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A diachronic account of Dutch *-nis, -heid, -dom* and *-schap*

Rivalry within the paradigm of abstract suffixes*

Abstract – In this case study I will investigate the history of the Dutch suffixes *-nis* ('-ness'), *-heid* ('-hood'), *-dom* ('-dom') and *-schap* ('-ship') in abstract nouns such as *hechtenis* ('custody'), *wijsheid* ('wisdom'), *rijkdom* ('richness') and *moeder-schap* ('motherhood'). Even though they appear to have interchangeable schematic meanings at first sight, I will argue that over time they have established distinct semantic frames, different morphological patterns and varying degrees of productivity. By means of a corpus-based investigation I will examine the semantic and morphophonological changes in their development from 12ᵗʰ century to present-day Dutch. My reconstruction shows that, despite their different sources, all the suffixes under investigation undergo parallel processes of semantic generalisation and reanalysis. This study differs from others such as Trips (2009) on English *-hood*, *-dom* and *-ship* in that it includes the hitherto underresearched suffix -nis, which, unlike *-heid*, *-dom* and *-schap*, did not originate in autonomous nouns. Yet, when all suffixes meet in the paradigm of abstract suffixation, they display similar characteristics and engage in interaction and rivalry, leading to different diachronic paths and distinct present-day Dutch functions.

1   Introduction

Abstract nouns such as *beauty*, *growth* or *love* are generally defined as describing 'typically non-observable and non-measurable' entities (Quirk et al. 1985: 247). They do not refer to a concrete perceptible or accessible entity in the external world, but to generic concepts conceived in the mind. Most abstract nouns are nominalizations containing at least one free morpheme which refers to a certain quality (expressed by an adjective, e.g. *truth* from *true*), a process (expressed by a verb, e.g. *growth* from *grow*) or an instantiation of a quality or process (expressed by a noun, e.g. *wonderness* from *wonder*). The element encoding the abstract meaning can be a zero-morpheme (e.g. *love*), but is very often a phonetically represented sign, i.e. a nominalising affix that is, at least in Germanic languages, mostly added at the end of the word (following the 'right hand head rule', Trommelen & Zonneveld 1986).

From synchronic studies on word formation we know that the Dutch language

has many suffixes at its disposal to form abstract nouns. De Vooys (1976: 214) mentions *-ing*, *-er*, *-de/-te*, pays special attention to *-(e)nis*, *-dom*, *-schap*, *-heid* and also discusses *-wezen* and *-rijk*. De Vries (s.d.: 87) adds *-igheid*, *-(e)ment*, *-(i) teit*, *-(er)ij*, *-atie*, *-laag* and obsolete *-i/-e* to this list, De Haas & Trommelen (1993) *-ie*, *-asme*, *-ade*, *-uur* and *-se*, and *Algemene Nederlandse Spraakkunst* (1997) includes the suffixes *-isme*, *-age*, *-atie* and *-st*. Vercoullie (1922: 112-115) makes a fundamental distinction between *-m*, *-sem*, *-sel*, *-nis*, *-e*, *-de*, *-te*, *-st*, *-ing* and *-lijk* and what he calls the 'autonomous suffixes' *-dom*, *-heid*, *-schap*.

As is the case with free morphemes, the present variety of abstract suffixes and their current distribution is the result of diachronic language processes. In this case study I will trace the history of the in origin Germanic abstract suffixes *-heid*, *-dom*, *-schap* and *-nis*, which all exhibit strong similarities in their semantic and compositional make-up, as exemplified by the co-existence of English *wisdom*, Dutch *wijsheid* and German *Weisheit* ('wis-hood'), En. *darkness* and *goodness* corresponding to Dut. *duisternis* ('dusk-ness') and *goedheid* ('good-hood'), En. *bishophood* versus Dut. *bisschopdom* ('bishop-dom'), En. *priesthood* versus Ger. *Priesterschaft* ('priest-ship'), En. *drunkenness* versus Dut. *dronkenschap* ('drunken-ship') and Ger. *Mutterschaft* ('mother-ship') versus En. *motherhood*. This article will investigate how the four main abstract suffixes in Dutch, three originating in nouns and the fourth one in an earlier affix, arrived at the present stage of apparent semantic and compositional similarity. I will reconstruct how the suffixes, once they had entered the paradigm of abstract suffixation, engaged in rivalry with each other. I will zoom in on crucial moments in their development when they took over semantic functions and morphological patterns from each other via processes of analogy and reinterpretation, resulting in semantic and morphological overlap in their functional domains. This fuelled the competition between the suffixes and lead to shifts in productivity, with one suffix becoming more productive than the other, or even in suffix substitution in already existing derivations.

This diachronic study will be structured as follows. In section 2 I will briefly introduce the suffixes *-nis*, *-heid*, *-schap* and *-dom* and their origins and show that their development involved processes of semantic bleaching, generalization and reanalysis. In section 3 I will look at the specific trajectories of the suffixes throughout the stages of the Dutch language with again focus on reanalysis or reinterpretation and subsequent extension of patterns. In the concluding section 4 I will summarize the main lines of this development, which I will interpret as a case of rivalry within the paradigm of abstract nominalization suffixes, yielding different diachronic paths and distinct present-day functions.

2   Origins and developments of the abstract suffixes

Accounts of the evolution of *-dom*, *-heid* en *-schap* have revealed that these suffixes **originated in autonomous nouns** (e.g. Schönfeld 1970 and Trips 2009). A particularly clear example is the Indo-European noun **(s)kai* ('image, sign, shape'), which evolved into the suffix *-heid*. As a first step in the process of morphologisation, the noun assumed a more abstract meaning, such as 'rank', 'position', 'dignity', 'standing' or 'honour, as in Old Saxon *hēd*, Old High German *heit*, Old

Norwegian *heiðr* and Old English *hād(or)*. Examples of the autonomous noun use conveying the meaning 'manner' are found in Gothic *haidus* and in Old High German *heidim*. Similarly, the suffix *-schap* stems from the autonomous noun **skap* ('creation, creature', see Schönfeld 1970: 202 and Trips 2009: 121), which in its turn evolved via zero-derivation or implicit transposition from the Indo-European verb **skapi-z*. As observed by Schönfeld (1970: 202) and De Vries & De Tollenaere (2004), **skap* led to nouns *ga-skafts* in Gothic, *scaf* in Old High German, Old Norwegian *skap* ('shape, kind'), Old English *gesceap* ('appearance') and Old Saxon *giskaft* ('fate'). The source noun from which the suffix *-dom* was derived, *dōm*, was as such already a derivation with an abstract suffix, namely Indo-European *-m/-moz* (OED 1989) or infix *-m-*, *-mo(n)-*, *-men-* of *-mi-* (Schönfeld 1970: 203). Through addition of this /m/-suffix to the verbal root *dō-* ('to place or to put', Wilmanns 1930: 392), a new noun *dō-m* ('situation') came about, which finally resulted in what Schönfeld characterizes as the exclusively Westgermanic[1] suffix *-dom* (1970: 201).

So far, the etymology of the suffixes conforms to the widespread **hypothesis** (Booij & van Santen 1998: 273) that almost all bound morphemes arise out of free words, i.e. '[…] the main diachronic source of affixes is in grammaticalized and agglutinated previous full words' (Haspelmath 1994: 2). A couple of adjectival morphemes also originated in this way, for instance Dutch *-lijk* and English *-ly* from the Gothic noun *leik* ('body') or Dutch *-baar* from the verb *baren* (cf. Got. *bairan*, 'carry'). Several linguists have considered their emergence as a case of either grammaticalization (Lehmann 2002: 14) or lexicalization (Hopper & Traugott 2003: 58), depending on which status, lexical or grammatical, they assign to the category of derivational affixes. Leaving aside the question of whether grammaticalization or lexicalization is at stake, it can be noted that these two diachronic developments have at least one process in common, namely desemantization or semantic attrition (Lehmann 1985: 306) of one of the components. The purely lexical, concrete noun, for instance IE **skap* ('shape') or IE **(s)kai* ('image'), first acquired a more abstract, metaphorically related (Traugott & König 1991: 190) meaning, namely 'kind/sort' or 'situation/manner' as in ON *skap* or Got *haidus*. As a consequence, **haiduz*, **skap* and *dōm* could occur in contexts in which they were not found before, i.e. they generalized (Bybee 2003: 152). Pivotal in the further development from noun to affix was the use of these **semantically bleached nouns in compounds**. The presumed development from noun to suffix can thus be represented as in Figure 1.

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noun → pre-compounded syntagm → compound **suffix**

Figure 1   Presumed cline from noun to suffix (taken from Lightfoot 2005:596)

However, as observed by Lightfoot (2005: 594), information about the intermediate stage between isolated noun and abstract compound, the 'pre-compounded

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1   Attestations in East Germanic or North Germanic languages are lacking, although De Vries & De Tollenaere (2004: 125) point at the Old Norwegian *-dōmr*, which was probably borrowed from Old English or Middle Dutch.

syntagm', is often lacking: 'evidence for the presumed pre-compounded phases is rare', regarding, for instance, 'the time when *magad* and *heit* [from Old High German *magadheit*, 'virginity'] would have appeared in written form as two independent nouns syntactically poised to fuse'. Moreover, such rare data often illustrate incidental cases of 'layering' or 'renewal' (Hopper & Traugott 2003: 9 and Fischer 1997: 156) rather than the transition from simple word to compound. In example (1), for instance, it is clear that *schap* acquired a more abstract meaning in *ridderscape*, but the co-occurrence of the autonomous word and the suffix is probably due to divergent language processes in which one path led to the emergence of the suffix and another to the Middle Dutch noun *schape* ('creature', 'kind'). The same holds for the suffix *-dom*, which existed alongside etymologically related Old Dut. *duom*, Middle Dut. *do(e)m* ('judgement').

(1) *Hi*   *was*   *vol*   *van*   **ridder-scape,**   *scone*
     he   was   full   of   **knight**-NOUN-**ship**-SUFFIX,   beautiful
     ende   *van*   *edelre*   **scape.**
     and   of   noble   **kind**-NOUN.
     'He was full of knightship, beautiful and of noble kind'.
     (Lanc. II, 5177, taken from the MNW)

Together with a reduction in semantic weight, the suffixes lost their syntactic freedom, first by being integrated in a compound and later by turning into a derivational suffix. A sequence of words, e.g. *uuizent* and *heit* (cf. 'wis' and 'dom'), fused when the syntagmatic combination became entrenched in the mental lexicon as one 're-packaged […] single processing unit' (Bybee 2003: 153). The original semantics of the second part of the compound were then likely to disappear (e.g. isolated **skap*, 'creation') and the abstract meaning (e.g. *-scap/-scip*, 'state') became permanently coded in the emerging suffix. The morphological boundaries were disregarded and the combination of two words was reinterpreted as one word, which is, in a sense, a case of rebracketing, as 'fusion involves changes in the assignment of boundaries' (Hopper & Traugott 2003: 41).

The abstract suffix *-nis(se)* seems to be an exception to the noun-to-affix cline, since a possible nominal root for this morpheme has not been found so far. Instead it originated in the Indo-European infix **-tu-* or Germanic **-þu-* or **-du-*, which formed abstract nouns from verbs ending in a vowel and a dental plosive (Kluge 1926: §137). When attached to Gothic verbs in *-at* or *-atjan* (with causative suffix *-jan*), reanalysis and following phonological **assimilation** (Schönfeld 1970: 211) of /t/ and /þ/ into *-at* and *-þu-* yielded the suffix **-assu*[2], as in the Gothic example (2). This formal reanalysis, I believe, led to a comparable development as the reanalysis involved in the development from autonomous nouns into *-heid*, *-dom* and *-schap*. Because of the highly frequent application and the semantic bleaching of the suffix, the output of the word formation rule and the morphological boundaries became less transparent with all four suffixes. Rebracketing

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2   As noted by Grimm (1967:312), there is no evidence for kinship between this Germanic suffix and the French abstract nouns on *-esse*, such as *justesse*, *tristesse*, *finesse* or *jeunesse* (with preceding /n/). Synonyms on *-ce* (cf. French *justice* and *patience*) indicate that the suffix *-(t)ez(z)a* does not date back to an assimilation of /t/ and that Latin *-tia* merely originated in Indo-European **-þu-* (cf. *justitia*, *tristitia*, *patientia*).

took place as *-at* and *-þu-* merged and at the same time, the suffix **-assu* expanded its derivational domain even more: it became relatively productive with verbs that did not end in *-at(jan)*, as in (3), and with non-verbal bases such as prepositions. Due to ambiguous formations, in which the Gothic verb in *-inōn* stemmed from a noun without this *-in-*, reinterpretation (Kluge 1926: §138) may have taken place. The sequence *-in-*, originally belonging to the verbal *-inōn*, was absorbed by the Gothic suffix *-assus* which generated *-(i)nassus* (4). Formal reanalysis and assimilation thus typified the history of the suffix and were still at work in the early Dutch period. The final consonant cluster of the base adjusted to the first consonant of the suffix in Middle Dutch *gevancknisse* (with /k/ instead of /n/ from the verb *gevangen,* 'to capture') or the elision of <de> in *vonnis* ('judgement', originally *vondenis* from the past simple of the verb *vinden,* 'to find').

