Abstract
This study considers the diachronic categorial shift from nominal (NG) to verbal gerunds (VG) in Middle English in terms of Langacker’s functional account of noun phrases and clauses as ‘deictic expressions’. The analysis shows that the Middle English gerund was essentially formally nominal but functionally hybrid, thus exhibiting ‘form-function friction’. This friction furthered a split between in the gerundive system a verbal component, associated with clausal deixis, alongside a nominal component, which specialized in nominal deixis; but this split is not absolute. The constructionist idea of language as a network of (inter)paradigmatically connected constructions helps to explain why the verbal gerund seems to simultaneously drift away from and again partake in the deictic behaviour of the nominal category.

Keywords: Middle English, construction grammar, nominalization, verbalization, gerund

Short title: Category change in the English gerund

1. Introduction
This paper discusses the category shift that has affected the English gerund and explores the contribution that a constructionist perspective can make to its description. Present-day English gerunds are deverbal nominalizations in -ing that can be either ‘nominal’ (abbreviated as NG), as illustrated in (1), i.e. with the internal syntax of a noun phrase (NP), or ‘verbal’ (abbreviated as VG), as in (2), with the internal syntax of a clause:

(1)  He'd been working too hard to spend time with women, and the courting of his 
     wife had been very proper and unexciting. (BNC)

(2)  You have warm feelings for her too, but you've let me succeed in courting her!
     (BNC)

The origin of the English gerund has been traced back to the Old English abstract noun of action formed by attaching the suffixes -ung or -ing to a verbal stem (e.g. wending ‘turning’: Fanego, 2004, p. 7; see also Kisbye, 1971 and Kastovsky, 1985). The verbal gerund is said to have developed from Middle English onwards mainly because of the syntactic ambiguity of a highly frequent gerundive subtype, i.e. one that lacked overt determiners but involved constituents that could be interpreted as belonging to either NP or VP structure, e.g. locative and temporal adverbs and particles, complement clauses, items that could be either adjectival or adverbial (for a detailed description of this process, see Fanego, 2004). In the Early Middle English period, until about 1300, these categorially ambiguous structures were merely open to ‘reanalysis’, without any visible changes at the surface (Fanego, 2004). Overtly verbal features soon followed, however, especially in prepositional contexts: from 1300 onwards, the first gerunds with direct objects appeared, as in (3):
Towards the end of the Middle English and start of the Modern English period (ca. 1500), other verbal categories, such as voice and tense/aspect distinctions, were integrated (e.g. voice: 1417 without being stolen; secondary tense: 1580-81 after having failed; see Tajima, 1985, p. 111-113).

While their formal differences are obvious (and have been well-documented), it remains unclear if and how nominal and verbal gerunds differ semantically. Or, in constructionist terms, it is unclear whether they represent truly distinct form-meaning mappings or constructions (as defined in, among others, Croft, 2001; Goldberg, 2006; Bergs & Diewald, 2009; Traugott & Trousdale, 2013). In what follows, we will zoom in on the Middle English period – when the verbal gerund first arose – and carefully reconsider the contexts in which the formal changes in the gerundive system were first attested, viz. determinerless or ‘bare’ ones. Since the categorial shift from nominal to verbal gerund did not fundamentally affect the propositional content of the designated entity (both nominal and verbal gerunds designate events), the semantic analysis that we wish to pursue here will focus on their discourse-functional behavior. It builds on Goldberg’s definition of constructions as “learned pairings of form with semantic or discourse function” (2006: 5) and is in line with Croft’s view on semantics as “intended to represent all of the CONVENTIONALIZED aspects of a construction’s function, which may include not only properties of the situation described by the utterance but also properties of the discourse in which the utterance is found (such as use of the definite article to indicate that the object referred to is known to both speaker and hearer) and of the pragmatic situation of the interlocutors” (Croft, 2001, p. 19, emphasis ours).

