

Linguistically interesting: Dutch domain adverbials in contrast

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Abstract

One might infer from the literature that Dutch may not use word-formation strategies for the linguistic realisation of the functional category of domain adverbials. English and German, however, are claimed to have very productive derivational patterns for the creation of domain adverbs. English systematically uses -wise (e.g. weatherwise) and German uses -mäßig or -technisch (e.g. wettermäßig, wettertechnisch). Starting from the observation that genetically related suffixes -gewijs, -matig and -technisch exist in Dutch, I investigate their potential to derive domain adverbs. I try to explain synchronic similarities and contrasts between Dutch, English and German patterns from a diachronic point of view as converging or diverging developments. The overall aim is to show that a contrastive investigation may contribute to a better understanding and a more accurate description of individual languages.

1 Domain adverbials

1.1 Domain adverbials as a functional category

Domain adverbials constitute a functional category within the universal linguistic function of modification.¹ By means of this modifier type “[t]he speaker claims (...) that the proposition holds true in a given domain; he does not commit himself to the truth of the proposition in any other domain” (Bellert 1977: 347). This can be illustrated by *linguistically* in (1) and *logically* in (2).

(1) *Linguistically, this example is interesting.*

(2) *Logically, John is wrong.*

Domain adverbials have been described for the first time by Bartsch (1972), who referred to them as ‘limitierende Adverbiale’ and by Bellert (1977), who subclassified ‘domain adverbs’ among the sentential adverbs. Quirk et al. (1985) included an adverbial category of ‘viewpoint subjuncts’. Although terminology varies, descriptions have in common that they refer to a functional category of modifiers which are used to restrict the domain of applicability of an utterance. Since domain modifiers are realised in the adverbial slots of the sentence, I shall refer to them as ‘domain adverbials’. By using a domain adverbial, the speaker determines the domain of validity of his or her utterance. In (2), the domain adverbial may function as a politeness strategy: the speaker

¹ This paper is a case study on the relation between derivation as a mode of linguistic expression and one particular functional category. I refer to Diepeveen (2011) for a case study on evaluative modifiers and to Diepeveen (2012) for further investigations. I would like to thank the supervisor of my Ph.D. dissertation, Matthias Hüning, for his advice. Special thanks go to the Institute for Dutch Lexicology for granting me the permission to access their material.

mitigates his or her judgement of John by restricting it to one domain. However, domain adverbials are particularly common as a stylistic device in objective texts in which different perspectives on a matter are required, e.g. in an academic or journalistic context. As domain adverbials allow the language user to illuminate specific aspects of a matter, they fit into an analytic mode of observation (Kühnhold, Putzer & Wellmann 1978). From a pragmatic point of view, domain adverbials constitute useful means for the organisation of utterances.

1.2 Domain adverbials in Dutch, English and German

Descriptions of domain adverbials as a functional category in the literature predominantly treat the linguistic expression of the category in English and German.² Different linguistic strategies are referred to, but scholars have particularly paid attention to the use of word formation for the creation of domain adverbs (e.g. Inghult 1975, Dalton-Puffer & Plag 2001, Lenker 2002, Ruge 2004, Lindquist 2007). In comparison with English and German, the attention for domain adverbials and their expression in Dutch is practically inexistent. The leading Dutch grammar by Haeseryn et al. (1997) includes a class of *bepalingen van beperking* ‘restrictive adjuncts’, with which it provides only a few loose examples. Handbooks on Dutch morphology, e.g. Booij (2002) and de Haas & Trommelen (1993), do not provide us with any information on specific morphology for creating domain adverbs. From this observation one might infer that Dutch lacks morphological strategies for a systematic expression of domain modification.

1.3 Aims and outline

On the basis of the current literature one gets the impression that there is a structural contrast between Dutch on the one hand, and English and German on the other: whereas English and German have systematic linguistic strategies associated with the functional category of domain modification, these seem to be absent in Dutch. However, I argue that this impression does not correspond with linguistic reality. In Section 2, I show on the basis of a comparison of genetically related suffixes that Dutch has word-formation patterns for the expression of domain modification in common with English and German. The synchronic section is supported by qualitative corpus data from *Algemeen Nederlands Woordenboek* (ANW) for Dutch. English examples are taken from the *British National Corpus* (BNC) and German examples from the *Kernkorpus of Digitales Wörterbuch der Deutschen Sprache des 20. Jahrhunderts* (DWDS).³ Section 3 discusses the history of complex domain adverbs in the three languages. The diachronic section starts from observations from the literature on English and German and is supported by qualitative data of the historical Dutch dictionary *Woordenboek der Nederlandsche Taal* (WNT).⁴ In Section 4, I discuss the findings of the preceding

² On the expression of domain modification in the Romance languages, see Klump (2009).