(2)   Got. *ibnjan* (from **ibn-atjan,* 'to equate') > Got. *ibn-assus* ('equality')
      Got. *ufar* ('over') > Got. *ufar-assus* ('abundant, excessive') > Got. *ufar-ass-jan* ('to do excessively')

(3)   Got. *hōrinōn* ('to commit adultery') > Got. *hōrin-assus* ('adultery') ~ Got. *hors* ('adulterer')

(4)   Got. *þiudanōn* ('to rule') > Got. *þiud-inassus* ('dominion')

Finally, all the described suffixes were subject to considerable phonological changes, of which several are undoubtedly connected with the semantic abstractness of the suffix, which motivated the primary stress on the base. Old Germanic **-nassu* for instance lost its full /a/ sound and appeared in Old Saxon *-nussi/ -nissi/nessi* with less prominent vowels (De Vries & De Tollenaere 2004). The final vowel /i/ was levelled to /ə/ (Van Loon 1987: 72) and was eventually omitted in German monosyllabic *-nis* and Old English *-nis/-nys/-nes*. Although the two variants *-nisse* and *-nesse* still occurred in Middle Dutch, 16th century Dutch selected the eroded *-nis* as the standard form. Except for the loss of inflectional final /ə/, *-heit*, *-heide* or *-hede* did not erode to the same extent as *-nis/-ness*. The / ai/ sound in **haidu* was contracted to /ei/ in central Westgermanic dialects, the ancestors of Dutch and German, and to /e/ in others (e.g. in Old Saxon). In Old Dutch, Westgermanic /ō/ diphtongized to /uo/ in *-duom* (Szulc 1987: 80) or developed into /ū/ in Northern dialects (compare noun *doem* or En. *doom,* Van Loon 1987: 62). In unstressed suffix position, this vowel has been shortened to /o/ in 15th century Dutch. The suffix *-scap* has been preserved in almost its original form. Although *-scap(e)* followed a rather rigid inflectional system in Old and early Middle Dutch[3], it lost its ending vowel. Due to palatalization and unrounding, Indo-European /a/ developed into Ingvaeonic /e/ and even /i/, leading to Old Frisian *-skep/skip(i)*. In western and more coastal dialects of Dutch, *-scip* (Schönfeld 1970: 201) remained in use, but it was replaced in the 17th century by the /a/ variant from the central dialects (Van Loey 1948: 13, Marynissen 1996: 251-254).

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3   A detailed inflection table with dialect variants can be found in Van Loey 1948:13-18.

3   The development of Dutch abstract suffixes

In this section, I will first discuss the empirical basis and the methodological assumptions of this study (3.1). I will then lay out my reconstruction of the diachronic paths of -*nis* (3.2), -*hei*d (3.3), -*dom* (3.4) and -*schap* (3.5).

3.1   *Data and methodology*

My investigation into the development of Dutch abstract suffixes is largely based on datasets containing written language from the 12th to the 20th century, taken from the DBNL corpus, a freely accessible collection of Dutch literary texts on the website *Digitale Bibliotheek voor de Nederlandse Letteren* (sponsored by Stichting DBNL, Maatschappij der Nederlandse Letterkunde, NWO and Nederlandse Taalunie).

  I divided the data into several subsets, each representing a time span of approximately 50 years. I classified 15,053 attestations (*N*) for -*nis*, 88,773 for -*heid*, 3,457 for -*dom* and 13,384 for -*schip*, which yielded a total of 10,403 different abstract derivations (*V*, e.g. *ridderschap*, *maagschap*, etc.). I analyzed these derivations in terms of their morphological pattern, that is, the category of their base, i.e. nominal (noun – adjective) or verbal (infinitive – participle). For each morphological pattern I identified the prototypical semantic frames. These semantic labels rely partly on contextual and semantic analysis of a random subset of 100 tokens of the pattern and partly on descriptions from the dictionaries *Oudnederlands woordenboek* (ONW, covering Old Dutch), *Middelnederlandsch Woordenboek* (MNW, Middle Dutch), *Woordenboek der Nederlandsche Taal* (WNT New Dutch) and *Van Dale Groot Woordenboek der Nederlandse Taal* (present-day Dutch).

  In this way, I combined the traditional qualitative approach of diachronic morphology with more extensive quantitative information about the occurrence of the basic morphological patterns in each period. This has allowed me, I believe, to increase the delicacy with which patterns and transitions could be observed. The extended empirical datasets revealed a number of hitherto overlooked forms, which required recognizing more ambiguity than had happened so far in the morphological analyses. Ambiguity is in fact a crucial starting point for reanalysis and extension of the suffixes over new schemes or patterns. Once such often incidentally formed new patterns show an increasing type frequency, there is 'semantic coherence' (Aronoff 1973 in Hüning 1999: 69) and the rule becomes fully productive (Trips 2009: 29).

  For the quantification of the data and the interpretation of the quantified data, I adopted the following procedures. In all the figures and tables, the quantitative term *type* refers to a derivation of which several instances may exist, e.g. *bescermenesse* and *bescermenisse* are two tokens or attestations (*N*) of one type (*V*) (symbols used by Baayen 1990 and Al & Booij 1989). I considered the relative proportion of types for each morphological pattern as an indication of the extent to which a productive rule dominated a stage in the history of the Dutch suffix. High token frequency (*N*) of a certain type I assumed to point at a high degree of lexicalization or fossilization, whereas a relatively large amount of hapax legomena, i.e. derivations just once attested, I took to reflect the productivity of a suffix.

3.2   The suffix -(t)(e)nis: from deverbal act nouns to non-productivity

In line with the development of the Gothic suffix *-(i)nassus*, Old Dutch *-(e)nussi* was employed to derive deverbal nouns, a derivational class which dominated the samples extracted from the DBNL corpus. In most cases, the suffix was attached to verb stems, as in 10th century *giruornussi* and *irbarnussi* from *giruor-on* ('to move' with infinitive suffix *-on*) and *irbar-on* ('to reveal'), or *farhugnissi* and *biriu(w)nissi* from **farhug-on* ('to scorn'), and *biriuw-en* ('to regret'). Apart from these apparently regular derivations from verb stems, Old Dutch had some forms with an inserted binding phoneme /ə/ as in *gihugenussi* (from *gihug-en*, 'to remember, to think of something') or *irsuokenussi* from *irsuok-en* ('to investigate'). De Haas & Trommelen (1993: 245) hypothesize that *-enis* was the primary morpheme which attached to the verb stem. Whenever the ending consonant was a nasal (/n/) or liquid (/l/ or /r/), there was phonological harmony with the first /n/ of the suffix and the /ə/ was dropped, as in *verwennisse* ('spoiling'), *vangnesse* ('imprisonment'), *verlancnisse* ('longing'), or *verkulnisse* ('cooling'). At first sight, this hypothesis might appear to be confirmed by the diachronic data: /ə/ could be a levelled variant of the /i/ from the reinterpreted suffix *-inassu*, which might have triggered palatalisation in 13th century *gevencenisse* (from *gevangen*, 'imprisoned'), *opverstentenisse* (from *opverstanden*, 'to rise') and *gedinkenisse* (from *gedenken*, 'to commemorate') or 14th century *versmedenesse* (from *versmaden*, 'to scorn'). Most linguists agree, however, that the *-i-* did not survive in Old Dutch, as seen in the examples *giruornussi* and *irbarnussi* mentioned above. They argue that the palatalization of the stem vowels was caused by the /i/ sound in the second syllable of *-enisse*, the vowel in present-day *-nis* (Van Loon 1987:39). Even so, whether the underlying morpheme was *-enis* or *-nis*, in Old and Early Middle Dutch both forms seem to be roughly interchangeable (as in for instance *gevangnisse* and *gevangenisse*): they were completely synonymous and tended to be selected in a quasi random fashion. It is only in late Middle Dutch that the allomorph *-enis* secured its position in a stabilised system (De Haas & Trommelen 1993: 245) and that the phonological conditions became more rigid: stems ending in another sound than /n/, /l/ or /s/ almost always took *-enis*.

Importantly, due to the increase of the intervening phoneme /ə/, ambiguous uses came about. Since the Dutch infinitive morpheme *-en* has the same phonological realisation as /ə/ and nasal /n/ in the suffix *-nis*, it was not always clear whether the derivation contained the infinitive or the verbal stem, as in Early Middle Dutch *nakenisse* from *naken* ('to approach'), *scamenesse* (from *scamen*, 'to be ashamed') and *verstannesse* (from the old verbal stem *ik staen*, 'I stand' or infinitive *staan* 'to stand', Schönfeld 1970: 178). Speakers may have assigned incorrect morphological structures to the derivations, based on formal analogy and semantic connections between verbal stems and infinitives (i.e. 'analogical reinterpretation', Van Bree 1996: 114 and 'restructuring', Booij & van Santen 1998: 280). This reinterpretation is often referred to as reanalysis, the 'change by which a complex word comes to be regarded as matching a different wordschema from the one it was originally created by' (Haspelmath 2002: 56). It is the first step in a process of analogical extension (Van Bree 1996: 104) or affix generalisation (Booij & van Santen 1998: 75). The derivational domain of *-nis*, originally attached to verb stems, was extended

to other word classes. In this way, semantic and formal ambiguity between infinitive and stem in derivations with -*nussi* led quite early to the emergence of a new productive pattern, as found in Old Dutch *ratonnussi* and *irfanknussi* from *raton* ('to prickle') and *irfān* ('to accuse'), both with the Old Dutch infinitive suffix -*on* or -*an*. Likewise, some verbs may have been reinterpreted as participles. Although most verb stems were monosyllabic (De Haas & Trommelen 1993: 245), a large amount of them (24.03% of the observations in my 12th and 13th century datasets) had been prefixed with Old Dutch *far-*, *ir-* and especially *gi-*, which correspond to *ver-* (Baayen 1990: 226), *er-* and *ge-* in present-day Dutch. These reinforced the perfective meaning of a verb, as in *gebruken* ('to use', cf. *bruken*, Got. *brukjan*) or *getugen* ('to testimony', cf. *tugen*, Got. *tiuhan*). This perfective prefix was optional until Late Middle Dutch, when its use became limited to and analogically spread over the grammatical class of participles[4]. This is why we encounter a lot of ambiguous derivations in Middle Dutch, such as 12th century *ghevanghenisse* (from the verb or participle *gevangen*, 'to catch, caught', Van Loey 1948: 77) and *gesceppenesse* or *ghescepenesse* (from infinitive *sceppen*, 'to create' or participle *gescepen* or *gesceppen*, Van Loey 1948: 76). Figure 2 visualizes the ambiguity in the morphological composition of *gevangenis*. With the *ge-* prefix becoming obligatory in participles and becoming more or less exclusively used for this category, most of these derivations could be interpreted as containing past participles instead of infinitives. I propose that at this point a new deverbal morphological rule originated. Eventually, suffix -*nis* came to be attached to past participles in which this *ge-* was lost or absent, for instance in Early Middle Dutch *von(de)nisse* ('verdict') (Schönfeld 1970: 212), which is based on the strong verb *vinden* with vowel change to /o/ in past participle *vond*. Similar examples are *gheboernesse* ('being born') with /ō/, derived from participle *gheboren* ('born') and verb *beren* ('to bear'), Late Middle Dutch *ontbondenisse* from *ontbinden* (Van Loey 1948: 69), as in (5), and *bedrogenisse*, which existed alongside *bedriegenisse*.

(5)	*die*	*grote*	*dissolucie*	*ofte*	**ontbonde-nisse**
	the	great	*dissolucie*	or	**dissolved**-PARTICIPLE-**ness**-SUFFIX
	of	*[van]*	*smeltinghen*	*des*	*lichamen*
	or	[of]	melting-GENITIVE	of	body-GENITIVE

'the great *dissolucie* or dissolution or [of] the melting of the body'
(c. 1462, anonymous, *Reis van Jan van Mandeville*)

The deverbal suffix -*nis*, with verbal stem, infinitive or participle, proved one of the most productive suffixes up until 16th century Dutch and, as shown in (5), formed act nouns. *Bedervenisse*, *behoudenesse*, *lavenesse* or *regierenissen* referred to the act of *bederven* ('to spoil'), *behouden* ('to maintain'), *laven* ('to slake') and *regeren* ('to rule') respectively, or at least to one delineated instantiation of this act ('instantial' act nouns, Hüning 1999: 176). Nowadays, Dutch speakers would translate such act nouns by words ending in -*ing*, as in *bescherm-ing* (Eng. *protection*, Middle Dutch *bescherm-enisse*), *(be)dreig-ing* (Eng. *a threat*, Middle Dutch

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4   See for instance Early Middle Dutch past participles *bleven*, *bracht*, *comen*, *leden* and *worden* and Present-Day *gebleven*, *gebracht*, *gekomen*, *geleden* and *geworden* from perfective strong verbs *blijven* ('to stay'), *brengen* ('to bring'), *komen* ('to come'), *lijden* ('to suffer') and *vinden* ('to find').

Figure 2   Overview of proposed morphological analyses with deverbal derivations in -nis
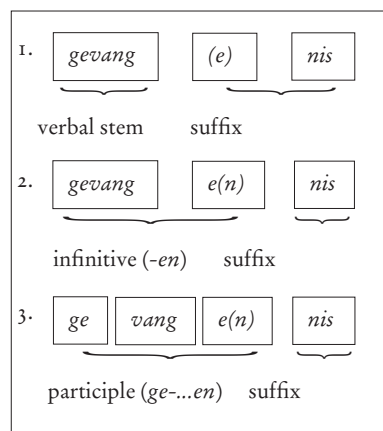
dreig-enesse) or *vordering* (Eng. *improve-ment*, Middle Dutch *vorder-nisse*).