Our analysis thus ties in with the constructionist belief that highly schematic syntactic
patterns, like lexical items, are meaningful entities (Colleman & De Clerck, 2011) and that the ‘meaning’ component of a construction is not limited to the conceptual content the linguistic form evokes (Croft, 2001; Hartmann, 2014).

In particular, we will take Langacker’s functional account of the noun phrase and clause as starting point and assume with him that both the noun phrase and the (finite) clause are ‘deictic expressions’, defined as structures that “include(...) some reference to a ground element within (...) [their] scope of predication”, the ‘ground’ involving the speech event, its participants and its setting (Langacker, 1987, p. 126). Nominals are said to differ from finite clauses in terms of which aspect of the ground or speech event they refer to (i.e. the speech participants in the case of NPs and the time of speaking in the case of finite clauses), as well as with respect to their fundamental epistemic concerns. In the case of nominals, which prototypically refer to objects, *identification* is the speaker’s primary concern since “the default expectation is for many instances of a given type to exist simultaneously and to continue existing indefinitely” (Langacker, 2009, p. 166; see also Croft, 1991, p. 118). The main effect sought by the speaker will therefore be situated at the level of discourse interaction when the speaker attempts to direct the hearer’s attention to the intended referent. For the events designated in finite clauses, it is not so much identification that is at issue, but *existence*. In the system of English gerundive nominalizations, then, it appears that the Middle English gerund was essentially formally nominal but functionally hybrid (Fonteyn, 2016), thus exhibiting ‘form-function friction’ (De Smet & Van de Velde, 2013). This friction over time has been (partially) resolved, as the nominal gerund will tend to pair with the functional apparatus associated with the NP (aimed at realizing reference to discourse participants), while the verbal gerund is mainly associated with the functional apparatus associated with non-finite clauses.
2. **Goals and Methodology**

We will address the following questions:

1. Were the initial formal changes that took place in the system of the (nominal) gerund led or accompanied by any semantic/discourse-functional changes, and if so, which ones?

2. Can it be concluded from this that verbal gerunds developed into a new constructional node and can they therefore be argued to represent a case of ‘constructionalization’, as defined in Traugott & Trousdale (2013, p. 22-23)?

3. How can a constructionist approach further our understanding of the (diachronic developments) in the English gerund construction?

To study the referential behavior of the first instances of the verbalized gerund against the background of their source construction (i.e. the bare nominal gerund), we extracted all verbal and bare nominal gerunds occurring between 1250 and 1500 from the Leuven English Old to New Corpus version 0.3 (Petré, 2013). We decided to extract the data from LEON0.3 rather than the more commonly used Helsinki Corpus (HC) or the second edition of the Penn Parsed Corpus of Middle English (PPCME2) for two reasons: first, comprising a total of 1,200,063 words, the subcorpus covering the period between 1250 and 1500 in LEON0.3 constitutes a much larger corpus than that in the HC (495,560 words) and PPCME2 (897,875 words), and second, LEON0.3 has been compiled with a view to being a more balanced corpus in terms of genre and dialect variation. All Middle English examples presented below were taken from the LEON0.3 data set. Any examples of gerunds from Early or Late Modern English were taken from the Penn Parsed Corpus of Early Modern or Modern British English (abbreviated
as PPCEME and PPCMBE respectively), and all examples of gerunds from Present-day English were taken from the British National Corpus (BNC). The differences between bare nominal and verbal gerunds in all three periods are tested in terms of effect size using Cramer’s V and significance using a Chi-square test on 2-by-2 tables. We consider p-values below 0.05 to indicate significance.