³ ANW could be accessed by special permission of the Institute for Dutch Lexicology [<http://www.inl.nl>]. BNC is available online at [<http://www.natcorp.ox.ac.uk>]; DWDS at [<http://www.dwds.de>]. Dutch and German examples are provided with a free English translation and word-by-word glosses. For the purpose of this paper, the morpheme division of complex domain adverbials is shown by means of hyphens and the category label ADV (adverbial) is added for the derivational suffix. Untranslatable particles get the label PART.

⁴ WNT and further historical dictionaries of Dutch are available online via an internet application under the supervision of the Institute for Dutch Lexicology at [<http://gtb.inl.nl>].

sections as converging or diverging developments. The paper is rounded off with a conclusion.

2 Linguistic expression of domain adverbials

2.1 Expression of domain adverbials in English and German

There is specialised literature on the expression of the functional category of domain modification in English and German (e.g. Dalton-Puffer & Plag 2001, Lenker 2002, Ruge 2004, Lindquist 2007). It refers to two main strategies: syntactic constructions and word formation. Syntactic constructions in English include: *as regards N*, *regarding N*, *in respect of N*, *as far as N is concerned*, *if we consider N*, etc. An example is given in (3).

- (3) *As far as age was concerned, absentees were more likely to be senior pupils, S4 and above.*

Similar syntactic constructions in German are *in Bezug auf N*, *was N betrifft*, *was N angeht*, *hinsichtlich N*, etc. An example is given in (4).

- (4) *Was die Disziplin betrifft, so stellt der Straßenkampf an sie natürlich geringere Anforderungen als ein langer und schwieriger Feldzug (...).*
 what the discipline concerns so makes the street.fight
 to them naturally smaller demands than a
 long and difficult campaign

‘As far as discipline is concerned, a street fight of course demands less of them than a long and difficult campaign.’

In English and German, complex words may function independently as domain adverbials. Examples for English were given in (1)-(2) with the deadjectival *ly*-derivatives *linguistically* and *logically*. Other examples include denominal *wise*-formatives, e.g. *weatherwise* in (5).

- (5) *I knew before I started out that, weatherwise, the end of March is not the time to plan a journey to the Islands (...).*

The word-formation strategy referred to in the literature for creating domain adverbials in German is denominal derivation by means of a range of native and non-native suffixes usually associated with the formation of relational adjectives. These suffixes include *-isch* in *polit-isch* ‘politically’, *-lich* in *gesundheit-lich* ‘regarding health’, *-ell* in *finanzi-ell* ‘financially’, *-iv* in *qualitat-iv* ‘qualitatively’, *-al* in *sozi-al* ‘socially’, *-är* in *pekuni-är* ‘financially’ (Inghult 1975: 153). However, for the creation of domain adverbials the literature refers specifically to the native suffixes *-mäßig* and *-technisch*. Consider *gattung-s-mäßig* ‘regarding genre’, with a linking-*s*, from DWDS in (6) and *fernseh-technisch* ‘regarding television’ from Ruge (2004) in (7).

- (6) *Ihr Stilmerkmal war die Groteske. Gattung-s-mäßig knüpfte her style.feature was the grotesque genre-ADV tied*

she an die Romanze an (...).
she with the romance in

‘Her stylistic hallmark was the grotesque. In terms of genre she tied in with romance.’

(7) *Gleich vorweg: Der Mittwochabend war*
straight beforehand: the Wednesday evening was
fernseh-technisch katastrophal.
telly.watch-ADV catastrophic

‘First of all, Wednesday night was a disaster as far as television is concerned.’

Lenker (2002) already pointed out that the English suffix *-wise* displays striking formal similarities with the German suffixes *-mäßig* and *-technisch*. Dalton-Puffer & Plag (2001) and Lindquist (2007) investigated *-wise* in large corpora of English and found that it productively combines freely with a variety of nominal base words. The same holds for *-mäßig* (Inghult 1975) and *-technisch* (Ruge 2004): there are hardly any input restrictions.⁵ They may combine particularly with base words which are not accessible for *-lich* due to morphological or phonetic reasons, for instance nouns derived with *-ung* (e.g. *gatt-ung* ‘genre’) and nouns ending in *-l* (e.g. *material* ‘material’). The suffixes *-mäßig* and *-technisch* are discussed in the literature as very productive especially in connection with the functional category of domain adverbials. Although they also create other semantic types of adverbials, it is striking that these suffixes may create domain adverbs almost unlimitedly, which even leads to competing formatives like *music-ally/music-wise* in English and *musik-al-isch/musik-mäßig/musik-technisch* in German.⁶ In sum, English *-wise*, German *-mäßig* and *-technisch* can be considered as specialised morphology for the creation of domain adverbials.

