	cirkel ‘circle’	om-cirkel ‘to encircle’
onder-	breek ‘to break’	onder-breek ‘to interrupt’
	titel ‘title’	onder-titel ‘to subtitle’
over-	win ‘to win’	over-win ‘to defeat’
	brug ‘bridge’	over-brug ‘to bridge’
vol-	maak ‘to make’	vol-maak ‘to bring to perfection’
voor-	kom ‘to come’	voor-kom ‘to prevent’
weer-	schijn ‘to shine’	weer-schijn ‘to reflect’

Table 134.9: Verbal prefixes that correspond to a word

These prefixes are thus a nice illustration of the process of grammaticalization, in which lexical words become grammatical morphemes, since these prefixes derive from words.

### 4.3.2. Suffixation

The creation of complex verbs in Dutch is mainly a matter of prefixation. The only two verbalizing suffixes are *-eer* and *-iseer*:

- (28) a. blond ‘blond’            blond-*eer* ‘to bleach’  
alarm ‘alarm’            alarm-*eer* ‘to alarm’
- b. modern ‘modern’            modern-*iseer* ‘to modernize’  
standaard ‘standard’            standaard-*iseer* ‘to standardize’

The suffix *-iseer* is a combination of the morphemes *-is-* and *-eer*, as can be concluded from the way in which deverbal nouns are formed: the suffix *-eer* is replaced with the suffix *-atie*, and this also applies to verbs ending in *-iseer*: *modern-is-~~eer~~* – *modern-is-atie* ‘modernization’ (only the part *-eer* is replaced).

#### 4.4. Adverbial derivation

Dutch adjectives can be used as adverbs without any overt morphological marking for adverbial status. Yet, there are a number of suffixes that create adverbs of various types, as illustrated in (29):

(29)	<i>base word</i>	<i>complex adjective</i>
	hoog ‘high’	hog-elijk ‘highly’
	blind ‘blind’	blind-elings ‘blindly’
	menselijk ‘human’	menselijk-erwijs ‘humanly’
	stil ‘quiet’	still-etjes ‘quietly’
	groep ‘group’	groeps-gewijs ‘in groups’
	fatsoen ‘decency’	fatsoens-halve ‘for decency’s sake’
	normal ‘normal’	normal-iter ‘normally’
	ander ‘other’	ander-s ‘differently’
	huis ‘house’	huis-waarts ‘to home’
	gewoon ‘common’	gewoon-weg ‘simply’

The productivity of these suffixes varies. The suffixes *-iter* and *-s* are unproductive, and some of these suffixes attach to a small set of words only. The suffix *-erwijs* has developed as a suffix for the formation of evaluative adverbs, as in *ongelukkig-erwijs* ‘sadly enough’ derived from the adjective *ongelukkig* ‘unhappy’ (Diepeveen and Van de Velde 2010).

#### 5. Conversion

Conversion is the process by which words are derived from other words without any overt morphological marking. In Dutch, we find various pairs of related words with the same phonological form, but different lexical class and meaning. The main conversion process in Dutch is the derivation of verbs from nouns. This is a very productive process, although it is not without restrictions. For instance, the names for all kinds of sports can be used as verbs in which that activity is involved: *voetball-en* ‘to play football’, *tenniss-en* ‘to play tennis’. Yet, even N → V conversion is not completely unrestricted. For instance, it would be odd to use nouns that denote food to denote the eating of that food, and hence a verb like *brod-en* ‘to bread’ is odd.

Here is a survey of the various types, with the direction of conversion indicated. The topic of how to determine the direction of conversion in Dutch is dealt with in (Don 1993).

(30)	N to V	fiets 'bike'	fiets 'to cycle'
	V to N	behoud 'to preserve'	behoud 'preservation'
	A to N	gek 'mad'	gek 'mad person'
	A to V	wit 'white'	wit 'to whiten'

The main criterion for determining the direction of conversion is semantic in nature: the meaning of the word on the right is a compositional function of the word on the left. In the case of *behoud* 'preservation' in (30) there is also a formal indication, as *be-* is typically a verbalizing prefix: hence the verb is coined first, and the noun derived from the complex verb.