Two major claims will be put forward. Firstly, it will be shown that within the context of bare gerunds (identified as the Middle English gerunds’ main locus of formal change; cf. Fanego, 2004), the formal verbalization of the gerund was tightly linked to a shift in referential or deictic behavior. In particular, while gerunds resembled regular NPs in terms of referential behavior, determinerless gerunds gradually developed more clause-like referential strategies through a number of bridging contexts, eventually resulting in the development of a new type of gerund that was not only formally but also deictically more clause-like. This clause-like behavior mainly manifests itself in the fact that bare gerunds acquire referential uses that solely depend on what Langacker (2008) has termed ‘indirect clausal grounding’, i.e. a grounding strategy commonly found with non-finite clauses that mainly depends on control and temporal integration relationships with the matrix clause. This was first suggested for non-specific, indefinite nominal gerunds in De Smet (2008, 2013) but will be further elaborated here, including the identification of two additional bridging contexts. Secondly, it will be argued that, while the (indirectly) clausally grounded verbal gerund that resulted from the gradual formal and referential changes in Middle English seems to have formed a new form-meaning node (or construction), the verbal gerund in general has at the same time preserved its ties with the nominal gerund and the overarching noun phrase schema. Even though some gerunds opened up to a new kind of deixis (i.e. clausal instead of nominal), and by doing so also shook off the need to identify the event as definite or indefinite, many verbal gerunds still designate events that can largely be described in terms of the same types of
nominal deixis found with nominal gerunds (e.g. specific, non-specific, generic). In addition to this semantic overlap, nominal and verbal gerunds moreover continue to be found in similar lexicogrammatical contexts (e.g. as subject, prepositional object, direct object) and show varying degrees of adherence to the overarching noun phrase schema.

In what follows we first set out the results of our referential analysis (Section 3). In Section 4, we consider them against the literature on constructional change and constructionalization and formulate some tentative conclusions regarding the constructional network of English gerunds and -ing forms in general. Section 5 summarizes the main findings and claims of our study.

3. Gerunds: nominal and clausal deixis

3.1 Qualitative analysis: types of deixis

In line with Schachter (1976) and Heyvaert (2003, 2008), who argue in favour of assigning Present-day English verbal gerunds an underlying referential structure like that of ordinary noun phrases, De Smet (2008, 2013) suggested that Middle and Modern English bare nominals behave as determinerless abstract nouns with either generic or indefinite reference. Because verbal gerunds developed from the bare nominal gerund (Fanego, 2004) and gradually came to replace their nominal predecessor, De Smet argued, “the uses to which verbal gerunds were put were (…) prefigured by the various uses of the bare nominal gerund” (2008, p. 90). As set out by Booij (2010), morphological constructions can be formalized in terms of constructional schemas, in which the form pole of the construction is linked to its...
meaning pole through a double arrow. The constructional schema that is claimed to underlie both bare nominal and verbal gerunds can, in other words, be represented as follows:

\[
[\emptyset_{\text{DET}} + V\text{-ing}]_{\text{NP}} \leftrightarrow [\text{generic type of action/event}]
\]

\[
\leftrightarrow [\text{indefinite (non-)specific instance of action/event}]
\]

The bare gerund is in this perspective analysed as a nominalization preceded by a nominal grounding mechanism, i.e. a zero-determiner, and it is said to be used to refer to either the kind or type of action or event expressed by the nominalized verb, or to a newly introduced and hence indefinite instance of that action or event. As such, the schema \([\emptyset_{\text{DET}} + V\text{-ing}]_{\text{NP}}\)
can be linked to two different types of reference, i.e. generic and (non-)specific indefinite. Generic uses of bare nominal and verbal gerunds are illustrated by *knawynge of bi selfe* and *chalenginge assoine* in (3a-b):

(3) a. *For by his maner of knawynge of bi selfe, & by his maner of medytacone, sall you come to he knaweynge of Gode* (c1440, LEON0.3 < PPCME2)

‘For by this way of knowing yourself (lit. ‘knowing of yourself’), and by this way of meditation, will you come to the knowing of God.’

b. *Here Endez he maner of chalenginge assoine*. (p1300, LEON0.3 < HC)

‘Here ends the manner of demanding excuse.’