   The productivity of the deverbal suffix with past participle base may, according to my observations, have favoured the emergence of a deadjectival pattern. The first deadjectival derivations, *thiusternussi* (from *thiuster* 'dark') and *īdilnussi* (from *īdil*, 'vain', cf. *idle*), are attested in my data in the 10th century. In 11th and 12th century Old Dutch, we find *finstarnussi*, *thimsternussi* and *wuostnussi*, derived from the adjectives *finstar* and *thimster* ('dark') and *wuost* ('ferocious'). Nevertheless, deverbal derivations still dominate the data and except for Middle Dutch *duysternisse*, deadjectival derivations remained infrequent and marginal. In the 14th and 15th century, however, the deadjectival suffix *-nisse* produced several neologisms, such as *donckernisse*[5] ('darkness', cf. *deemsternisse*), *swaernisse* (from *zwaar*, 'heavy') and even *soetenisse* (from *soet*, 'sweet'). These abstract nouns describe a characteristic and are quality nouns: they refer to the quality of 'being dark/heavy/sweet' or 'being filthy' in the case of *vuilnisse* (from *vuil*, 'filthy'), and 'being *cool*' in *coelnisse* (from *koel*, 'cool'). I would like to point out the close link here between the adjectival pattern and the one with verbal origins, more specifically the participle. The characteristic expressed by the base is often a temporary state caused by an act, as in for instance *moetnesse/vermoeienis* ('the quality of being tired', 'tiredness'), *bedroefenesse* ('the state of being dejected', 'sadness' from adjective *bedroefd* or verb *bedroeven*), *schendenesse* ('the state of being disgraced') or *hechtenis* ('being imprisoned'). Probably, the patterns with participle functioned as an intermediate stage for the development of deadjectival derivations, as both participles and adjectives can be used as predicates. This formal reanalysis also triggered semantic reinterpretation (as defined by Van Bree 1987: 167) in a couple of cases: in (6), *verradenisse* with verbal stem *verraden* (literally 'the act of betraying') is used to refer to the prototypical quality of people who betray, namely 'the quality of being false or disloyal', or 'treacherousness'.

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5   The majority of early derivations from adjectives ending in /r/ may have led to the insertion of -*er*- in Late Middle Dutch *wildernisse* (from *wild*, 'wild'), although this may as well have been caused by the co-existence of the synonym *wildert* ('desert').

Table 1   Diachronic overview of morphological patterns with -nis (type frequency)

base	infinitive	infinitive or noun	noun	infinitive or past participle
c. 1200-1300	17 (50.00%)	9 (26.47%)	0	6 (17.65%)
c. 1300-1400	24 (34.29%)	14 (20.00%)	0	19 (27.14%)
c. 1400-1500	25 (37.31%)	14 (20.90%)	2 (2.99%)	17 (25.37%)
c. 1500-1550	36 (45.57%)	17 (21.52%)	6 (7.59%)	9 (11.39%)
c. 1550-1600	51 (53.68%)	14 (14.74%)	10 (10.53%)	8 (8.42%)
c. 1600-1650	34 (50.00%)	11 (16.18%)	7 (10.29%)	6 (8.82%)
c. 1650-1700	22 (45.83%)	8 (16.67%)	6 (12.50%)	6 (12.50%)
c. 1700-1750	18 (50.00%)	6 (16.67%)	6 (16.67%)	2 (5.56%)
c. 1750-1800	19 (47.50%)	6 (15.00%)	4 (10.00%)	5 (12.50%)
c. 1800-1850	27 (55.10%)	8 (16.33%)	5 (10.20%)	4 (8.16%)
c. 1850-1900	27 (50.00%)	9 (16.67%)	5 (9.26%)	6 (11.11%)
c. 1900-1950	25 (54.35%)	5 (10.87%)	3 (6.52%)	6 (13.04%)
c. 1950-2000	18 (56.25%)	3 (9.38%)	2 (6.25%)	4 (12.50%)

(6) *Ende   Maximuse,   den   groten   tyran,   Sonder*
     and   Maximus,   the   great   dictator, without
     verra-nesse   *verwan   [...]*
     betray-VERB**-ness-**SUFFIX   won
     'and Maximus, the great dictator, won without treacherousness'
     (c. 1300-1325, Jacob van Maerlant, *Spiegel historiael*, derde partie, boek II, VII. Dit
     es van sire doghet, r. 75)

Nevertheless, many of the deadjectival forms disappeared quite early (from 9.47% in the late 16th century to no attestations in the 17th century) and the ones surviving acquired a more concrete locative meaning, as in *wildernisse*, *heidenesse* ('land of the heathen', from *heiden*, 'heathen'), *woestenis* ('a desert'), or *duisternis*, ('darkness', 'dark place'). It may be under the impulse of such locative meanings that *gevangenis*, originally expressing the quality of 'being captured', developed its concrete semantics of 'prison'.

    As can be seen in Table 1, the deverbal pattern still dominated 17th century *-nis*: it accounts for around 50% of all the observed types. However, a steady increase in denominal formations can be observed as well (from no attestations of exclusively denominal derivations in the 13th century to 2.99%, 7.59%, 10.53% in the 15th and 16th century up to 16.67% in the early 18th century). De Haas & Trommelen (1993: 245) state that *-nis* basically attached to Germanic verbs and adjectives. Some Middle Dutch derivations however could be analysed as derived from either a verb or from a noun, as in the dual-labeled column in Table 1. The two analyses are, for instance, possible with *scamenisse, ghebrukenesse, lettenisse, ghedenckenisse, verraetnesse* and *verderfenisse* with recognisable verbs *scamen, ghebruken, letten, ghedencken, verraden* and *verderven* or derived abstract nouns *scame* ('shame'), *gebruuc* ('use'), *lette* ('obstruction'), *gedenken* ('remembrance'), *verraet* ('treason') and *verderfe* ('destruction'). By the beginning of the 16th century we encounter some derivations that are no longer ambiguous and necessarily require an analysis on the basis of a noun, such as spysenesse (from *spyse*, 'food') and *vergiffenis* ('forgiveness', from obsolete *vergif*) as opposed to

past participle	adjective	infinitive or adjective	noun or adjective
2 (5.88%)	0	0	0
2 (2.86%)	6 (8.57%)	1 (1.43%)	4 (5.71%)
3 (4.48%)	2 (2.99%)	0	4 (5.97%)
1 (1.27%)	4 (5.06%)	1 (1.27%)	5 (6.33%)
2 (2.11%)	9 (9.47%)	1 (1.05%)	0
1 (1.47%)	3 (4.41%)	1 (1.47%)	5 (7.35%)
1 (2.08%)	1 (2.08%)	1 (2.08%)	3 (6.25%)
1 (2.78%)	0	0	3 (8.33%)
1 (2.50%)	0	2 (5.00%)	3 (7.50%)
1 (2.04%)	0	1 (2.04%)	3 (6.12%)
2 (3.70%)	1 (1.85%)	1 (1.85%)	3 (5.56%)
2 (4.35%)	1 (2.17%)	1 (2.17%)	3 (6.52%)
1 (3.13%)	0	1 (3.13%)	3 (9.38%)

clearly deverbal *vergevenis*, which was common in Middle Dutch.

The rise of nominal bases with incorporated abstract suffix -*te* in the 16th and 17th century is essential in this development. A /t/ sound was already present in the early stages of the language, as the ending consonant of a verbal stem was easily devoiced[6] in Middle Dutch, yielding for instance 12th century *verbintenis* from *verbinden* ('to connect'), *beeltenis* (from *beelden*, 'to depict') or *ontsteltenis* (from participle *ontsteld*, 'dismayed'). From then on, -*nis* could be attached to nominalizations on the abstract suffix -*te*: 13th century *gelofnisse*, *ghedenkenis* or *gheboernisse* were replaced by late 16th century *geloftenisse*, *gedachtenis* ('thought') and *geboortenisse*, derived from *gelofte* (verb *geloven* and -*te*), *gedachte* ('thought', derived from participle of *denken* 'to think') and *geboorte* (from participle *geboren*). Reanalysis took the form of affix telescoping (Haspelmath 2002: 56 and 1994: 3) here, that is, the process in which two morphemes, namely nominalising -*te* and -*nis*, fuse into one, yielding a third allomorph -*tenis* (De Haas & Trommelen 1993:245). In the case of 16th century *bekentenesse* ('confession') and *erkentenesse* ('acknowledgement'), both derived from the verb *(be/er)kennen* ('know') – a nominal base with -*te* (*bekente) never existed. This shows that /t/ was inextricably tied to the suffix, not to the base. Table 2 visualises how *bekennisse/herkennis* were replaced by *bekentenis/erkentenis* in the period 1200-1600.

Not all derivations were affected by this new productive rule: the mechanism was for instance blocked (in the sense of Rainer 1988, Haspelmath 2002: 249 and Booij & van Santen 1998: 69) in the highly frequent lexicalized form *kennis* ('knowledge', cf. German Kenntnis). The question arises then whether -*nis* still contributed to the meaning of the derivation, since suffix -*te* also formed abstract

6   Via this final devoicing, assimilation and even syncope could be brought about, as in the omission of /də/ in Middle Dutch *vondenisse > vonnis*, *verstandenisse > verstannesse* and *verradenisse > verraetnesse > verranesse*. Final devoicing (or so-called 'Auslautverhärtung') before a nasal (-*nis*) did not take place whenever the final consonant of the base was preceded by a vowel (Van Bree 1987: 165), as in 13th century *bedidenisse* or *behoudenisse*, 14th century *besnidenesse*, *heidenisse* or *verleidenesse* and 16th century *geschiedenis*.

nouns. *Beloftenis* and *geboortenis*, for instance, have disappeared in present-day Dutch in favour of synonymous *geboorte* ('birth') and *belofte* ('promise').

*Table 2   Development of derivations with final devoicing and -*tenis *allomorph (token frequency)*

	base in d/t + -(e)nis e.g. beel(d)tenis verbin(d)tenis	n + -nis e.g. bekennisse herkennis	n + -tenis e.g. bekentenis erkentenis
1200-1550	1	12	0
1550-1600	0	0	15
1600-1700	35	2	10
1700-1800	137	0	37

In my view, the allomorph -*tenis* does not function as a phonologically conditioned variant of -*nis*, but its systematic emergence suggests a semantic development. It may have been a reaction to the overall lexicalization[7] of derivations in -*nis* in the late 16th and the beginning of the 17th century and the concrete meanings that many of these highly frequent lexicalized forms came to convey in a rather unsystematic manner. Rather paradoxically, it is the abstractness of the suffix and its increasing availability that caused the word formation rules to become obscure (or 'opaque' and therefore difficult to apply, see Van Bree 1996: 165) and, hence, the outcome of suffixation to become more susceptible to semantic specialisation into concrete meanings[8]. My data showed that many act nouns came to refer to a person or thing that causes the action ('agentive nouns', Kronenberger 2002: 202), such as *een hindernis* ('an obstacle') or *een stoornis* ('a disturbance'). Others referred to the result of the act (Hüning 1999: 184), for instance *gesceppenesse/ gestaltenisse* (example 7, 'a shape' that has been created, from *scheppen*, 'to create'). The distinction between cause and result is not always very clear: the nouns *verbintenisse* ('an agreement'), *getuigenis* ('a testimony'), *vonnis* ('a conviction, judgement') may refer to a legal document that causes the action of *verbinden* ('to commit to') or *getuigen* ('to testimony') as well as to the result of this verbal act, written down on paper. The rise of concrete secondary meanings eventually led to a new productive pattern with -*nis* that I observed in the 18th and 19th century, yielding derivations such as *medichinesse* ('a medicine', present-day Dutch *medicijn*) and *gebeurtenis* ('an event', from the verb *gebeuren*, 'to happen') which never had an abstract meaning. In these nouns, as well as in *beloftenesse* and *ghebortenesse*, the suffix -*nis* did not add much meaning to the derivation anymore: semantic bleaching had come to a final zero-point and, as shown by present-day *belofte* and *geboorte* with abstract -*te* and omitted -*nis*, even resulted in a null mor-

7   The term 'lexicalization' applies here to the non-systematic (Himmelmann 2004: 36) fossilization or 'idiomaticization' (Lehmann 2002: 16) of words which have become 'demorphologized' and 'desemantizised': their formal and semantic compositionality is disregarded. Complex words have to lexicalize before (contextually determined) semantic specialization or extension can take place. This may also entail that 'one of its constituent words may get lost, whereas the complex word survives' (Booij 2005: 17). For further discussion of the term in grammaticalization studies, see Lehmann (2002), Lightfoot (2005) and Himmelmann (2004).
8   Because they designate a concrete entity, these nouns require an indefinite determiner, are obviously countable and can occur in the plural.

pheme or zero-form (Givón 1979: 209). By this stage, -*nis* had taken up so many morphological patterns and meanings that -*te* may have been added to strengthen one subtype, namely the deverbal nominalising pattern with abstract meaning.

(7) *[…]   in   verscheyden gestalte-niss-e   voortcomen*
    […]   in   different   shape-NOUN-**ness**-SUFFIX   occur
    '[which] occur in different shape(s)'
    (1560, Desiderius Erasmus, *Lof der Zotheid*, translation of *Moriae Encomion*, fol.4rr)

Similarly, some derivations developed a passive concrete meaning. *Erfenesse* (from *erven*, 'to inherit'), for example, came to name the 'affected object' (Hüning 1999: 186) of the action, the thing that you can inherit, or 'the inheritance'. The affected object meaning came, again, to be encoded by the suffix. *Muizenis* (8), for instance, was an 18th century derivation that did not refer to the act of contemplating (from the verb *muizen* ('muse')), but only to specific worries that people have on their mind. Even deadjectival derivations were subject to this emergence of concrete semantics: *vuilnis* lost its original meaning of 'the state of being filthy/rotten' in favour of the present-day concrete semantics of 'rubbish'.