## 6. Borrowed word formation and neo-classical word formation

Dutch has borrowed many complex words from Greek and Latin, often with French as an intermediate language, and also from French itself. More recently, many English complex words have been borrowed into Dutch. Once a sufficient number of a certain type of complex word has been borrowed, the language user can discover a pattern, and form new words of the same type. For instance, once the user of Dutch has come across a number of de-adjectival nouns ending in *-iteit*, the Dutch version of French *-ité*, (s)he can create new complex nouns of this type that need not have an equivalent in French. The rise of new word formation schemas with non-native affixes is also strengthened by the existence of internationalisms, complex words that are found in most European languages in one form or another. Table 10 provides a survey of non-native suffixes in Dutch:

<i>Suffix</i>	<i>Base</i>	<i>Base word</i>	<i>Output</i>	<i>Derived word</i>
-aal	N	synode 'synod'	A	synod-aal 'synodical'
-aan	N	parochie 'parish'	N	parochi-aan 'parishioner'
-aat	N	doctor 'doctor'	N	doctor-aat 'doctorate'
-air	N	hypotheek 'mortgage'	A	hypothek-air 'mortgage'
-ant	V	predik 'to preach'	N	predik-ant 'clergyman'
-aris	N	bibliotheek 'library'	N	bibliothec-aris 'librarian'
-ast	N	gymnasium 'grammar school'	N	gymnasi-ast 'grammar school pupil'

-atie	V	organiseer ‘to organize’	N	organis-atie ‘organization’
-eel	N	fundament ‘fundament’	A	fundament-eel ‘fundamental’
-eer	N	parfum ‘perfume’	V	parfum-eer ‘to perfume’
-ees	N	Taiwan ‘Taiwan’	N	Taiwan-ees ‘inhabitant of Taiwan’
-ein	N	republiek ‘republic’	N	republiek-ein ‘republican’
-erie	N	parfum ‘perfume’	N	parfum-erie ‘perfume shop’
-esse	N	secretaris ‘secretary’	N	secretar-esse ‘secretary, fem.’
-ette	N	opera ‘opera’	N	oper-ette ‘operetta’
-esk	N	ballade ‘ballad’	A	ballad-esk ‘ballad-like’
-eur	N	ambassade ‘embassy’	N	ambassad-eur ‘ambassador’
-eus	N	rancune ‘rancour’	A	rancun-eus ‘rancorous’
-iaan	N	presbyter ‘prebyter’	N	presbyter-iaan ‘presbyterian’
-ide	N	broom ‘bromine’	N	brom-ide ‘bromide’
-ier	N	juweel ‘jewel’	N	juwel-ier ‘jeweler’
-iet	N	metropool ‘metropolis’	N	metropol-iet ‘metropolitan’
-ieus	N	mode ‘fashion’	A	mod-ieus ‘fashionable’
-ine	A	blond ‘blond’	N	blond-ine ‘blonde’
-isch	N	algebra ‘algebra’	A	algebra-isch ‘algebraic’
-iseer	A	banaal ‘banal’	V	banal-iseer ‘to banalize’
-isme	A	absurd ‘absurd’	N	absurd-isme ‘absurdism’
-ist	N	propaganda ‘propaganda’	N	propagand-ist ‘propagandist’
-oir	N	emancipatie ‘emancipation’	A	emancipat-oir ‘emancipatory’
	N	urine ‘urine’	N	urin-oir ‘urinal’
-oot	N	psyche ‘psyche’	N	psych-oot ‘psychotic’

Table 134.10: Non-native suffixes

It is obvious that most language users do not know the historical origin of these suffixes. Yet, the distinction between native and non-native affixes plays a synchronic role because non-native suffixes only attach to non-native base words, as illustrated in (31) for the competing suffixes *-iteit* (non-native) and *-heid* (native):

- (31) blind ‘blind’                      \*blind-iteit / blind-heid ‘blindness’  
stabel ‘stable’                      stabil-iteit / stabel-heid ‘stability’

Exceptions to this generalizations are words like *flauw-iteit* ‘silli-ness’ ← *flauw* ‘silly’ and *hondo-loog* ‘dog expert’ ← *hond* ‘dog’ that have a native base; the latter word has an obvious intentional character.

Non-native prefixes differ from non-native suffixes in that many of them allow non-native bases. The non-native negative Latin prefix *in-* behaves just like non-native suffixes:

- (32) *gewoon* ‘common’      *on-gewoon* / *\*in-gewoon* ‘un-common’  
*stabiel* ‘stable’      *on-stabiel* / *in-stabiel* ‘un-stable’

However, most borrowed prefixes do occur with native base words, as illustrated in Table 11.

<i>prefix</i>	<i>example</i>
anti- ‘anti-’	anti-godsdienstig ‘antireligious’
co- ‘co-’	co-ouderschap ‘shared parenship after divorce’
contra- ‘contra-’	contra-gewicht ‘counterweight’
ex- ‘former-’	ex-man ‘former husband’
hyper- ‘hyper-’	hyper-gevoelig ‘hypersensitive’
infra- ‘infra-’	infra-rood ‘infrared’
loco- ‘vice-’	loco-burgemeester ‘vicemayor’
meta- ‘meta-’	meta-taal ‘metalanguage’
neo- ‘neo-’	neo-hervormd ‘neoreformed’
pro- ‘pro-’	pro-apartheid ‘pro-apartheid’
pseudo- ‘pseudo-’	pseudo-wetenschap ‘pseudoscience’
semi- ‘semi-’	semi-overheid ‘semigovernment’
sub- ‘sub-’	sub-groep ‘subgroup’
super- ‘super-’	super-gaaf ‘very nice’
turbo- ‘super-’	turbo-koe ‘very productive cow’
ultra- ‘ultra-’	ultra-zacht ‘very soft’
vice- ‘vice-’	vice-voorzitter ‘vice-chairman’