Examples of bare nominal and verbal gerunds that profile newly introduced (and hence indefinite) instances of a type are given in (4). In these cases, De Smet (2008) argues, the zero-grounding signals that the gerund is not identifiable through the surrounding discourse:
a. *Than anone they harde crakyng and crynyng of thunder.* (a1470, LEON0.3 < PPCME2)

‘Then suddenly they heard cracking and crying of thunder.’

b. *Also is ordeined þat vche brother & soster of þis fraternite schal paie þe helpyng & susteynyng of seke men, whiche þat falle in disse, as by falling doun of an hous, or hurtynge of an ax, or oþer diuerse sekenesses, twelfe penyes by þe +ger.* (1384-1425, LEON0.3 < HC)

‘It is also commanded that each brother and sister of this fraternity shall pay the helping and sustaining of sick men, which got sick, for instance through falling down from a house or being hurt by an axe, or other various sicknesses, twelve pennies per year.’

c. *Thenne who that wyll haue the very vnderstandyng of this mater, he muste ofte and many tymes rede in thys boke and ernestly and diligently marke wel that he redeth. For it is sette subtylly, lyke as ye shal see in redyng of it.* ... (1481, LEON0.3 < PPCME2)

‘Then he who will have the very understanding of this matter, he must often and many times read this book and earnestly and diligently indicate that he has read.

For it is made subtly, as you will see in reading (of) it …’

These non-generic instantiated (indefinite) gerunds can refer either to single specific events, as in (4a), or to any arbitrary (and therefore non-specific) instance of the type, as in (4b-c). Additionally, like regular bare NPs, bare nominal gerunds can also be used nonreferentially, as illustrated in (5):
(5)  

_And steiynge into þe hul of Iesu wip hise disciples is takyng of goostly lyȝf for to lerne Cristes lawe._ (c1400, LEON0.3 < PPCME2)

‘And staying into the hill of Jesus with his wise disciples is taking (of) spiritual light to learn Christ’s law.’

De Smet (2008, p. 69) first pointed out that in many of these nonspecific bare gerunds, the gerund allows for a so-called ‘controlled reading’. In example (4c), for instance, the subject of the main clause _ye_ is the understood subject of the gerund _in redyng of it_ (‘as you will see whenever you read it’). Similarly, in example (6a), the nonspecific indefinite NP _a womman_ serves as the implied subject of _castynge of of hire clothes_, and in (6b) _euery baxter_ serves as the understood subject of _kepyng_

(6)  

a. (…) _he had sworn þat he scholde putte the ryuere in such poynt þat a womman myghte wel passe þere with outen castynge of of hire clothes._ (?a1425, LEON0.3 < PPCME2)

‘(…) he had sworn that he would change the river in such a way that a woman might well pass there without casting off her clothes (lit. casting off of her clothes).’

b. _And euery baxter in kepyng treuly þe assyse aforseyd, as it is provyd be þe baxter of our lord þe Kyng, may wynne in euery quarter of whete bakyng (…)_ (1470-1500, LEON0.3 < PPCME2)

‘And every baker, in keeping to the decision of court before-mentioned, as it is provided by the baker of our lord the king, may make profit (…)’
It is suggested that these nonspecific (indefinite) bare nominal gerunds easily combine with a controlled reading “because the new information imparted by indefinite referents can be interpreted solely against the background of the immediate textual context, rather than through episodic memory as in the case of definite reference” (De Smet, 2013, p. 137; see also Langacker, 2009). Because control relationships are clausal grounding mechanisms, linking “a time-unstable situation to a time-stable nominal referent” (De Smet, 2013, p. 137), nonspecific indefinite gerunds in fact invite both a nominally grounded (zero-determiner) and a clausally grounded (controlled) reading. In this sense, gerunds like (4c) and (6) can be said to function as bridging contexts in which the referential behaviour of the gerund is still predictable through the original nominal structure of the gerundive construction (i.e. [ØDET + VingN]NP), but an additional more clausal interpretation has become available for both bare nominal and verbal gerunds.