(8) *Waarom   zijn   leven bedorven   met   muize-niss-en?*
    why   his   life   spoil   with   **muse**-VERB-**ness**-SUFFIX
                                                -**es**-PLURAL

    'Why spoil his life with worries?'
    (1880, Carel Vosmaer, *Amazone*, p. 325)

Table 3   Diachronic overview of proposed semantic derivation patterns in -nis

		semantic frame	base	productive	example
abstract	instantial act noun	**'the act of X'**	verb participle	c. 10th-16th century	*behoudenis, dreigenesse, geboortenesse*
abstract	quality noun (state)	**'the quality of X', 'the state of being X'**	adjective participle	c. 12th-15th century	*duisternis, soetenisse, swaernesse, verradenesse*
concrete	area (locative)	**'area with prototypical quality X'**	adjective	-	*wildernis, heidenesse, woestenis*
concrete	affected object (passive)	**'person or thing undergoing the act of X', 'person/thing prototypically having quality X'**	verb participle adjective	c. 17th-19th century (increasingly associated with -*tenis*)	*beeltenis, betekenis, kennis, vuilnis*
concrete	affecting object (agentive + resultative)	**'person or thing doing the act of X', 'result of the act of X'**	verb participle	c. 17th-19th century (increasingly associated with -*tenis*)	*bescermenisse hindernis, stoornis, gebeurtenis, beloftenesse*

This change in the meaning of *-nis* and the emergence of concrete nouns affect-ed the overall productivity of the suffix drastically in the 17th century. Evidence of this productivity is the extension of the derivational domain to adjectives and nouns, but also the breakthrough of innovative derivations with words from mi-nor categories or foreign origins, such as Old Dutch *thrīnussi* ('trinity', from *thrī̆*, 'three'), Middle Dutch *quitenesse* from *quiten* ('liberate', from Old French *quitter*), 16th century *paeyenisse*, *joyenesse* and *fortunesse*, based on verb *paeye* ('to pay', cf. Old French *payer* of *paie*) and nouns *joye* ('joy', cf. French *joie*) and *for-tune* ('chance', vgl. Old French *fortune*, cf. Latin *fortuna*) respectively. The mo-mentary rise of *-nesse* in the 16th century was followed by a period of lexicalization and stagnation in productivity. Via metonymy relationships, most derivations acquired concrete meanings, ranging from reference to people, such as *bescher-menisse* ('a defender', from *beschermen*, 'to defend'), *kennesse* ('an acquaint-ance', from verb *kennen* 'to know') and collective *besnijdenis* ('the Jews', from verb *besnijden* 'to circumcise'), to objects (cf. 'tools', Hüning 1999: 187) such as *gedenkenis* ('a memorial', from the verb *gedenken*, 'to remember'). The historical development of the semantic derivation patterns I identified, including this last stage, is represented in Table 3. Except for some lexicalized forms such as *droe-fenis* ('sadness'), *erkentenis* ('recognition') and *verrijzenis* ('resurrection'), most abstract nouns in *-nis* disappeared at the end of the 20th century and the concrete *-(te)nis* did not seem productive enough to bridge this gap. By the time Standard Dutch had been definitively moulded, around the 20th century, the productiv-ity of the suffix *-nis* was lower than ever. Most 19th century abstract neologisms such as *zwijgenis* ('silence', from *zwijgen* 'to shut up'), *nuchternis* ('soberness', from *nuchter* 'sober'), *groetenis* ('greeting'), *bewegenis* ('movement') and *gewen-nis* ('habituation') did not survive.

3.3   The suffix *-(ig)heid*: deadjectival quality nouns

Unlike deverbal *-nis*, the Dutch suffixes *-heid*, *-dom* and *-schap* originated in noun-noun compounds in Gothic and were initially attached to nominal bases in the broad traditional sense of nominal or adjectival (with the distinction be-tween both being often hard to make). Old Dutch *-heit* seems to occur mainly with adjectival bases such as *argheit*, *wankilheit*, *bitterheit*, *heiderheit*, *skōnheit*, *wīsheit* or *slahtheit*, derived from adjectives *arg* ('bad'), *wankil* ('wobbly'), *bit-ter* ('bitter'), *heider* ('bright'), *skōn* ('beautiful'), *wīs* ('wise') or *slaht* ('slow'). Old Dutch had some denominal formations such as *gotheit* (from *got*, 'god'), *mana-heit* (from *mana*, 'man') and *kristīnheit* (from *kristīn*, 'christian'). However, they shared many semantic similarities with the deadjectival quality nouns which they were – increasingly – outnumbered by in the earliest stages of the Dutch language (from 5.00% and 3.00% of exclusively denominal derivations in the 13th-14th cen-tury to around 0.50% and 0.40% in the 17th and 18th century). Most denominal derivations which originally denoted a specific rank could also refer to a quality that prototypically comes with occupying a position. The definition for *mensheit* in the Middle Dutch dictionary (MNW), for instance, reads 'to be a human' as well as 'humaneness'. Because of the close link between the rank 'childhood' and the quality 'childishness', /s/ was inserted in the derivation *kindsheid*, probably in

analogy with the adjective *kinds* instead of the noun *kind* (cf. High German *kind-heid*, Middle High Ger. *kintheit* and En. *childhood*). This pattern with adjectival base and quality noun semantics would become highly productive throughout the history of *-heid*.

The main difference between deadjectival quality nouns in *-heid* and ones in *-nis* lies in the number of polymorphemic or compositional bases (Wilmanns 1930: 385). Adjectives with suffixes *-lijk* ('-ly'), *-zaam* or *-ig* frequently occurred with *-heit* from Old Dutch onwards, as in for instance *guotlīkheit*, *stādigheit*, *brōthigheit*, *wirthigheit* from *guotlīk* ('godly'), *stādig* ('steady'), *brōthig* (vgl. *brōthi*, 'weak') and *wirthig* ('worthy'). Wilmanns (1930: 385) suggests that these formations may have counterbalanced the loss in productivity of Middle Dutch abstract suffixes *-(e)de* and *-te* (derived from *ī*, cf. Got. *-iþa/iða*[9]). There may be no evidence of a causal connection between the disappearance of nominalising *-(d)e* (Schönfeld 1970: 201) and the emergence of the polymorphemic bases with synonymous *-heid* but the high commutability and the almost unrestricted flexibility of *-heid* is certainly one of the reasons why the suffix gained ground so easily within the paradigm of abstract suffixes[10]. At the end of the 16th century, 72.44% of the deadjectival derivations in *-heid* in my data involved compositional forms with *-zaam*, *-baar*, *-ig* or *-achtig*, compared to 41.18% in the 12th century, as shown in Figure 3. The morphological constraints on the base were so few that a

Figure 3   Compositionality of deadjectival bases with -heid (type frequency)
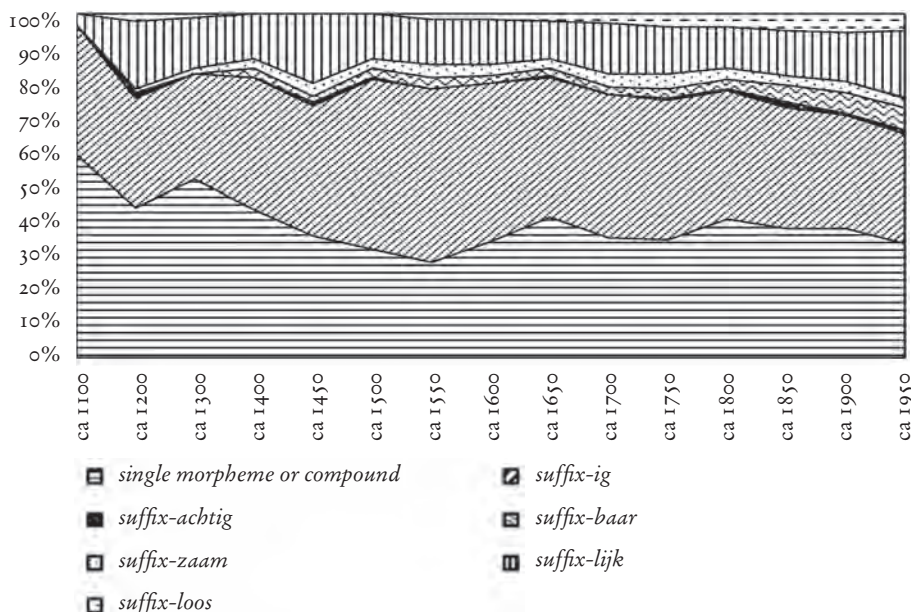
9   Compare Present-Day Dutch *warmte, diepte, weelde, lengte* (Schönfeld 1970: 235) or English *-th* in *warmth, depth, wealth, length* (OED).

10   Whenever the *-e, -de* or *-te* suffix did survive, semantic differentiation between the derivation with *-heid* and the one with *-e/-de/-te* took place, as in for instance *hoogheid* versus *hoogte* or *diepheid* versus *diepte*, see De Vooys 1976: 219 and Wilmanns 1930: 388.

variety of synonymous derivations emerged, for instance *reynheit*, *reynelijckhede* and *reynicheit* ('cleanness'). The deadjectival forms sometimes competed with the originally denominal derivations, such as *goddelijkheid*, *menselijkheid* and *jeugdelijkheid* which gradually pushed out quality nouns *godheid*, *mensheid* and *jonkheid* (resp. 'godness', 'humanness' and 'youngness').

Within this diversity of complex adjectival bases, the forms with *-ig* became very frequent and finally fused with the abstract suffix into the allomorph *-igheid*. In Late Middle Dutch, most lexicalized old adjectives in *-ig* were already morphologically opaque: the nouns or adjectives on which *heil-ech* ('holy'), *ghier-ech* ('miserly') or *guls-ich* ('gluttonous') were based, disappeared or occurred both with and without *-ig*, as in *soetecheit* ('sweetness'), *lichtecheiden* ('lightness') vs. *soetheit, lichtheit* (see De Haas & Trommelen on *-ig* 1993: 248). The transparency of the morphological structure was lost and in the 14th and 15th century, a few derivations emerged in which *-ig* did not belong to the adjectival base, but merely functioned as an intermediate, transitional syllable, as in 14th century *geborenicheide* ('birth') or *meineedecheit* ('perjury') (but **geborenich* or **meineedec*), 15th century *gesondicheit*, and *snelligheydt* from *gesond* ('healthy') and *snel* ('fast') and 16th century *rijpicheyt* ('ripeness') and *strengicheyt* ('strictness'). Both morphemes *-ig* and *-heid* were so frequently combined that they eventually were reinterpreted as one fused or 'telescoped' suffix (compare *-te* and *-nis* in *-tenis*). Examples proving the claimed morpheme status of *-igheid* are stacked forms *vruchtbaricheit* ('fertility'), *eerlozicheyd* ('honourlessness') or *ghehoorsamichede* ('disobedience'). As *-zaam* or *-baar* changed the part of speech of the base into an adjective and *-ig* did not semantically contribute to the derivation anymore, the only reason why it was still inserted, was because it had become formally part of the suffix *-(ig)heid*. By the 15th century, the allomorph *-igheid* even occurred in derivations which contained nouns (*rebel* in *rebellicheit*, 'rebellion'), verbs (*falen* in *falicheyt*, 'failure') or noun phrases (*duistere nacht*, 'dark night', in *duusternachticheyt*). In German, this telescoped affix consisting of *-ec* and *-heit* further fused into the assimilated forms *-igkeit* and even *-keit* (cf. Wilmanns 1930: 385).[11]

Whether speakers opted for the use of *-heid* or *-igheid* increasingly depended on semantic grounds. In Middle Dutch, most derivations with *-heid* and *-igheid* co-existed and were more or less semantically equivalent: the compilers of the Middle Dutch Dictionary (MNW) cross-reference *vetticheit*, *magericheit* and *sachticheit* and their variants without *-ig*, namely *vetheit*, *magerheit*, *sachtheit*, i.e. 'fatness', 'slimness', 'softness'. With the increase of the *-igheid* allomorph in the 16th and 17th century, I observed some semantic differentiation between the two allomorphs: derivations with Dutch *-igheid* acquired concrete meanings more easily (see Wilmanns 1930: 388 on the German equivalent *-keit*), whereas words on *-heit* remained their abstract meaning. The 16th century derivation *groenicheit*, for instance, could still refer to 'the quality of being green' (cf. *groenheit*) but also

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11   This allomorph has proven to be more frequent in German than in Dutch. A facilitating factor in the increase of German *-keit* may have been its stylistic association with the formal written language of South-West Germany (cf. Schönfeld 1970: 201). In Middle Dutch, however, there is no indication of a formal or stylistically marked origin of the *-igheid* allomorph. In fact, the WNT mentions for certain derivations that the equivalent with *-ig* (e.g. *fraaiheid* versus *fraaiigheid*) seems to be used more in informal contexts.