2.2 Expression of domain adverbials in Dutch

There are no indications in the literature that Dutch has any systematic strategies for realising the functional category of domain adverbials. Haeseryn et al. (1997) only mention examples in which we recognise syntactic strategies, such as the constructions *wat N betreft* ‘as far as N is concerned’, *met betrekking tot N* ‘as far as N is concerned’ as illustrated in (8), and *qua N* ‘as for N, regarding N’ as illustrated in (9).

(8) *Met betrekking tot de toekomst zit iedereen eraan.*
with relation to the future sits everyone off
Alleen van het heden kan een mens zeker zijn.
only of the present can a human sure be

‘As far as the future is concerned, everyone is wrong. One can only be certain of the present.’

⁵ The lack of input conditions is taken by some scholars as an argument to assume affixoid status or even compounding, but this discussion would take us too far within the scope of this paper. I refer to Decroos/Leuschner (2008) on Dutch and German affixoids and the status of *-matig/-mäßig* and Dalton-Puffer & Plag (2001) on the suffix-status of *-wise*.

⁶ As a native speaker of German pointed out to me, these formatives may not be fully interchangeable.

- (9) *Ik was vijftien en zijn boek was twaalf. Qua*
 I was fifteen and his book was twelve as.for
leeftijd pasten we bij elkaar.
 age fit we with each.other

‘I was fifteen and his book was twelve years old. As far as age is concerned, we matched.’

In Haeseryn et al. (1997) there are no examples of complex adverbs functioning as domain adverbials and handbooks on Dutch morphology do not refer to any specialised morphology for the creation of domain adverbs. This may give us the idea that the Dutch language system may not make use of word formation to realise the modifier subfunction of domain modification. If this is so, this is an interesting contrast between Dutch on the one hand and the related Germanic languages English and German on the other. It may mean that English and German prefer a more economical expression strategy.

There are, however, indications that linguistic reality deviates from the current descriptions in the literature. This becomes clear if we investigate derivatives formed with the suffixes *-gewijs*, *-matig* and *-technisch*. Philippa et al. (2003-2009) mention a ‘limiting’ meaning for the *gewijs*-derivative in (10) and van der Horst (2008) gives a few examples without a univocal interpretation.

- (10) *Temperatuur-gewijs gaan we er niet op vooruit.*
 temperature-ADV go we there not on forward

‘It is not getting any better for us temperature-wise.’

For the ‘limiting’ meaning, Philippa et al. (2003-2009) paraphrase *-gewijs* by *-technisch* and this corresponds with some paraphrases for *technisch*-derivatives by the prescriptive Dutch language portal *Taaladvies*. At closer inspection, the examples these scholars provide may be classified as domain adverbials. I tried to find evidence for these linguistic patterns in the ANW corpus, the largest dictionary of modern Dutch (after 1970) which is currently being developed. I analysed concordances for *gewijs*-derivatives and *technisch*-derivatives qualitatively which resulted in a relatively small collection of domain adverbs. Examples are *schoen-s-gewijs* ‘regarding shoes’ in (11) and *zang-s-gewijs* ‘regarding singing’ in (12) for *-gewijs*; additionally, *type-technisch* ‘regarding typing’ in (13) and *openbare-orde-technisch* ‘regarding public order’ in (14) for *-technisch*.

- (11) *De meesten van ons zullen schoen-s-gewijs wel*
 the most of us shall shoe-ADV PART
weer (...) ergens tussen deze twee uitersten in
 again somewhere between these two extremes in
belanden.
 land

‘As far as shoes are concerned, most of us will probably end up in between these two extremes again.’

- (12) *Politiek groeiden Vlaanderen en Wallonië verder uiteen,*
 political grew Flanders and Wallonia further apart

zang-s-gewijs *idem dito.*
singing-ADV idem ditto

‘Politically, Flanders and Wallonia grew further apart, as far as singing is concerned, ditto.’