The first instances of bare nominal and verbal gerunds that rely solely on clausal grounding to establish reference started to emerge when the clausally grounded controlled reading became a true part of the gerundive construal options (De Smet, 2008, p. 69; Fonteyn, 2016). The referential behavior of the gerunds cannot in these cases simply be predicted through a nominal [ØDET + VingN]NP analysis, and the gerunds seem to have taken on a new, more ‘clause-like’ type of reference. An example of this is (7a), where smytynge of Malcus here does not refer to a generic event, but profiles a specific single event that can be considered as known or identifiable to the hearer (De Smet, 2013, p. 137). In a regular NP, such identifiable specific referents would be marked as definite by means of a definite determiner or a demonstrative. Yet, through their control and temporal integration relationship with the matrix clause, bare nominal and verbal gerunds can refer to specific events without displaying the indefinite semantics of being ‘newly introduced’. Similarly, in (7b-c), redyng off my letter and losyng of yonder knight refer to (non-generic) specific events profiling past
actualizations in the actual world of the speaker but there is no definite determiner to formally mark that accessibility:

(7) a. And here bese blynde heretykes wanton wyt as ydiotes, whan þei seyn þat Petur synnede not in smytynge of Malcus here. (c1400, LEON0.3 < HC)

‘… when they say that Petre did not sin in cutting off Malcus’ ear (lit. cutting off of Malcus’ ear).’

b. Syre, I thank you hertely þat hyt plesyd you to wyshe me with you at redyng off my letter: truly I wold I had a be there with you at þe same seson with all my hert. (1472, LEON0.3 < PPCME2)

‘Sire, I thank you heartily that it pleased you to wish me with you at reading (of) my letter; truly I would have been there with you at the same season with all my heart.’

c. I had never so grete sorow as I have for losyng of yondir knyght. (a1470, LEON0.3 < PPCME2)

‘I never had such great sorrow as I have for losing (of) that knight.’

In (7), the referents of the gerunds are thus related to the ground through a control relation with the matrix clause, receiving a specific subject or instantiator and specific temporal information from the larger finite clause it forms a part of (Heyvaert, 2003, 2008; De Smet, 2008). Even though, as -ing forms, these gerunds are not finite themselves, they can thus be said to establish at least partial or ‘indirect’ clausal grounding, through their indirect temporal relationship with the matrix clause and, often, through the person deixis of the controller.

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1 In Present-day English, it is possible to have non-controlled specific reference (e.g. Meeting him was the best thing that ever happened to her [Google, 2014])
Gerunds like these form a complication for classifying and analysing all gerunds as abstract nouns with nominal referential behaviour in that they seem capable of singling out a specific event without employing any nominal grounding mechanism that marks the event as retrievable. In the corpus analysis that we present here we revisit instances of bare NGs and VGs in Middle English, in an attempt to add more quantitative and descriptive detail to De Smet’s account of the functional start of the verbal gerund and, ultimately, to address the question of whether the discourse-functional or deictic changes that we witness in the system of the gerund, together with the formal verbalization, can be assigned ‘constructionalization’ status.

Let us first consider the distribution of reference types within our set of bare nominal gerunds (Figures 1 and 2) and verbal gerunds (Figures 3 and 4) between 1250 and 1500. By and large, the referential types found there can be grouped in three categories:

1. A first category comprises those cases in which the referential behaviour of the gerund can be successfully deduced from a nominal \([\emptyset_{\text{DET}} + \text{VingN}]_{\text{NP}}\) analysis, i.e. gerunds with generic and specific or non-specific indefinite reference;

2. A second category contains the aforementioned bridging contexts, which allow for both a nominally grounded and a clausally grounded reading;

3. A final category consists of all gerunds that do not fit the nominal paradigm of reference types but establish clausally grounded specific reference.