Figure 4   Overview of morphological analyses of deadjectival adjectives in -(ig)heid
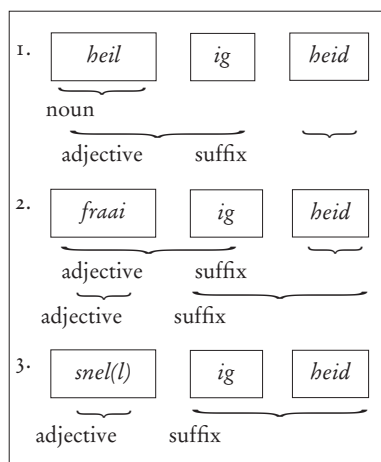
to 'something green'. By contrast, 20th century *vuiligheid* (9) or *gauwigheid* were only used as concrete nouns ('something filthy or *vuil*' and 'something you do quickly or *gauw*'). A similar semantic split is manifested in the difference between present-day Dutch *fraaiheid* ('prettiness') and *fraaiigheid* ('something pretty'), *kleinheid* ('smallness') and *kleinigheid* ('something small'), *zoetheid* ('sweetness') and *zoetigheid* ('a sweet'). In other words, the allomorph *-igheid* evolved into a fully operational morpheme producing concrete nouns.

(9) *ze*   *zuiverden*   *het*   *voorhof*   *van*   *onkruid,*   *veegden*
     they   cleared   the   front-yard   of   weeds,   swept
     alle   **vuil-ig-heid**   *samen*
     all   **dirt**-NOUN-**ig**-SUFFIX-**heid**-SUFFIX   together
     'they cleared the front yard of weeds, swept all the dirt'
     (1904, Reimond Stijns, Hard Labeur, p. 101)

The participle pattern with *-heid* was less common than the purely deadjectival structure, but its number rose steadily from early Middle Dutch onwards (from 5.58% past participles in the 13th century to around 11% in the 18th and 19th century in my data). The past participle referred to a temporary state initiated by an action, such as *bedectheit* and *ghemintheit* from the weak verbs *bedecken* ('to cover') and *minnen* ('to love', notice the participle marking *ghe*-V-*t*), *verborgen-heit* and *ghenomenheit* from the strong verbs *verbergen* ('to hide') and *nemen* ('to take') of which the participles were formed by vowel change in the stem (Ablaut).

   However, the development of this participle derivation was different from that with suffix *-nis* in that *-heid* could also be attached to present participles, e.g. *mogentheit* ('being almighty' from *mogend*, 'being able to') or *leventheit* ('being alive' from *levend*, 'living').

   The growth of the participle patterns with *-heid* was a prerequisite for the extension of the derivational domain to purely verbal bases, as in early Middle Dutch *veranderheyt* ('change', cf. *verandernisse*), *komenheit* ('coming', cf. *comenisse* in the MNW) or *kunheit* ('skill'). As a first step in this process, derivations with a /t/ from the weak past participle form or the present participle (in *-end/-int*) became

Table 4   Diachronic overview of morphological patterns with -heid (type frequency)

base	noun	noun or adjective	adjective	present participle	present participle or infinitive
c. 1100-1250	2 (5.00%)	1 (2.50%)	32 (80.00%)	4 (10.00%)	0
c. 1200-1300	7 (3.00%)	12 (5.15%)	186 (79.83%)	2 (0.86%)	0
c. 1300-1400	4 (1.88%)	13 (6.10%)	176 (82.63%)	2 (0.94%)	0
c. 1400-1450	3 (1.99%)	10 (6.62%)	132 (87.42%)	3 (1.99%)	0
c. 1450-1500	6 (1.78%)	11 (3.26%)	266 (78.93%)	2 (0.59%)	0
c. 1500-1550	17 (3.31%)	19 (3.70%)	413 (80.51%)	9 (1.75%)	0
c. 1550-1600	10 (1.30%)	32 (4.15%)	614 (79.53%)	17 (2.20%)	6 (0.78%)
c. 1600-1650	9 (1.51%)	18 (3.01%)	493 (82.44%)	12 (2.01%)	2 (0.33%)
c. 1650-1700	5 (1.50%)	4 (1.20%)	274 (82.04%)	13 (3.89%)	3 (0.90%)
c. 1700-1750	3 (0.62%)	8 (1.66%)	382 (79.25%)	12 (2.49%)	9 (1.87%)
c. 1750-1800	5 (0.58%)	6 (0.70%)	663 (76.83%)	26 (3.01%)	12 (1.39%)
c. 1800-1850	4 (0.48%)	7 (0.84%)	678 (80.91%)	22 (2.63%)	5 (0.60%)
c. 1850-1900	6 (0.32%)	13 (0.70%)	1515 (81.94%)	62 (3.35%)	3 (0.16%)
c. 1900-1950	3 (0.37%)	5 (0.61%)	677 (83.17%)	24 (2.95%)	0
c. 1950-2000	4 (0.51%)	1 (0.13%)	637 (81.67%)	20 (2.56%)	0

opaque. This /t/ was sometimes reinterpreted as a mere binding phoneme and could, perhaps as a result of hypercorrection, be inserted in 16th and 17th century derivations with past participle bases which did not contain this morpheme (such as *gheschapentheyt* from *scheppen/geschapen*, 'to create/created', *verborghentheyt* from verbergen/verborgen, 'to hide/hidden'), verdorventheyt from *verderven/verdorven* ('to debase/debased'), as in (10).

(10) [...]   *van*   *de*   *kranck-heyt*   *ende*
[...]   of   the   ill-ADJECTIVE-hood-SUFFIX   and
swack-heyt,   *jae*   *van*   *de*
weak-ADJECTIVE-hood-SUFFIX   yes   of   the
verdorven-t-heyt   *des*
corrupted-PARTICIPLE-**t-hood**-SUFFIX the-GENITIVE
menschelijcken   *willens*
human-GENITIVE   will-GENITIVE
'about the illness and weakness, the **perverseness** of the human will'
(1569, Philips van Marnix van Sint Aldegonde, *De bijencorf der H. Roomsche Kerc ke*, Dat III capittel)

By the end of the 18th century, this binding phoneme was systematically dropped again, leading to an increase of possible infinitive bases (in *-en*), such as 19th century *kwaadsprekenheid* ('slander'), *oplettenheid* ('advertency') or *haatdragenheid* ('vengefulness'). Table 5 shows the rise in 1500-1700, and subsequent drop, in frequency of the forms with binding phoneme /t/.

past participle or infinitive	past participle	adjective or infinitive	infinitive	other
0	0	1 (2.50%)	0	0
3 (1.29%)	13 (5.58%)	1 (0.43%)	6 (2.58%)	3 (1.29%)
0	16 (7.51%)	1 (0.47%)	0	1 (0.47%)
0	1 (0.66%)	0	0	2 (1.32%)
2 (0.59%)	39 (11.57%)	2 (0.59%)	2 (0.59%)	7 (2.08%)
3 (0.58%)	43 (8.38%)	2 (0.39%)	3 (0.58%)	4 (0.78%)
8 (1.04%)	70 (9.07%)	1 (0.13%)	3 (0.39%)	11 (1.42%)
2 (0.33%)	42 (7.02%)	0	9 (1.51%)	11 (1.84%)
1 (0.30%)	30 (8.98%)	1 (0.30%)	0	3 (0.90%)
2 (0.41%)	52 (10.79%)	0	5 (1.04%)	9 (1.87%)
2 (0.23%)	122 (14.14%)	0	13 (1.51%)	14 (1.62%)
4 (0.48%)	94 (11.22%)	1 (0.12%)	9 (1.07%)	14 (1.67%)
4 (0.22%)	208 (11.25%)	1 (0.05%)	14 (0.76%)	23 (1.24%)
1 (0.12%)	86 (10.57%)	2 (0.25%)	6 (0.74%)	10 (1.23%)
0	100 (12.82%)	0	8 (1.03%)	10 (1.28%)

Table 5   Incidental epenthesis and syncope of binding phoneme /t/ (token frequency)

	gelegen-heid	*gelegend-heid*	*verborgen-heit*	*verborgend-heid*
1500-1600	14	22	0	20
1600-1700	10	75	0	6
1700-1800	220	20	6	7
1800-1900	1261	12	40	0

The high productivity of *-heid* around the 17th century was apparent in the range of minor word classes it attached to, represented under 'other' in Table 4. Already in Middle Dutch, *-heid* could be combined with atypical bases such as *ander* ('other'), *meerder* ('more'), preposition *over* ('over, above') in abstract nouns *anderheit* ('the quality of being different'), *meerderheid* ('the quality of being superior'), or *overheit* ('the quality of being mighty', now lexicalized into 'the government'). These nouns expressed a non-gradable relation between two entities, which is rare in abstract noun formation (e.g. van Santen 1992: 184). The quality noun semantics remained dominant and were imposed on roots which at first sight could not be associated with a quality meaning.

> (11) *Is   anderheit   ghesturven   doot,*
>   is   other-NOUN/ADVERB-**ness**-SUFFIX   died   dead,
>   'when **otherness** has died, then [...]'
>   (c. 13th century, anonymous, *Een subtile ghedicht van hogher godliker mynnen*, r. 15)

From the 17th century onwards, many of the derivations lexicalized and acquired contextually determined concrete meanings. *Christenheid/kerstijnheit* or *edelheit* (originally 'the quality of being a Christian or being noble') were sometimes

used to refer to a group of Christians or noble men. *Meerderheid* and *minderheid* (originally abstract 'to be superior/inferior') nowadays exclusively denote 'a majority/minority'. Some derivations assumed a locative meaning, such as *gelegen(t)heit* ('a well-situated place', Kronenberger 2002: 204) and 16th century uses of *openheid* (originally 'the quality of being open') referring to an open space or an opening.

Table 6   Diachronic overview of proposed semantic derivation types in -heid

<table>
<tr><td></td><td></td><td>*semantic frame*</td><td>*base*</td><td>*productive*</td><td>*example*</td></tr>
<tr><td rowspan="2">abstract</td><td>quality noun</td><td>**'the quality of X', 'the state of being X'**</td><td>noun adjective participle other</td><td>c. 13th-21th century</td><td>*mensheid, kindsheid, mogendheid, dronkenheid, overheid*</td></tr>
<tr><td>instantial act noun</td><td>**'the act of X', 'being in the state caused by X'**</td><td>participle verb</td><td>–</td><td>*weten(t)heid, vergeten(t)heid*</td></tr>
<tr><td rowspan="3">concrete</td><td>collective</td><td>**'group of X', 'group of people sharing quality X'**</td><td>noun adjective other</td><td>–</td><td>*mensheid, edelheid, overheid*</td></tr>
<tr><td>area or institution (locative)</td><td>**'area or institution with prototypical quality X'**</td><td>adjective participle</td><td>–</td><td>*gelegenheid, openheid*</td></tr>
<tr><td>affecting object or person (agentive)</td><td>**'person or thing doing the act of X', 'person or thing with prototypical quality X'**</td><td>adjective participle</td><td>c. 17th-19th century (mostly associated with *-igheid*)</td><td>*vuiligheid, grappigheid, aardigheid*</td></tr>
</table>

Apart from these incidental collective or locative meanings, most lexicalized derivations came to denote a specific person or object which typically displays the quality expressed by the adjectival base. *Outheit*, which is currently only used to refer to a period, once had the sense of 'an object from an old period' or 'relic' (compare *antiquiteit*, 'an antique'). Other examples of semantic specialisation are the use of *een schoonheid* ('a beauty') to refer to someone beautiful (cf. French *une beauté*) or *heiligheid* for a holy person. The diachronic development of the semantic derivation patterns is represented in Table 6.

3.4   The suffix -dom: from quality nouns to collective nouns with allomorph -en-dom

As a continuation of its original noun-noun compound structure, the suffix *-dom* was at first mainly attached to nominal bases in the broad sense of either noun or adjective. Original *-dom* as in Old Dutch *biskopduom*, 12th century *hertochdom* or 13th century *maghedom* was used to refer to the abstract notion of 'status' (Trips 2009: 82), 'the position or rank of a bishop (*biskop*), a duke (*hertoch*) or a virgin (*maghet*)'. The denominal pattern, of which 14th and 15th century *scependoem* (from *schepen*, 'alderman'), *keefdoem* (from *keef/kevese*, 'concubine') and *keyserdom* (from *keizer*, 'emperor') are some more examples, still persists nowadays as the default pattern of the suffix. Note that the two semantically re-

lated meanings of the derivations in -*dom*, viz. 'social status' (e.g. *maghedom*) and 'profession' (e.g. *scependoem*), correspond with two different semantic types of nominal bases, viz. nouns referring to a person (e.g. *maghet*) and nouns referring to a rank (e.g. *biskop*). Table 7 shows that in its earliest use, -*dom* combines with both nominal bases.

Adjectival derivations were also already attested in Old Dutch, for instance in *siekduom* ('sickness' from *siek*, 'sick') and *wÐsduom* ('wisdom' from *wijs*, 'wise'). Middle Dutch words such as *rijc* in *rijckdom* ('richness') and *wise, edel*, have both adjective and noun status ('the wise, the noble', etc.), as noted by Koelmans (1979: 43) and Hüning (1999: 112): they all refer to a quality as well as a state or rank. This might also explain why currently obsolete *heildom* (from noun *heil*, 'blessing') existed alongside the formally deadjectival deriviation *heilichdom* (from *heilig*, 'holy') in Middle Dutch.

Except for the 13th century derivation *wasdoem* (from *wassen*, 'to grow'), the suffix -*dom* has never really taken verbal stems. Koelmans et al. (1979: 43) therefore suggest that *wasdoem* ('growth') may have been derived from the noun *was* ('growth'). The development of act noun meanings in some formations with non-verbal roots and -*dom* shows that the suffix is already stretching its semantic domain. In (13), for instance, *hoerdom* (from the noun *hoer*, 'whore') does not refer to the state or position the girl is in, but rather to the more abstract and often frequentative behaviour of promiscuity or adultery. However, this deverbal act noun pattern emerges only occasionally.