- (13) *Eerst wilden* *we onze homepage*
first wanted we our homepage

degroteliteraireleeskijkknutseldoe-vakantiesite.nl noemen, maar dat
thebigliteraryreadwatchtinkerdo-holidaysite.nl call but that

leek *ons type-technisch* *toch niet handig.*
seemed us type-ADV yet not handy

‘First we wanted to call our homepage ‘degroteliteraireleeskijkknutseldoe-vakantiesite.nl’, but then we thought that would not be very practical from the point of view of typing.’

- (14) *We geven het honk het voordeel van de twijfel*
we give the base the benefit of the doubt
maar blijven kijken of het openbare-orde-technisch
but keep looking if it public.order-ADV
problemen geeft.
problems gives

‘We are giving the base the benefit of doubt but we will keep looking whether it leads to problems regarding public order.’

On the basis of its genetic relatedness to German *-mäßig*, I also investigated Dutch derivatives formed with the suffix *-matig* in ANW. Here, too, there is evidence that domain adverbs can be created, consider *kostprijs-matig* ‘regarding cost price’ in (15) and *verkeer-s-matig* ‘regarding traffic’ in (16).

- (15) *Zonder hun toelage en medewerking zou het*
without their allowance and cooperation would the
geheel kwalitatief en kostprijs-matig niet op het
whole qualitative and cost.price-ADV not on the
bereikte niveau kunnen aangeboden worden.
reached level can offered become

‘Without their allowance and support this whole thing could never have been offered at the current level qualitatively and in terms of cost.’

- (16) *Gedeputeerde Hennekeij gaat de vergelijking met een*
deputy Hennekeij goes the comparison with a
tunnel die financieel en verkeer-s-matig volledig zijn
tunnel that financial and traffic-ADV entirely his
start miste niet uit de weg. “Wij hebben ons
start missed not out the way we have our

huiswerk heel goed gedaan en lessen getrokken
 homework very good done and lessons drawn
uit de financiële perikelen van de Liefkenshoektunnel (...).
 out the financial perils of the Liefkenshoektunnel

‘Representative Hennekeij is not afraid to make a comparison with a tunnel which had a bad start financially and in terms of traffic. “We did our homework and learned from the financial problems of the Liefkenshoektunnel (...).”’

The qualitative corpus inspection has shown that *-gewijs*, *-matig* and *-technisch* may be associated with the formation of domain adverbs. Contrary to what we infer from the literature, the Dutch language system has the structural potential to use word formation for the expression of domain modification. The Dutch patterns with *-matig* and *-technisch* formally correspond with German *-mäßig* and *-technisch*, whereas Dutch *-gewijs* corresponds with *-wise*.⁷ In order to understand such structural similarities in these three genetically closely related languages, the inclusion of diachronic data is required.

3 Diachrony of complex domain adverbs

3.1 Diachrony of German domain adverbs

Inghult (1975) carried out a detailed investigation on the history of domain adverbs in German. He found that Middle High German could use adverbial genitives to express domain meanings, e.g. *der jâre* ‘of years’ and *der witze* ‘of wit’ in (17) (Inghult 1975: 152).

(17) *Er was der jâre ein kint, der witze ein man.*
 he was of.the year a child of.the wit a man

‘Regarding age he was a child, as for wit, he was a man.’

Then, syntactic constructions were used as illustrated in Section 2.1. Finally, in the 19th century, independent complex words could occupy the function of domain modifiers, e.g. *militär-isch* ‘militarily, from a military point of view’ which modifies *wichtig* ‘important’ in (18), an example from 1864 (Inghult 1975: 153).

(18) *Die Örtlichkeiten sind für uns auch militär-isch wichtig.*
 the areas are for us also military-ADJ important

‘The areas are also important to us from a military point of view.’

For *mäßig*-derivatives, which already productively derived various types of qualifying modifiers, the domain function constituted a new function. Consider (19) from 1813 with *sinn-mäßig* ‘regarding meaning’ and *klang-mäßig* ‘regarding sound’ (Inghult 1975).

(19) *So kommt ja der optische und akustische betrug*
 so comes PART the optical and acoustic deceit
des wortspiels gleichfalls auf ein solches vexierbild
 of.the word.play similarly on a such vexing.picture

⁷ German has a historically equivalent suffix *-weise* but this cannot be used for creating domain adverbs.

hinaus, das zwar nicht sinn- aber klang-mäßig zweien
 out that indeed not sense- but sound-ADV to.two
wesen angehört.
 figures belongs

‘Like this the optical and acoustic illusion of the pun is similarly disclosed in a picture puzzle, which represents two figures, not semantically, but in terms of sound.’