Interestingly, our data suggest that, in addition to the bridging context identified in De Smet (2008, p. 68-69), two other bridging contexts exist where the gerund allows for a clausal grounding reading alongside a nominal one. First, a number of generic gerunds invite an

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2 Alongside controlled uses, verbal gerunds started taking non-genitive subjects in Late Modern English (e.g. I am rather in hopes the magazine article has dropped through, either from [my paper] being thought bad, or [Macmillan] repudiating the thing. [187X, PPCME]). Much like the controlled verbal gerund, verbal gerunds with a non-genitive subject do not establish reference through a nominal grounding strategy, but are related to the ground through the inclusion of the specified subject and their temporal relation to the larger clause they form a part of.
additional controlled (but still generic) reading. In example (8), *consentynge of synne* is used to refer to a general kind of activity. Such generic gerunds are predictable from a nominal analysis and are usually non-controlled, but in this case the generic subject pronoun *he* (anaphorically referring to the generic nominal *a man*) in the matrix clause can in fact be interpreted as the implied subject of the gerund (‘… or else he will immediately surrender to sin’):

(8) *And thanne, if that a man withstonde and weyve the firste entisynge of his flessh and of the feend, thanne is it no synne; and if it so be that he do nat so, thanne feeleth he anoon a flambe of delit. And thanne is it good to be war and kepen hym wel, or elles he wol falle anon into consentynge of synne;* (c1390, LEON0.3 < PPCME2)

‘And then, if a man withstands and decline the first temptation of his flesh and of the devil, then it is not a sin; and if it is the case that he does not do so, then he immediately feels a flame of delight. And then it is good to be protective and keep him well, or else he will immediately fall into surrendering to sin’

Second, we also found some generic gerunds that invited additional controlled readings that are typically not generic, but refer to an actualized specific instance of the type. In example (9a), for instance, *brekyng of þe pes* can be interpreted as a type of criminal action one can be pursued for, but also as the past instantiation of that type of crime. In the latter case, the object in the matrix clause *him* is selected as the understood subject of the gerund (‘the king pursued him because *he* broke the peace’). Along the same lines, *robbynge and spoiling of monasteries* in (9b) can be read either as a generic misbehaviour, or as a specific past occurrence (‘Because the king robbed and destroyed monasteries’):
(9) a. (...) and because pe kyng pursuit him for brekyng of pe pes, he fled into Wales (...). (a1464, LEON0.3 < HC)

‘And because the king pursued him for breaking (of) the peace, he fled into Wales.’

b. For (...) manslauth, gloteny, and lecchery, and specialy robbyn and spoilyng of monasteries, pe pope cursed pe kyng (a1464, LEON0.3 < PPCME2)

‘For manslaughter, gluttony, and lechery, and especially robbing and destroying of monasteries, the pope cursed the king.’

3.2 Quantitative analysis: the rise of clausal deixis in bare nominal and verbal gerunds

The quantitative analysis of the distribution of reference types helps us to shed new light on the rise and diachronic development of the verbal gerund. First, Figures 1 and 2 show that the lion’s share of Middle English bare NGs fits the nominal paradigm of reference types (51–70%). Of these unambiguously nominal bare NGs, 24–27% profile generic actions or events, while 18–23% profile a specific or nonspecific indefinite instance of an action/event. In addition, bare NGs also quite frequently occur in the above-mentioned bridging contexts, where a nominal referential analysis is accompanied by an additional controlled reading (25–43%). Only a small number of bare NGs (5–7%) are found with specific, clausally grounded reference.
Figure 1 - Distribution Reference Types Bare Nominal Gerund (detail)

Figure 2 - Distribution Reference Types Bare Nominal Gerund (Simplified)
Figure 3 - Distribution Reference Types Verbal Gerund (Detailed)