(13) hi   seide hare tonrechte **hoerdom**   toe
      hi   said   her   wrongly   *whore*-NOUN-***dom***-SUFFIX towards
      'he wrongly accused her of adultery'
      (c. 1393-1402, Philip Utenbroecke, *Spiegel historiael*, ii.I, r. 12)

By the 16th and 17th century, the suffix -*dom* was often innovatively and creatively used. This resulted in the temporary breakthrough of adjectival derivations, such as *iongedom, leechdom, vrydom*, which competed with *joncheit, leechheit, vryheit* ('youngness', 'emptiness', 'freedom'). However, it was mostly nominal derivations which profited fully from this increased productivity and consequently extended their use (from around 40 to 50% in the 15th century to around 67% in the late 18th century). In the early 17th century *pausdom* ('popedom'), *priesterdom* ('priesthood'), *prinsdom* ('princedom') and *ketterdom* ('hereticness') emerged. As also noted by Koelmans et al. (1979:37), a fair amount of these neologisms were created by Joost Van den Vondel (so-called 'poetic licence', Haspelmath 2002: 101), such as *zeedom* ('seamen'), *besnedendom* ('Judaism', from *besneden*, 'circumcised') and *ridderdom* ('knighthood').

One of the most remarkable tendencies, however, was the sudden use of plural forms in nominal stems (see Table 8), as in late 16th century *vorstendom* ('the kings') or 17th century *jodendom* ('the Jews') and *godendom* ('the gods'). Apart from *jufferdom* (from *juffer*, 'nurse'), *zusterdom* (from *zuster*, 'sister'), *koningdom* (from *koning*, 'king'), *meesterdom* (from *meester*, 'master') or *rederijkerdom* (from *rederijker*, 'rhetorician'), most neologisms in the 18th and 19th century data consist of plural base forms: examples are *protestantendom* (~ 'protestants'), *comediantendom* (~ 'comedians'), *germanedom* (~ 'Teutons'), *republikeinendom* (~

Table 7   Diachronic overview of morphological patterns with -dom (type frequency)

base	infinitive	noun	
		thing	person
c. 1200-1300	o	o	1 (10.00%)
c. 1300-1400	o	2 (11.11%)	3 (16.67%)
c. 1400-1450	o	o	1 (10.00%)
c. 1450-1500	o	2 (18.18%)	1 (9.09%)
c. 1500-1550	1 (5.56%)	4 (22.22%)	1 (5.56%)
c. 1550-1600	o	2 (9.09%)	3 (13.64%)
c. 1600-1650	o	2 (9.09%)	4 (18.18%)
c. 1650-1700	o	2 (10.00%)	4 (20.00%)
c. 1700-1750	o	4 (18.18%)	9 (40.91%)
c. 1750-1800	o	3 (14.29%)	7 (33.33%)
c. 1800-1850	o	2 (9.52%)	7 (33.33%)
c. 1850-1900	o	6 (13.33%)	17 (37.78%)
c. 1900-1950	o	2 (14.29%)	3 (21.43%)
c. 1950-2000	o	1 (5.56%)	8 (44.44%)

'republicans'), or *vrouwedom* (~ 'women'), all with *-en*, the plural morpheme in Dutch. Hence, a new productive rule has to be posited. Even the existing Middle Dutch derivations *engeldom* (~ 'angels') or *dichterdom* (~ 'poets') as well as *hoerdom* were subject to this rule, yielding 18th century *englendom*, *dichtrendom* and *hoerendom*. The insertion of *e(n)* may have been caused by reanalysis of deadjectival derivations ending in *-en*, such as *heidendom* or *eygendom* or derivations based on participles, such as *besnedendom* or *geschapendom*. The development can also be linked to the compound origins of the derivational pattern. Some Old-Germanic compounds required a genitive form for the first incorporated element, as can be seen in Middle High German *vürstentuom* ('princedom' but Old High German *furisttuom*), *herizogentuom* ('dukedom') and *witewentuom* ('widowhood'), examples taken from Wilmanns (1930: 393). Given the intense contact between German and Dutch in the 17th century, these genitive forms may have been reinterpreted as plural morphemes.

Table 8   Plural morphemes in neologisms in -dom in the 18th and 19th century

	deadjectival	denominal		
		singular	plural -en	plural -s
c. 1700-1750	o	4	6	o
c. 1750-1800	o	3	7	1
c. 1800-1850	o	1	6	o
c. 1850-1900	1	7	22	o

As observed by Koelmans (1979: 38), this rise of plural forms is problably only the formal reflex of a semantic evolution. Table 7 shows an increase in nominal bases referring to persons. However, derivations such as *griekendom*, *vrouwedom*, *patriottendom* or *mannendom* did no longer refer to the state or quality of the *Greeks*, *women*, *patriots* or *men*, but designated the group as such. In the 16th and 17th century, many abstract quality nouns already took on a collective inter-

rank	adjective	noun or adjective	noun or infinitive
3 (30.00%)	3 (30.00%)	2 (20.00%)	1 (10.00%)
4 (22.22%)	3 (16.67%)	5 (27.78%)	1 (5.56%)
4 (40.00%)	2 (20.00%)	2 (20.00%)	1 (10.00%)
2 (18.18%)	4 (36.36%)	1 (9.09%)	1 (9.09%)
1 (5.56%)	6 (33.33%)	4 (22.22%)	1 (5.56%)
7 (31.82%)	6 (27.27%)	3 (13.64%)	1 (4.55%)
7 (31.82%)	4 (18.18%)	4 (18.18%)	1 (4.55%)
4 (20.00%)	4 (20.00%)	5 (25.00%)	1 (5.00%)
1 (4.55%)	3 (13.64%)	4 (18.18%)	1 (4.55%)
4 (19.05%)	3 (14.29%)	3 (14.29%)	1 (4.76%)
5 (23.81%)	3 (14.29%)	3 (14.29%)	1 (4.76%)
13 (28.89%)	4 (8.89%)	4 (8.89%)	1 (2.22%)
1 (7.14%)	4 (28.57%)	3 (21.43%)	1 (7.14%)
2 (11.11%)	4 (22.22%)	2 (11.11%)	1 (5.56%)

pretation in certain contexts, such as *rijkdom* ('the rich'), *edeldom* ('the noble') and *wijsdom* ('the wise'). This collective meaning became fully productive in the 18th and 19th century. Most collective nouns in -*dom* were derived from a stem referring to people, to animals, as in *apendom* ('apes'), *beestendom* ('beasts'), *wolvendom* ('wolves') and *bavianendom* ('baboons'), or, as Koelmans (1979: 39) puts it, to creatures with human features, such as *schepsel* ('creature') in *schepslendom* and *geest* ('ghost') in *geestendom*. The collective meaning then came to be coded by the suffix itself, as in the 18th century formation *mensdom* (cf. *mensheid* in present-day Dutch), which refers to 'all humans' and no longer to 'humanness'. In some cases, a secondary meaning developed from the collective semantics, namely the view, mentality or theory adhered by a group of people, as in *Christendom* or *jodendom*. This appears to have become a productive pattern in the 20th century, as illustrated by *Hitlerdom* and *wertherdom* ('mentality of selfdestruction', referring to the character of *Die Leiden des jungen Werther* by Goethe).

Derivations with -*dom* survived in 20th century Standard Dutch only in lexicalized formations such as *rijkdom* ('wealth'), *ouderdom* ('age') or *jodendom*. *Hertogdom*, *bis(schop)dom* and *vorstendom* are primarily used in their locative sense[12] nowadays, i.e. an area which belongs to a duke (*hertog*), bishop (*bisschop*) or lord (*vorst*). Some derivations acquired other concrete meanings, referring to objects such as *eigendom* ('property', which is personal or *eigen* to someone) or *heiligdom* ('sanctuary, temple'). The evolution of the semantic derivation patterns is represented in Table 9.

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12   Lieber (2005: 150) argues that locative meanings with abstract suffixes -*age* and -*ery* often originated in collective uses, a typical case of metonymy: 'there is some natural connection between the collective meaning and the place-name meaning […] a *swanery* or *piggery* would be a place where a collectivity of swans or pigs is gathered'. The development of -*dom* and -*schap* proved that this presumption does not necessarily count for all suffixes: a *bisdom*, *hertogdom* of *vorstendom* usually belongs to one person.

Table 9   Diachronic overview of proposed semantic derivation types in -dom

		semantic frame	base	productive	example
abstract	quality noun	'the quality of X', 'the state of being X'	adjective noun	c. 12th-14th century	*wijsdom, rijkdom, ouder-dom, zoetdom, maechdom, jongedom*
	act noun	'the act of X', 'the prototypical behaviour of X'	verb noun	–	*hoerdom, wasdom, idiotedom*
	rank	'the profession of X'	noun	c. 13th-16th century	*priesterdom, bisschopdom, koningsdom, keizerdom*
concrete	collective	'group of X', 'group of people sharing quality X'	noun	c. 18th-21th century -endom	*mensdom, papendom, protes-tantendom, regentendom*
	locative	'area appointed to X'	noun	–	*hertogdom, vorstendom, prin-sdom*
	theory	'mentality with pro-totypical quality X'	adjective noun	–	*christendom, heidendom, protestantendom, hitlerdom*
	object	'thing with proto-typical quality X'	adjective	–	*rijkdom, heiligdom, eigendom*

Neologisms that still emerge in present-day Dutch, despite the low productivity of the suffix *-dom*, are mainly used in ironic or negative contexts. The infrequency and archaic nature of the suffix (Koelmans et al. 1979: 44), confer a humorous effect on its use in informal contexts: the combination of the formal suffix and a depreciative stem, such as *idioot* ('idiot') or *paap* ('popish person') yields parodic formations, such as *ploertendom* (from *ploert*, 'cad'), *keezedom* (from *kaas/kees*, 'cheese', referring to the Dutch), *papedom* or even Afrikaans *idiotedom*. The negative connotation of the base has an impact on the suffix too: derivations such as *regentendom* (14) or *protestantendom* inherit a disapproving value even though the stem is neutral.

(14) *Toen   zijn   de   studenten   in   opstand   gekomen   tegen*
      then   are   the   students   in   resistance   came   against
      het   regent-en-dom.
      the   **teacher**-NOUN-*s*-PLURAL-***dom***-SUFFIX
      'And then the students rose against the **teachers**'
      (1969, F. Auwera, *Schrijven of schieten interviews*, Harry Mulisch, p.98)

3.5   The suffix -schap: denominal quality nouns referring to ranks

Although *do(e)m* and *haidus* were also found in compounds before the suffixes had emerged, it is *schap* which shows this compound origin most explicitly in the Old Dutch data of the DBNL corpus. The earliest attestation *watarskap* ('water source', or literally 'place where water is being created') is sometimes analysed as a compound (see ONW) and sometimes as a derivation (see WNT). Similarly, *bodaskap* refers to the 'messenger creation' or the message that the messenger (*boda*) 'creates'/transfers. The dominance of the compound use in Old Dutch may even entail that *schap* did not occur as a suffix yet in this period. The first clear suffix

function of *-schap* is attested in 12th century deadjectival *heithinskap*, with a semantically abstract second element: *heithinskap* refers to the quality of 'being a heathen' (compare *heathenism*).

In my Early Middle Dutch data, *-schap* is mainly attested with nouns referring to people. It tends to differ from *-dom* in that nominal bases with *-schap* more often refer to a specific occupation or profession instead of a social status or family relationship (e.g. *maghe* or *hoer* in *maghedom*, *hoerdom*). This pattern was extremely productive throughout the history of the suffix and has proven to be fairly stable, as 12th and 13th century derivations *meysterscap* (from *meyster*, 'scholar'), *ridderscap* (from *ridder*, 'knight') or *coepmanscap* (from *coepman* 'merchant') and 14th century neologisms such as *capiteinscap* (*kapitein*, 'captain') or *governoerscap* ('governor') are still fully transparent today. The suffix seems to compete with *-dom* in derivations such as *broederscap* ('brotherhood', compare *zusterdom*, 'sisterhood'), *juedscap* (from *jood*, 'Jew', ~ *jodendom*) and *maechscap* (from *mage*, 'a relative', ~ *magedoem*). The distributional distinction between profession and social status is, however, not rigid: *cnaepscap* (15), which is derived from *cnape*, may refer to the state of being a knight or servant, as well as to the social status of a young unmarried boy. The close link between family and social status is also present in *broederschap* ('brotherhood') which may relate to the family relationship as well as to the '(spiritual) solidarity' or in *vaderschap* (cf. *fatherhood*), which may also refer metaphorically to the typical qualities of a person who 'functionally and relationally acts as a father' (Geeraerts & Moerdijk 1983: 93). These abstract nouns often name an interhuman relationship, from family relationships (*zusterschap*, 'sisterhood' or recent *ouderschap*, 'parenthood') to social relationships (*vriendschap*, 'friendship' or Middle Dutch *maatschap*, 'companionship').