The use of *mäßig*-derivatives as domain adverbials rose strongly from the 1950s onwards, which caught the attention of scholars like Seibicke (1963) and of a range of language critics. The latter felt the pattern was stylistically inappropriate and they strongly disapproved of it (see Seibicke 1963 and Inghult 1975). Nevertheless, the suffix managed to specialise and the pattern is firmly established in present-day German, e.g. in examples like (6) above.

From Kann (1974) and Kühnhold, Putzer & Wellmann (1978) we infer that in the 1970s a new word-formation strategy was used in German for the creation of domain adverbs: the suffix-like morpheme *-technisch*. Ruge (2004) believes that *-technisch* is still on its way to becoming a suffix. He contrasts the domain adverb *filmtechnisch* in (20) and (21) which display a different morphological structure and a different semantic interpretation. In (20), *film-techn-isch* can be paraphrased as ‘regarding film technique, cinematically’ and as such it can be analysed as an *isch*-derivative of the compound noun *Filmtechnik* ‘cinematic technique’. In (21), however, *film-technisch* can be interpreted as ‘regarding film’ without there being any semantic connection with cinematic technique. We may assume that examples like (20) are historically primary. In (21), *-technisch* is a suffix morpheme, more precisely, a formal reflection of domain modification.

- (20) *Mit einem Mega-Budget von angeblich fast 200*
 with a mega-budget of allegedly almost 200
Millionen Dollar im neu gegründeten Disney-Digitalstudio
 millions dollar in.the new founded Disney-Digital.studio
entstanden, entführt diese film-techn-isch ebenso verblüffende
 originated abducts this film.technical just.as stunning
wie brillante Pionierleistung die Zuschauer zurück in
 as brilliant pioneer.achievement the viewers back in
eine Welt 65 Millionen Jahre vor unserer Zeit.
 a world 65 millions years before our time

‘Developed in Disney’s newly founded digital studio with a giant budget of allegedly nearly 200 million dollars, this cinematically amazing and brilliant pioneering achievement takes the viewer to a world 65 million years before our time.’

- (21) *Dasselbe blüht auch der Politiker-Riege, die neben*
 the.same blooms also to.the politicians.batch that besides
Kohl, Genscher und Waigel beispielsweise auch das
 Kohl Genscher and Waigel for.example also the

Ehepaar *Clinton präsentiert [...]. Auch ,film-technisch'*
 married.couple Clinton presents also film-ADV
sind die Maskenhersteller nicht von gestern. Die
 are the mask.makers not from yesterday the
jüngste Neuheit: Masken rund um den Krieg
 youngest novelty masks roundabout the war
der Sterne.
 of.the stars

‘A batch of politicians meet with the same fate, including not only Kohl, Genscher and Waigel but also the Clintons (...). But the mask creators also play their cards well when it comes to film. Their latest invention: *Star Wars* related masks.’

3.2 Diachrony of English domain adverbs

Diachronic observations on domain adverbs in English can be found in Lenker (2002). She observed that by the 19th century the use as domain adverbials represented a new function of *ly*-derivatives. An example from 1870 is *botanically* in (22).

(22) *Botanically, this is the region of palms.*

Around 1940, *wise*-derivatives are found as domain adverbials in American texts. Consider *positionwise* from 1942 in (23) (Lenker 2002).

(23) *It should be noted that there are two types of hydrogen atoms positionwise.*

The development of this new function is interesting since *-wise* had already lost its productivity for deriving qualifying adverbs (e.g. *crosswise*). The new pattern of creating domain adverbs with *-wise* expanded quickly and caught the attention of language critics who strongly disapproved of its proliferation.⁸ Nevertheless, the pattern spread, also to British English. Lindquist (2007) shows that *wise*-derivatives in present-day English occur across all varieties of English and across all genres, both spoken and written.

3.3 Diachrony of Dutch domain adverbs

In order to find out more about the diachrony of the expression of domain modification in Dutch, I carried out a qualitative investigation in the historical dictionary *Woordenboek der Nederlandsche Taal* (WNT). The huge collection of quotations in WNT covers the period 1500-1976 and can be searched with a search application. In the WNT material, independent domain adverbs can be detected in the 19th century, e.g. *moreel* ‘morally’ and *fysiek* ‘physically’ from 1844 in (24).