Table 134.11: Borrowed prefixes with native bases

Prefixes may be borrowed indirectly. An example is the use of German *über-* as a prefix with the meaning ‘to an extreme extent, a prototypical instantiation of’ in present-day English, as in *über-nerd*. This prefix now also combines with Dutch native nouns such as *klootzak* ‘jackass’

and *nicht* ‘homosexual’: *über-klootzak*, *über-nicht*. This fashionable use of *über* is not borrowed from German, but from English.

Language contact may also lead to another form of morphological influence: grammatical replication, in which a construction of one language is replicated by another. A morphological example is that both English and Dutch feature adjectival compounds of the type NA, in which A has the form of a past participle, as in *computer-controlled* and *home-made*. This type of compound is an old but infrequent type in Dutch, but nowadays used in the technical domain to coin technical words. Its productivity has been boosted in present-day Dutch by the parallel and very frequent use of such NA compounds in English (Hüning and Schlücker 2010).

## 7. Blending, clipping and word-creation

In addition to regular word formation processes, Dutch features various forms of what may be referred to as word manufacturing: the creation of new words in such a way that there is no direct compositional interpretation of the new word on the basis of the meaning of its formal constituents.

In blending, two words are fused into one. This process is used frequently in English, and Dutch has taken over this process, sometimes inspired by an English equivalent. For instance, the blending of *sex* ‘id.’ and *exploitatie* ‘exploitation’ into *sexploitatie* has a counterpart in English *sexploitation*. Another example of blending is *giromaat*, from *giro* ‘bank giro’ and *automaat* ‘machine’. In order to grasp the meaning of *giromaat*, we need the meaning of *automaat*, which is only partially present in the formal make up of *giromaat*.

What is more productive in Dutch is the use of splinters, morphemes such as English *-burger* and *-gate* from *hamburger* and *Watergate* respectively. The use of these two borrowed morphemes has become quite productive in Dutch (Hüning 2000; Meesters 2004), and combines with Dutch words, as in *kaas-burger* ‘cheeseburger’ and *Mabel-gate* ‘political scandal around princess Mabel’. Examples of productive splinters as first parts of words are *bio-*, *eco-*, and *tele-*, from *biologisch* ‘biological’, *ecologisch* ‘ecological’ and *telefoon* ‘telephone’ or *televisie* ‘television’ respectively. These morphemes are often referred to as confixes, bound morphemes with a lexical meaning. Another example is *flex-* derived from *flexible* ‘flexible’, which can be used as an initial element in words like *flex-werker* ‘flexible worker’. Splinters are also used in combination with an ending *-o* to make nouns that denote certain types of persons, as in *lesb-o* ‘lesbian person’ (from *lesb-isch* ‘lesbian’) and *Brab-o* ‘inhabitant of Brabant’ (from *Brabant*).

Clipping is used to abbreviate long words, as in:

- (33) aso            a-sociaal ‘a-social’  
doka            donkere kamer ‘dark room’  
horeca           hotel-restaurant-café ‘hotel-restaurant-café’  
sofinummer    sociaal-financieel nummer ‘social security and tax number’  
stufi            studie-financiering ‘study-grant’

Word creation takes place by means of acronyms. We distinguish two types, letter words, in which the first letters of a complex expression form a new word, and syllable words, where the first letters of each of the constituents is pronounced as a syllable:

- |      |   |                      |
|------|---|----------------------|
| (34) | <i>letter words:</i>  | <i>pronunciation</i> |
|      | Havo = Hoger Algemeen Vormend Onderwijs<br>‘Higher General Secondary Education’ | [ha:vo:]             |
|      | Hema = Hollandse Eenheidsprijzen Maatschappij<br>‘Dutch Uniform-prices Company’ | [he:ma:]             |
|      | <i>syllable words:</i>  |                      |
|      | WAO = Wet op de Arbeidsongeschiktheid<br>‘Law on the Labour-unfitness’          | [we:a:o:]            |
|      | bh = bustehouder ‘bosom-holder, bra’  | [be:ha:]             |

The use of these various processes of word manufacturing has been boosted by the need of modern society for names for all sorts of new entities, for instance in the world of government regulation and that of electronic devices, and is strongly influenced by the use of the same processes in other European languages, in particular English.

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