(15) *[...]* *Die*   *in*   **cnaep-scap**   *so*   *street*
     […]   who   in   **servant**-NOUN-***ship***-SUFFIX   so   fought
     Dat *hi*   *wel*   *ridder mocht betalen.*
     that   he   well   knight may   pay
     '… who fought in servantship, so that he could pay a knight'
     (c. 1315-1335, Lodewijk van Velthem, *Spiegel historiael*, vijfde partie, boek III, r. 1340)

Similar to the development of *-dom*, the 12th and 13th century nominal bases with an equivalent adjectival use were again the ones making further extension of *-schap* to the adjectival derivations possible, viz. *vroetscap* (16), *nutscap* and *vrientscap* which could be based on the adjectives *vroet* ('wise'), *nut(te)* ('useful') and *vrient* ('friendly') or on the homonymous nouns yielded by zeroderivation. This led to 13th century deadjectival quality nouns *ghemeenscap* ('fellowship', from adjective *ghemeen*) and *bliscap* ('gladness', from adjective *bli*, without the nominal ending in *-d*, cf. *blidscap*), which referred to a specific human characteristic, or sometimes to a temporary state with past participle bases (Middle Dutch *dronkenschap*, 'being drunk' or 19th century *gevangenschap*, 'being captivated'). The increasing productivity of the adjectival pattern in Middle Dutch is illustrated by neologisms *familyaerschap*, *ijpocrijtscap* or *jaloirscap*, based on *familyaer* ('presumptuous'), *ijpocrijt* ('hypocriet') and *jaloers* ('jealous', derived from French *ja-*

Table 10   Diachronic overview of morphological patterns with -schap (type frequency)

base	infinitive	noun	
		thing	**person**
c. 1200-1300	o	1 (0.33%)	8 (26.67%)
c. 1300-1400	o	5 (9.43%)	14 (26.42%)
c. 1400-1450	1 (4.35%)	2 (8.70%)	8 (34.78%)
c. 1450-1500	o	1 (4.76%)	7 (33.33%)
c. 1500-1550	4 (10.81%)	6 (16.22%)	7 (18.92%)
c. 1550-1600	7 (13.21%)	4 (7.55%)	14 (26.42%)
c. 1600-1650	2 (4.00%)	6 (12.00%)	18 (36.00%)
c. 1650-1700	3 (8.33%)	o	9 (25.00%)
c. 1700-1750	4 (8.16%)	4 (8.16%)	18 (36.73%)
c. 1750-1800	4 (8.00%)	4 (8.00%)	17 (34.00%)
c. 1800-1850	4 (6.56%)	4 (6.56%)	23 (37.70%)
c. 1850-1900	4 (2.99%)	10 (7.46%)	54 (40.30%)
c. 1900-1950	5 (11.36%)	3 (6.82%)	15 (34.09%)
c. 1950-2000	3 (5.26%)	5 (8.77%)	28 (49.12%)

lous). Nevertheless, this expansion was restricted to Middle Dutch: no new deadjectival derivations were generated in 16th century Dutch.

(16) *[…]   Ende   heft   verloren   alsine   cracht, Sine*
　　　[…]   and   has   lost   all his   power,   his
　　　vroet-scap   *ende   sine   virtuut.*
　　　***wise*-ADJECTIVE-*ship*-SUFFIX**   and   his   virtue
　　　'… and lost all of his power, his **wisdom** and his virtue'
　　　(c. 1250, anonymous, *Ferguut*, r. 2788)

I propose that deadjectival *-schap* influenced the semantics of the denominal pattern, as even some denominal derivations came to refer to a quality instead of a rank or status. In these cases, the prototypical characteristic or state of a person became the focus: Middle Dutch *gezelschap* is probably most accurately translated by 'fidelity' or 'kindness', which is to be expected from a *gezel* ('companion'). *Cnechtschap* acquires the meaning 'helpfulness' and *meesterscap* (lit. 'mastery') refers to the quality 'competence'. Other examples are *vriendschap* ('friendliness') or *vijandschap* ('hostility'). Besides this semantic side path, the denominal pattern with profession semantics remained highly productive. In the 16th and 17th century neologisms *apostelschap* (lit. 'apostle-ship'), *roffiaenschap* (from *roffiaan*, 'matchmaker' or 'brothel keeper'), *burgemeesterschap* ('mayoralty'), *herderschap* ('pastorship') or *colonelschap* ('colonelship') emerged.

The high productivity of the suffix in the late 16th century manifested itself in the emergence of deverbal derivations (from no exclusively deverbal attestations in the 12th and 13th century to 10.81% and 13.21% in the early and late 16th century). Some 14th and 15th century deadjectival as well as denominal constructions had indirect verbal origins, such as *dronkenscap* (from participle *drunken*), *ghereetscap* (from *gereiden*, 'to prepare'), *conscap* (cf. *conde*, 'skill') or *ghequelscap* (noun derived from *kwellen*, 'to torment'). This resulted in a deverbal productive pattern of which 16th century abstract nouns *vereenschap* (from *vereenen*,

rank	past participle	adjective	noun or adjective	other
10 (33.33%)	1 (3.33%)	4 (13.33%)	6 (20.00%)	o
24 (45.28%)	4 (7.55%)	4 (7.55%)	2 (3.77%)	o
7 (30.43%)	1 (4.35%)	3 (13.04%)	1 (4.35%)	o
5 (23.81%)	3 (14.29%)	2 (9.52%)	3 (14.29%)	o
11 (29.73%)	1 (2.70%)	7 (18.92%)	1 (2.70%)	o
19 (35.85%)	2 (3.77%)	3 (5.66%)	4 (7.55%)	o
14 (28.00%)	3 (6.00%)	4 (8.00%)	3 (6.00%)	o
14 (38.89%)	3 (8.33%)	4 (11.11%)	3 (8.33%)	o
15 (30.61%)	4 (8.16%)	2 (4.08%)	2 (4.08%)	o
15 (30.00%)	5 (10.00%)	3 (6.00%)	2 (4.00%)	o
18 (29.51%)	5 (8.20%)	6 (9.84%)	1 (1.64%)	o
52 (38.81%)	5 (3.73%)	5 (3.73%)	2 (1.49%)	2 (1.49%)
13 (29.55%)	4 (9.09%)	1 (2.27%)	3 (6.82%)	o
13 (22.81%)	3 (5.26%)	3 (5.26%)	2 (3.51%)	o

'to unite'), *verraedschap* (from 'to betray') or *versnelschap* (from 'to accelerate') are examples. Two 17th century derivations, wetenschap and weddenschap were based on the infinitive form (*weten*, 'to know' and *wedden*, 'to bet') instead of the verbal stem. Deinfinitival *(on)wetenschap* eventually replaced Middle Dutch *conste* ('skill') and *weddeschap* is a synonym of now obsolete *wedding*. Apparently, these deverbal and deinfinitival derivations often assumed an act noun meaning. *Zeggenschap* originally referred to 'the act of saying something' and wetenschap has been attributed the definition of 'the act of knowing' in the WNT. The formation of act nouns with -schap conflicted with deverbal *-ing*, as in 17th century *rekeninge, weddinge*[13], *versnelling* or *kwelling*, cf. *ghequelscap*.

Perhaps exactly because of this overlap with the domain of *-ing*, act nouns in *-schap* have known a very short productive period, which meant that most deverbal derivations became soon lexicalized and underwent semantic specialisation. *Zeggenschap* nowadays refers to 'the right to decide', *rekenschap* no longer refers to 'the act of calculation' but to the justification that comes with a certain calculation and *nalatenschap* names the objects, goods or ideas that have been transmitted by ancestors ('legacy', expressed by *erfgoet* before the 17th century). A relatively common present-day deverbal derivation is the lexicalized *beterschap* ('improvement, progress, recovery'). *Beterschap* originated in the 17th century, based on a comparative form (*beter*, from *goed*, 'good') or the derived verb *beteren* ('to improve'), and finally replaced the deverbal suffix *-nis* of obsolete *beternisse*. Table 11 specifies how *beternis(se)* was replaced by *beterschap* in the 18th century.

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13   Their semantic similarity may even have led to 18th century stacked form *weddingschap*. The WNT adheres to the explanation of De Vries (s.d.: 89) for this occurence: *weddenschap* is derived from *weddingschap*, via 'assimilation of *ng* to *n* in front of *s*', although this seems to be in contradiction with the chronology of the data: the first attestation of *weddenschap* dates back to the 17th century, while *weddingschap* has been attested for the first time in the 18th century (see WNT).

Table 11   Development of beternisse *and* beterschap *(token frequency)*

	beternis(se)	beterschap
c. 1300-1400	9	0
c. 1400-1500	1	0
c. 1500-1600	1	0
c. 1600-1700	4	2
c. 1700-1800	0	17
c. 1800-1850	0	5
c. 1850-1900	0	55
c. 1900-2000	0	4

In the 18th and 19th century data, most neologisms were denominal and had pro-
fession semantics such as *professorschap* ('professorship'), *acteurschap* (lit. 'actor-
ship'), *schrijverschap* (lit. 'writership') or 19th century *beulschap* (lit. 'execution-
ership'), *boerschap* (lit. 'farmership'), *bruidegommeschap* (lit. 'bridegroomship')
and *diktatorschap* ('dictatorship'). The only exception to this rule is 19th century
zwangerschap ('pregnancy'), which replaced synonymous *zwangerheid*.

   In certain contexts, the derivations acquired concrete meanings. Although the
collective meaning was less common than it was with *-dom*, *-schap* could also
refer to a group of people, as in *jongelingschap* ('youngsters'), *clerckschap* ('the
clerks') and *burgerschap* ('the citizens'). Present-day *gezelschap* has this mean-
ing of both 'the group companions' (cf. Middle Dutch *ghezinne* or *compagnie*)
and 'an association' (cf. *versaminghe* or German *gesellschaft* 'society'). Locative
concretisations of derivations in *-schap* could refer to an area or an institute. One
example is *graafschap* ('county', e.g. *'t Graefschap van Vlaenderen*, 'the Coun-
ty of Flanders') which denotes the area over which the *graaf* ('count') has power
(compare *hertogdom*). Recent locative derivations denote an institute, as in *ven-
nootschap* ('company') or *agentschap* ('agency'). Some derivations came to desig-
nate a thing or person exhibiting the prototypical feature or state expressed by the
base noun, such as *gereetschap* (collective 'tools', cf. Middle Dutch *tuyg*), or *een
maatschap* and *een heerschap* referring to a mate (*maat*) or gentleman (*heer*), in
which the *-schap* suffix does not seem to contribute to the denotational meaning
of the derivation. These lexicalisations did not always survive: the use of *vriend-
schap* (lit. 'friendship') in the sense of 'a pleasure' (for instance in *een vriendschap
doen*, 'to do a favour'), is nowadays obsolete.

   In the 20th century, the original denominal pattern with *-schap* has proven to
be the most stable and productive, as shown by neologisms *presidentschap*, *dan-
dyschap*, *pionierschap* (from *'pioneer'*) or *voyeurschap*, sometimes with ethnic
nouns in *duitscherschap* (lit. 'Germanship'), *europeërschap* (lit. 'Europeanship')
and *mandarijnenschap* (from *mandarijnen*, 'Chinese mandarins'). Even in infor-
mal present-day Dutch, it shows more productivity than *-nis* or *-dom*: the forma-
tion of *vrouwschap* ('womanhood') or deadjectival *bezopenschap* (lit. 'sloshed-
ness') have been attested. Although the suffix does not necessarily take stems with
negative connotation, some of these recent derivations hint at a slightly coloured
meaning. The clash between *-schap* naming prestigious ranks and some 'hierarchi-
cally low' (Moerdijk & Geeraerts 1983: 528) bases, such as *vuilnisman* ('garbage
collector'), have led to ironic derivations (e.g. *vuilnismanschap*). This irony may

Table 12   Diachronic overview of proposed semantic derivation patterns in -schap

		semantic frame	base	productive	example
abstract	quality noun	'the quality of X', 'the state of being X'	adjective participle noun	c. 12th-15th century	vroetschap, blijdschap, Duitserschap, gevangenschap, zwangerschap
	kinship or relation	'being X', 'having the relationship X'	noun	c. 12th-16th century	broederschap, vriendschap, vijandschap, ouderschap
	rank	'the profession of X'	noun	c. 14th-21th century	priesterschap, gouverneur-schap, ridderschap
	instantial act noun	'the act of X'	verb	c. 16th-17th century	weddenschap, rekenschap, verraadschap, versnelschap
concrete	collective	'group of X', 'group of people sharing quality X'	noun	-	gezelschap, klerkschap
	area or institution (locative)	'area or institute appointed to X'	noun	- (cf. schap)	graafschap, agentschap, vennootschap, gebuurschap
	person	'person with prototypical quality X'	adjective noun	-	manschap, echtschap, maatschap, heerschap
	object	'thing with prototypical quality X', 'result of the act of X'	adjective verb	-	gereedschap, eigenschap, nalatenschap, gemeenschap

be present in some recent formations, but most neologisms in my data have a neutral connotation, such as *papaschap* (lit. 'daddyship'). Except for some occasional creative derivations, the negative connotation or ironic aura has not become part of the suffix itself.

Van Bree (1996: 161) has noted that in certain Northern dialects, *-schap* was reinterpreted as a free morpheme and could be extracted. In neologisms *productschap* and *bedrijfschap*, *schap* no longer functions as a suffix, but is instead reinterpreted as the second part of a compound: *productschap* refers to an organisation of enterprises which process the same material or 'product' (cf. Van Dale 1999). *Schap* has here a specific lexical meaning of its own, namely 'organisation of enterprises'. This reanalysis is probably based on the analogy with *vennootschap*, which originally referred to the abstract notion of 'being a *vennoot*, a partner', but came to refer to a co-operation in economical affairs. This concrete meaning of an 'organisation' or 'institute' has become associated with the lexical morpheme *schap*, which is even able to stand on its own as a noun (17, not to be found in Van Dale 1999). The emergence of autonomous *schap* is the result of analogy, contextual reinterpretation and finally extraction or 'debonding' (Norde 2006), but does not involve a revival of the original semantics of **skap* ('creature'). Only one semantic aspect of the derivation is being extrapolated to the autonomous morpheme: *een schap* does not refer to 'a rank' nor 'an area', but to an 'organisation' or 'institute'.