(24) *Door dit alles (...) is de stad zoodanig, moreel*
 because this all is the city thus moral

⁸ A nice example of the fact that the pattern was frowned upon is the film *The Apartment* (1960) in which the character Al Kirkeby uses *wise*-adverbs all the time, which is ridiculised by the other characters who start imitating him. The German version of the film renders all *wise*-adverbs by *mäßig*-derivatives (see Sick 2005).

en fysiek, in de verknijping (...) dat iemand
 and physical in the cramp that somebody
naauwelijks meer bekennen durft, dat hij een
 barely anymore admit dares that he a
Leidenaar is.
 person.from.Leiden is

‘As a result of all this (...) the city is morally and physically so cramped (...), that people hardly dare to admit that they are from Leiden.’

It seems that *matig*-derivatives can be used as domain adverbials in the 1950s. An example is *begrip-s-matig* ‘regarding terminology’ from 1955 in (25). Whereas examples are scarce in the WNT material, I detected a rise of the new domain function of *-matig* in the 1980s and 1990s in the ANW corpus (see Section 2.2).

- (25) **Begrip-s-matig** is het stellig gewenst om
 term-ADV is it certain desired to
onderscheid te maken tussen zuivere
 difference to make between pure
wetenschap en toegepaste wetenschap en
 science and applied science and
wetenschapstoepassing.
 science.application

‘Terminologically it is certainly desirable to differentiate between pure science, applied science and science application.’

In the WNT material, I found complex adverbs which structurally represent *isch*-derivatives of compounds with the lexical noun *techniek* ‘technique’, e.g. *zangtechnisch* ‘regarding singing technique’ from 1946 in (26).

- (26) *De spanning en opening der mond (...), de*
 the tension and opening of.the mouth the
ligging en vorm van de tong zijn
 location and form of the tongue are
zang-technisch volkomen verantwoord.
 singing-technical fully justified

‘The tension and opening of the mouth (...), the position and the shape of the tongue are fully justified as far as singing technique is concerned.’

The domain adverb *zang-technisch* in (26) can be compared with German *film-technisch* ‘cinematically’ in (20) in Section 3.1: there clearly is a lexical meaning of ‘technique’. The structure of this complex adverb differs from e.g. *type-technisch* ‘as far as typing is concerned’ in (13) and *openbare-orde-technisch* ‘as far as public order is concerned’ in (14) in Section 2.2 above. We may assume that the latter two adverbs, both attested in ANW in the year 2002, are formed with a bound morpheme *-technisch* which has no semantic association with ‘technique’. Instead, *-technisch* can be analysed as a derivational suffix which contributes the domain interpretation. Since no unambiguous examples of derivatives can be found in WNT, the pattern must have

emerged in the 1970s at the earliest. In ANW there are at least unambiguous examples in the 1990s.

As for *gewijs*-derivatives, Philippa et al. (2003-2009) situate the new ‘limiting’ meaning at the end of the 20th century. My qualitative study shows that there are no unambiguous domain adverbs formed with *-gewijs* in the WNT material. Instead, we are dealing with a young pattern: the first examples can be found in material of the 1990s in ANW. I refer to (11) and (12) in Section 2.2 above.

4 Discussion: converging and diverging developments

4.1 Converging developments

The diachronic overview in Section 3 reveals converging developments regarding complex domain adverbs in Dutch, English and German. They developed the potential to use complex adverbs as independent domain modifiers, e.g. English *botanically* in (22), German *militärisch* ‘militarily’ in (18) and Dutch *moreel* ‘morally’ in (21). Complex domain adverbs formed with native suffixes (e.g. *-ly*, *-isch*) and foreign suffixes (e.g. *-eel*) are found from the 19th century onwards. It is not clear how this convergence should be explained. Inghult (1975) refers to possible influence from French and Latin but he also considers the possibility of independent linguistic developments. This fits in with the explanation provided by Lenker (2002) for the expansion of domain adverbials in English and German. She argues that people until the Middle Ages tended to consider the world rather one-sidedly, predominantly from a religious or theological point of view. In the spirit of Enlightenment and the progress of science and technology, it became important to observe the world from multiple perspectives. Thus, language users developed a more analytical way of talking about the world. As shown in Section 3, descriptive phrases were the main linguistic strategy for realising domain modifiers until the 19th century. From then on, speakers of western European languages introduced a new, more economical mode of expression for domain modification as they started using complex adverbs. An influential factor in this respect may be the growing importance of media and advertising (Kühnhold, Putzer & Wellmann 1978: 427).