Figure 4 - Distribution Reference Types Verbal Gerund (Simplified)
The kinds of deixis found for the verbal gerund, as illustrated in Figures 3 and 4, seem to have a slightly different distribution. Unlike bare NGs, the first instances of the verbalized gerund only very marginally exhibit unambiguously nominal referential behavior (4–5%), which is significantly less than with bare nominal gerunds in 1250-1350 ($V=0.324$, $p=0.01585$), 1350-1420 ($V=0.231$, $p=4.051e^{-06}$) and 1420-1500 ($V=0.361$, $p=1.097e^{-10}$) (as indicated in Table 1). They do, however, occur frequently in contexts that allow for a nominal alongside a clausal grounding analysis (74–59%), and appear much more likely to occur with unambiguously clausal grounding than bare NGs: while between 1250-1350, the distribution of clausal grounding in bare NGs and VGs does not significantly differ ($V=0.142$, $p = 0.3192$), the relative frequency of clausally grounded VGs exceeds that of clausally grounded bare NGs between 1350-1420 (22%, $V=0.157$, $p=0.01383$) and even more so between 1420-1500 (36%, $V=0.336$, $p=1.1241e^{-06}$):

Table 1 – Differences between Bare Nominal and Verbal Gerunds

<table>
<thead>
<tr>
<th>Nominal deixis</th>
<th>BNG</th>
<th>VG</th>
<th>effect size ($V$)</th>
<th>$p$-value</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1250-1350</td>
<td>43/61 (70%)</td>
<td>1/6 (17%)</td>
<td>0.324</td>
<td>0.01585</td>
<td>**</td>
</tr>
<tr>
<td>1350-1420</td>
<td>169/330 (51%)</td>
<td>1/23 (4%)</td>
<td>0.231</td>
<td>$&lt;0.0001$</td>
<td>***</td>
</tr>
<tr>
<td>1420-1500</td>
<td>123/230 (54%)</td>
<td>2/44 (5%)</td>
<td>0.361</td>
<td>$&lt;0.0001$</td>
<td>***</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clausal deixis</th>
<th>BNG</th>
<th>VG</th>
<th>effect size ($V$)</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1250-1350</td>
<td>3/61 (5%)</td>
<td>1/6 (17%)</td>
<td>0.142</td>
<td>0.3192</td>
</tr>
<tr>
<td>1350-1420</td>
<td>19/330 (6%)</td>
<td>5/23 (22%)</td>
<td>0.157</td>
<td>0.01383</td>
</tr>
<tr>
<td>1420-1500</td>
<td>16/230 (7%)</td>
<td>16/44</td>
<td>0.336</td>
<td>$&lt;0.0001$</td>
</tr>
</tbody>
</table>
As such, the quantitative analysis of verbal and bare nominal gerunds between 1250 and 1500 allows us to make two important observations. First, the early instances of the formally verbalized VG are less affiliated with nominal use than is suggested by De Smet (2013). It is not so much the case that “in the initial stages of their development, [the use of verbal gerunds is] to be understood against the background of the nominal system they were infiltrating” (De Smet, 2013, p. 138); rather, the data suggest that initially, verbal gerunds were more common in those uses that allowed for a clausal deixis analysis or established unambiguously clausal reference. Secondly, in view of the fact that the VG’s affinity to nominal reference is somewhat weaker than initially thought, it seems slightly inaccurate to assert that the VG’s link to nominal behavior became “less pronounced” over time (De Smet, 2013, p. 138), as the quantitative comparison of the referential behavior of bare NGs and VGs indicates that VGs in Middle English never showed any ‘pronounced’ association with unambiguously nominal reference in the first place.

A brief glance at the distribution of nominal-clausal deixis in Early Modern, Late Modern and Present-day VGs further adds to the evidence that the VG’s affiliation to nominal behavior is not subject to diachronic weakening. On the contrary, it seems that verbal gerunds with nominal deixis similar to that of abstract nouns, while being somewhat of a rarity in Middle English, are in fact quite common in Present-day English (Schachter, 1976; Heyvaert, 2008; Fonteyn, Heyvaert & Maekelberghe, 2015):

(10) a. **Picking up refuse for recycling** can be profitable, if towns are willing to pay for it. But **sorting and reselling rubbish** is not. (BNC) [generic]

b. **Cycling, like walking, is one of the best ways of seeing and enjoying the countryside.** (BNC) [generic]
a. For example, a reaction to a particular food may occur within a few minutes of eating a food, or after a day or two. (BNC) [non-specific]

b. In severe cases, they may respond by shaking and urinating uncontrollably when they come near the surgery. (BNC) [non-specific]