(17) *Een*   **schap**   *[…],*   *zoals*   *Zuivel,*   *is*   *veel*
     an   **ship**-NOUN   […]   such as   Dairy,   is   plenty
     terughoudender   *dan*   *een*   **schap** *[…],*   *zoals*   *Akkerbouw.*
     Distant   than   a   **ship**-NOUN   such as   Agriculture.
     'an **industry** (…), such as Dairy, is more distant than a **business** […], such as Agri-
     culture'
     (February 2006, Belgian Ambassade, *Maandbericht uit Den Haag*)

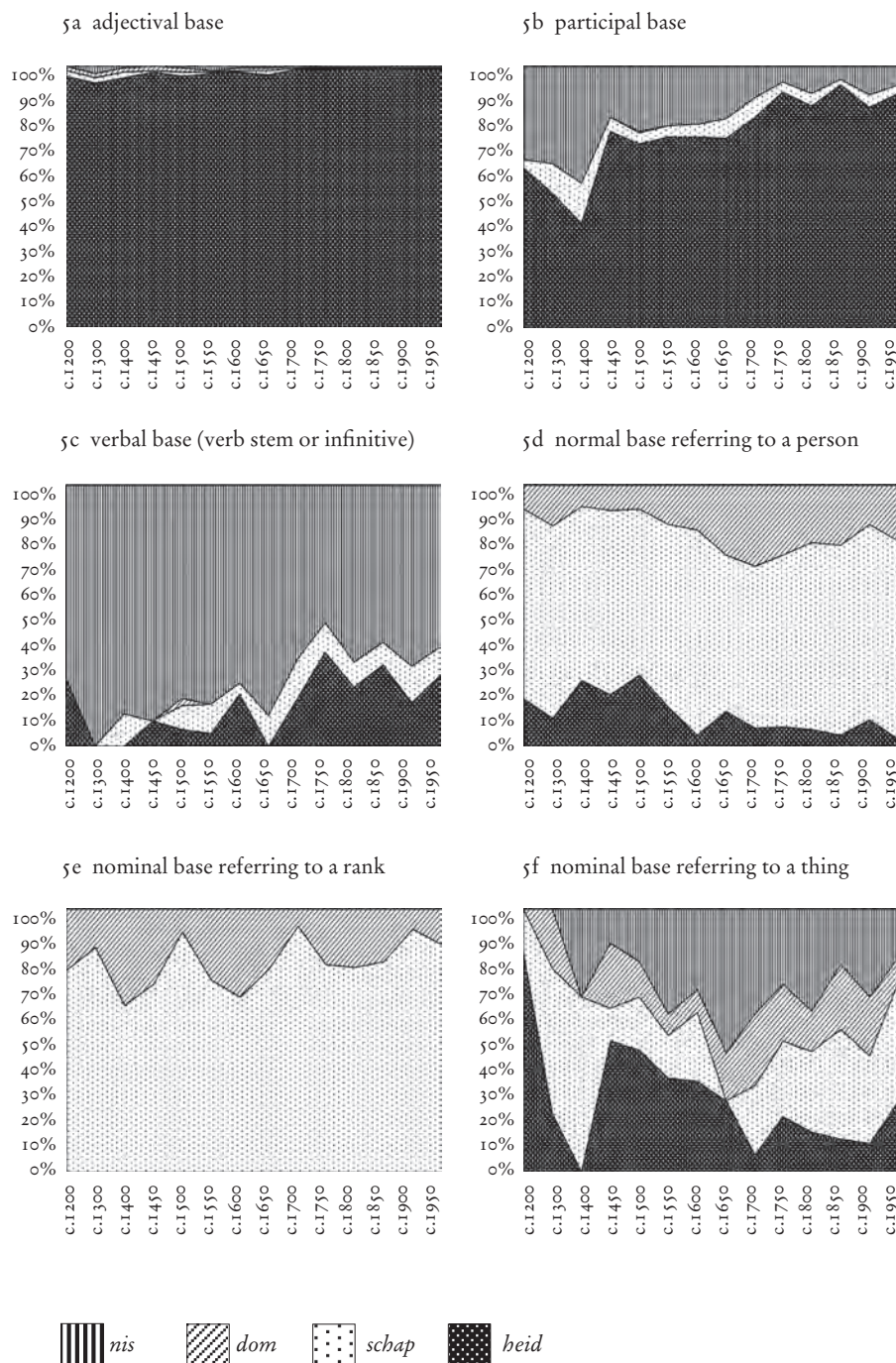## 4   Concluding discussion: rivalry within the paradigm of abstract suffixation

The suffixes *-heid*, *-dom* and *-schap* have often been discussed together because
of their similar evolution, but in this investigation I hope to have shown that very
similar semantic and morphological processes also marked the history of *-nis*.
Noun-noun compounds with the autonomous nominal elements *haidus*, *do(e)*
m and *scap(e)* formed the source construction of *-heid*, *-dom* en *-schap* whereas
the suffix *-nis* probably originated in a deverbal derivational pattern. However,
through bleaching of their original lexical meaning and continuing processes of
analogy and reinterpretation, all of the suffixes diverged from their original struc-
ture and came to exploit morphologically different bases or new meanings, often
causing overlap with each other. Formal ambiguity between word classes, as well
as metaphorical or metonymic relations, nourished these shifts in derivational do-
main, for example from denominal *kindheid* ('social position of being a child') to
deadjectival *kindsheid* ('behaviour of childishness') or from *hindernis* as 'the act/
process of obstructing' to 'an obstruction, the result of the obstructing'.

   The suffixes differ, however, in that they do not display one and the same pro-
ductive pattern at the same moment. Figure 5 below, based on the relative spread
of these suffixes or 'productivity indexes' (*I*, see Al & Booij 1989), shows the
dominance of *-heid* in the adjectival pattern (5a) and its increase with participial
bases (5b). The figure visualizes the decrease of participial and deverbal *-nis* (5b
and 5c) and the predominance of *-dom* and especially *-schap* in the denominal pat-
tern (5d). It also shows the upcoming differentiation between kinships and rela-
tionships in *-dom* (5d) and professions in *-schap* (5e) and the temporary extension
of *-(te)nis* to bases referring to abstract nouns of the type *geboorte*, *gelofte* and *ge-*
dachte (5f). As shown by the opposite developments in (5c) and (5f), the decline
of *-nis* as a deverbal suffix coincided with the emergence and increase of denomi-
nal derivations.

   Although the morphological and semantic changes described are thus in many
ways similar, different chronologies and constant interaction between *-nis*, *-heid*,
-dom and *-schap* have probably caused the suffixes to develop their own sense and
prototypical[14] morphological structure. Old Dutch *-heid*, denominal in origin and
clearly distinguished from its concrete use by the 17th century allomorph *-igheid*,
produced deadjectival quality nouns from an early stage on. Together with the in-
crease of productivity of quality nouns with *-heid*, which imposed no restrictions
on the complexity of the adjectival bases, the productivity of deadjectival *-dom*
and *-schap* decreased. Consequently, *-schap* and *-dom* remained generally close to

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14   On delineation of prototypical patterns in morphology, see Moerdijk & Geeraerts (1983: 530).

Figure 5   *Evolution of the productivity index of -nis, -heid, -schap and -dom (based on type frequency of unambiguous types)*

5a adjectival base

5b participal base

5c verbal base (verb stem or infinitive)

5d normal base referring to a person

5e nominal base referring to a rank

5f nominal base referring to a thing

nis   dom   schap   heid

their noun-noun compound origins ('the rank/state of X') and especially -*schap* evolved into a fairly productive suffix to form denominal quality nouns referring to ranks or professions. It is not clear whether we should consider the fossilization of denominal abstract -*dom* and the following emergence of the collective meaning of -*dom*, formally expressed by the allomorph -*endom*, as a catalyzer or as a result of the growing overlap with quality nouns in -*schap*. The described changes also influenced the prototypical patterns of long-established, but in earlier studies neglected, -*nis*, a very productive Old Dutch suffix generating deverbal act nouns. Perhaps because of strong competition with deverbal -*ing* (e.g. *beproevenesse* and *beproevinge*), -*nis* first shifted to the domain of deadjectival quality nouns (e.g. *duisternis* or *soetenisse*), which was by then however already dominated by -*heid*. In the 17th century, some deinfinitival act nouns ending in -*heid* and -*schap* were created (e.g. *wetenheid* or *zeggenschap*), which entered into competition with deverbal -*nis*. Finally, both deverbal and deadjectival -*nis* disappeared. By the 18th and 19th century the suffix mainly formed denominal concrete nouns. The emergence of -*tenis* with reinforcing abstract -*te* marked the inevitable non-productivity of -*nis*: -*tenis* was, unlike -*nis/-enis*, not a phonologically determined allomorph, but rather a device to counterbalance the semantic erosion of the original suffix.

   On the basis of all these observations I propose that one of the most decisive factors in the development of the distinct suffixes was rivalry. With the notion of rivalry[15] I want to generalize over the diachronic interactions that can be observed between the four nominalizing suffixes. Analogy and reinterpretation led to partial functional doublets, which may create pressure towards semantic differentiation but may also result in the gradual loss of a form/function pairing. Figure 6 visualizes the history of productive patterns with each of the suffixes. I would argue that the extinction of deadjectival -*dom*, -*nis* and -*schap* and their following divergent paths are at first caused by the high productivity of deadjectival -*heid*. In English, for example, denominal -*hood* did not extend its domain to the same extent (e.g. *manhood*, *citizenhood* or *companionhood*), as a result of which -*dom* and -*ship* and more specifically -*ness* successfully took on deadjectival quality nouns (e.g. *freedom*, obs. *awaredom*, *kinship* or obs. *gladship* and *blindness*, *heaviness* or even *parabolicalness*, see OED). Rivalry between -*schap* and -*dom*, in its turn, triggered differentiation between relationship nouns and finally collective nouns in -*dom* and profession quality nouns in -*schap*. At moments when near-synonymous suffixes interfaced in non-lexicalized derivations, they were easily substituted by more productive ones (Wilmanns 1930: 392 and Van Bree 1996: 168). This is why *gelegenisse*, *quelnesse* and *beternisse* were replaced by derivations in -*heid*, -*schap* or -*ing* (cf. *gelegenheit*, *gequelheit/kwelling* or *beterschap*) or why collective -*dom* in present-day *jodendom* pushed out *joodscap* or *joodsheit*. Occasionally, 'overcharacterization' (Booij & van Santen 1998: 262) took place: the suffixal meaning was reinforced by the addition of another suffix, yielding concatenated forms such as 13th century *heerscapheit* or *maghedoemlijchheit*.

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15   In some respects, this notion is similar to the 'rivalry' invoked by Malkiel (1990) in his description of the diachronic interactions between various phonological forms in inflectional paradigms (1990: 219) or even between the variants of phraseological paradigms (1990: 106).

Figure 6   Schematic overview of the replacements of -nis, -heid, -dom and -schap
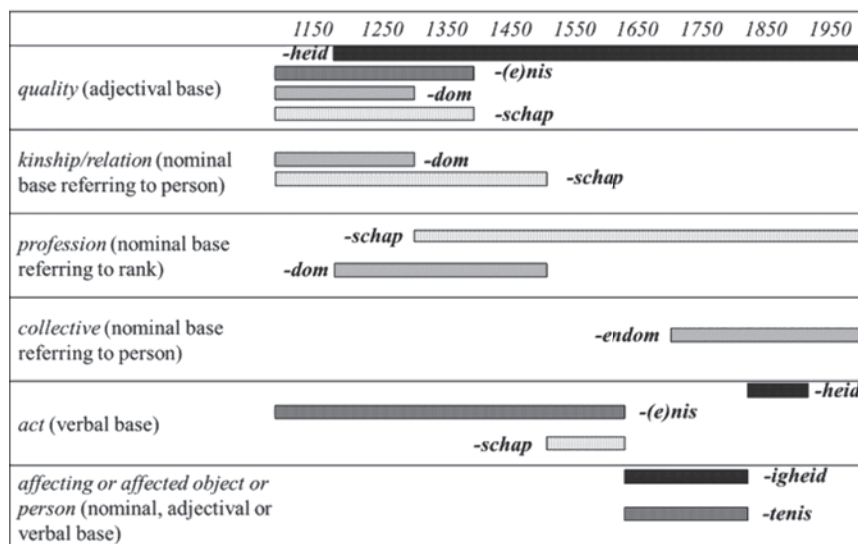
This first explorative diachronic outline of Dutch *-nis*, *-heid*, *-dom* and *-schap* has thus revealed that their semantic and morphological shifts sharply affected their present-day functions and that all abstract suffixes, regardless of their historic (dis)similarity, should be considered. Further research into abstract nominalising suffixes will give us more insight into the impact of interrelated changes within the paradigm of abstract suffixes, which hitherto have been studied too much in isolation. This case study might therefore be complemented in interesting ways with extensive comparative examinations into the English or German abstract affixes. Likewise, comprehensive study is warranted of underresearched Dutch suffixes *-ing*, *-de/-te* ('-th') or borrowed *-(er)ij* ('-(er)y'), *-isme* ('-ism'), *-age*, *-atie* (-'ation') and *-iteit* ('-ity'), because they have all partaken in the rivalry within the abstract suffixal system of the Dutch language.

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