A striking convergence is the fact that Dutch, English and German rapidly extended their inventory of bound morphemes to form domain adverbs on the basis of nouns. In German, *-mäßig* was associated with domain modification in the 19th century. English followed with *-wise* in the 1940s and Dutch with *-matig* in the 1950s. In the 1960s, German added *-technisch* to the inventory, as a competitor to *-mäßig*. Dutch followed with *-technisch* and *-gewijs* in the 1990s. The choice of these elements may have a language-structural reason: they are remarkably flexible when it comes to input conditions. As pointed out in Section 2, they can be combined with practically any noun, regardless of its origin and morphological complexity. Moreover, Seibicke (1963) found that native suffixes had an additional advantage: native alternatives were applauded by puristic authorities. Around 1900, the *Allgemeiner Deutscher Sprachverein* (later *Gesellschaft für Deutsche Sprache*) explicitly advised language users to replace foreign lexemes in German by *mäßig*-derivatives, e.g. *militärisch* by *krieg-s-mäßig*. However, many prescriptive linguists criticised the abundant use of *mäßig*-adverbs (and, likewise, of English *wise*-adverbs) since they were perceived as

trendy and stylistically marked. Despite severe criticism, both *-mäßig* and *-wise* managed to penetrate all style registers and varieties.

It is striking that Dutch *-matig* and *-technisch* appeared later in the domain function than their German equivalents and *-gewijs* displays this function also half a century later than English *-wise*. The chronology of the shared patterns may imply that language contact is responsible for the convergence. For *-gewijs*, this is indeed highly likely. Philippa et al. (2003-2009) propose that Dutch borrowed the new ‘limiting’ meaning from English. It is a fact that language contact with English in the 1990s enlarged particularly through modern communication media. The internet constitutes the typical context where domain adverbs formed with *-gewijs* crop up. Nevertheless, it cannot be entirely ruled out that the domain use developed independently in Dutch; an indication for this are ambiguous examples which are open for both a qualifying or a domain interpretation, e.g. *percent-s-gewijs* ‘percentage-wise’ may get the interpretation ‘as a percentage’ or ‘as regards percentages’. The possibility of an independent semantic development must also be considered for *-technisch* and for *-matig*. Decroos & Leuschner (2008) argue that the Dutch suffix *-matig* developed independently, but that it was influenced by German *-mäßig* which had become productive much sooner and to a very large extent.⁹ This observation may be extended to the domain interpretation, which may have given off some of its popularity. For *-technisch* in Dutch, we may assume a development parallel with German, where adverbially used *isch*-derivatives are historically primary. The development to a suffix may still be ongoing (cf. Ruge 2004 and see Section 3.3).

In sum, we discovered structural convergences in the investigated Germanic languages which are probably the result of a combination of the effects of language contact and parallel developments.

4.2 Diverging developments

Although there are structural convergences, we also observe diverging developments between Dutch, English and German regarding domain adverbs. The main divergence is situated on the level of norm, which I am using here in the sense of Coseriu, as the ‘normal’ realisation of a functional category (see e.g. Decroos & Leuschner 2008). In present-day English, *wise*-adverbs now represent a ‘normal’ linguistic strategy for realising domain modifiers and so do *mäßig*-adverbs in German. Observe that *technisch*-adverbs may still have some acceptance problems (see e.g. Sick 2005). However, in Dutch, domain adverbs derived by *-gewijs*, *-matig* and *-technisch* are perceived as somewhat marked. They do not constitute the normal realisation of the functional category of domain modification in Dutch. This can be inferred from their absence in the literature, in grammar and in lexicography, but it is also shown by their scarcity in a large corpus of present-day Dutch like ANW. If they occur, this is typically the case in concordances from the internet (e.g. discussion forums) or in literary and journalistic texts where the author may show off a certain creativity or wittiness. The deliberate nature particularly of *technisch*-derivatives can be illustrated by various *ad hoc*-creations like *openbare-orde-technisch* in (14) in Section 2.2 above.

⁹ The origin of the Dutch suffix *-matig* itself is a matter of debate. See Decroos & Leuschner (2008) and Diepeveen (2012).

The deliberate or artificial character of the derived domain adverbs in Dutch is in strong contrast with present-day English and German, where domain adverbs formed with *-wise* and *-mäßig* (and to a lesser extent, *-technisch*) underwent a huge rise in productivity and penetrated all varieties and registers. There may be a language-internal explanation for this contrast. As pointed out in Section 2.2, Dutch may use descriptive phrases for the expression of domain modification. It appears that particularly the [*qua*+N]-phrase ‘regarding N’, illustrated in (9) above, is frequently used, e.g. in the ANW corpus. If we look into the diachrony of the [*qua*+N]-phrase, we find that it is relatively new. Van der Horst & van der Horst (1999) observed a semantic shift for *qua*: it was originally used to indicate some kind of identity, e.g., *qua professor* ‘as a professor’, but it developed into a preposition with a limiting meaning. They situate this shift around 1943 but earlier examples can be found in WNT, e.g. *qua figuur* ‘as for the appearance, regarding the appearance’ from 1921-1923 in (27).

- (27) “Een prettige stem, die mevrouw Poolman,”
 a pleasant voice that madam Poolman
 oordeelt een minzame dame (...), “maar **qua figuur** niet
 judges a benign lady but as.for figure not
 de aangewezen ingénue”.
 the appropriate ingénue

“‘This Mrs. Poolman has a lovely voice’, a gracious lady judges (...), ‘but not the appropriate ingénue as far as her appearance is concerned’.”

The new use of *qua* was initially criticised but it eventually found recognition in Dutch lexicography from the 1950s onwards (van der Horst & van der Horst 1999). It is firmly established in present-day Dutch across text-types and registers. The type frequency of the [*qua*+N]-phrase suggests a productivity which has the characteristics of a word-formation pattern.¹⁰ This may block the use of derivational patterns with *-matig*, *-technisch* or *-gewijs*. A quantitative analysis on the relative productivity and division of labour of these patterns was, unfortunately, not feasible within the scope of this paper.

Besides language-internal explanations for the divergence between system and norm in Dutch, some language-external factors may have had an influence on the marked status of derived domain adverbs. We may again refer to puristic activities, for instance by the *Genootschap Onze Taal* after World War I, which were directed against *matig*-derivatives. Speakers of Dutch were advised to avoid these since they were considered as germanisms. Similar advice is given today by the online prescriptive language portal *Taaladvies*, which considers certain *matig*-derivatives and *technisch*-formatives as ‘non-

¹⁰ In English, domain expressions with *qua* do not seem to exist; in German, they are extremely rare. In the DWDS material of the 1990s there is a sporadic example: *In ihrer Not mußten viele ihre Häuser und Hütten verpfänden oder sogar verkaufen, während es der Gesellschaft qua Pro-Kopf-Einkommen „im Durchschnitt“ immer besser ging* ‘In her need many houses and cabins had to be pawned or even sold, while society in general was doing better and better from the point of view of income per person’. In English, the construction denotes an identity rather than domain modification, e.g. *Philip Larkin was unquestionably better loved, qua poet, than John Betjeman, who was loved also for his charm.*

Dutch' and artificial.¹¹ It is impossible, however, to determine the effect of prescriptive activities on actual language practice.

5 Conclusion

A synchronic comparison of Dutch with the genetically related languages English and German reveals structural similarities in the word-formation system. Like English and German, Dutch suffixes can be formal reflections of the functional category of domain modification. In Dutch even three suffixes have the potential to derive domain adverbs: *-gewijs*, which is equivalent to English *-wise*, and *-matig* and *-technisch*, which are equivalent to German *-mäßig* and *-technisch*, respectively. A diachronic investigation of the shared patterns revealed both converging and diverging developments as far as the expression of domain modification is concerned. There are convergences on a structural level: Dutch, like English and German, developed an economical manner of expressing domain modification by means of word formation. They should probably be explained by a combination of parallel language-internal developments and the effects of language contact. A striking divergence is that independent complex domain adverbs do not appear to constitute the normal way of expressing domain modification in Dutch. Most probably, there is a language-internal explanation for this divergence: Dutch prefers to use syntactic constructions, for instance descriptive phrases with *qua*. Nevertheless it is still remarkable that Dutch structurally has three derivational patterns for creating domain adverbs. Their division of labour is clearly a matter for further research.

This paper aimed to provide evidence for the merits of a contrastive approach as a heuristic method for the description of individual languages. By comparing Dutch with the genetically closely related languages English and German, we discovered word-formation patterns otherwise gone unnoticed. Through language comparison, we obtained a more accurate description of the possibilities and limitations of the Dutch word formation system. Conversely, language comparison provided a better insight in the specific properties of English and German adverb formation.

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¹¹ <http://taaladvies.net/taal/advies/vraag/524>; <http://taaladvies.net/taal/advies/vraag/777> (30 November 2011)

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