The frequency increase of VGs with this type of nominal zero-grounding started in Early Modern English, together with the dramatic overall increase of VGs (De Smet 2008). While the lion’s share of Early and Late Modern VGs still exhibits clause-like deictic/referential behavior (12), the number of VGs functioning like generic (13) and, somewhat more marginally, non-specific indefinite (14) abstract nouns in other words increased as well (Fonteyn, Heyvaert & Maekelberghe, 2015):

(12) a. (...) thou hast magnified thy mercy which thou haste shewed vnto me in saving my life (1614, PPCEME)

b. (...) he says he will come up to you and beg his pardon for being so drunk last night (1684-1687, PPCEME)

(13) a. S. Chrysostome preaching earnestly against this barbarous Inhumanity of striking the Wife, or reviling her with evil Language, says, it is as if a King should beat his Viceroy and use him like a Dog. (1640-1710, PPCEME)

b. Yes, my Lord, and procuring the waggon is charged as an overt act of treason. (1817, PPCMBE)

c. I need scarcely allude to the nonsense which is talked among the very poor, about the honour of being married at sixteen. (189X, PPCMBE)
(14) a. *When the pains were local and permanent, but not very severe, great advantage resulted from stimulating the skin and supporting the heat of the part by the aid of warm plasters.* (1807, PPCMBE)

b. ‘(...) their essence is one and the same.' *There is no denying it.*' (1897, PPCMME)

Note that the use of the verbal gerund is likely to be contextually motivated in a considerable number of these cases. First, in examples such as (13a) and (13c), the use of a verbal rather than a nominal gerund could be preferred because the gerundive construction functions as a postmodifier introduced by the preposition *of*, creating a so-called *horror aequi* context. Such *horror aequi* contexts, which involve the repetition of identical and adjacent grammatical elements and structures, are typically disfavoured by the language user (Vosberg, 2003, Rohdenburg, 2003). Bare nominal gerunds still commonly functioned as prepositional complements of *of* in Middle English (e.g. *Thei were also accused of clipping of mony* [a1464, LEON0.3 < PPCME2]), but disappeared from these contexts in Early Modern English when the verbal gerund became much more frequently used and well-established. Thus, it seems that, in his avoidance of a sequence of *of*-phrases, the language user does still recognise the verbal gerund as a nominal form that forms a suitable alternative for the nominal gerund. In addition, it has been argued, the verbal gerund offers certain advantages over the nominal gerund in terms of “syntactic flexibility” (De Smet, 2008: 60) in that it can express secondary tense and voice and mood distinctions. In an example such as (13c), for instance, the language user has opted for a verbal gerund since no straightforward nominal equivalent is available and the VG is regarded as sufficiently nominal to figure in a postmodifying context. In terms of deixis, therefore, it would be inaccurate to claim that the VG has undergone a full categorial shift from nominal construction to clause: while VGs are clearly hospitable towards
and in some contexts even prefer clausal deixis, they still maintain reasonably strong ties with their nominal origin.

The bare NG in Early and Late Modern English, having found a functional competitor in the newly arisen VG, rapidly decreased in frequency and eventually lost the ability to establish clausally grounded specific reference. For instance, there seems to be no Present-day English bare nominal equivalent of the clausal use of bare NGs such as *making of the Book* in (15):

(15) (...) he thereby came within the Compass of Law, which he intended not in *making of the Book* (1590, PPCEME)

That is not to say that bare nominal gerunds have disappeared from the stage altogether. They still exist (albeit marginally) in Present-day English and most commonly profile non-controlled generic events (Fonteyn, Heyvaert & Maekelberghe, 2015), as in (16):

(16) It was the least glamorous sector of the army, undertaking labour of all kinds:

(...) handling of stores behind the lines, (...). (BNC)

In conclusion, detailed corpus-based analysis of the discourse-functional status of Middle English bare gerunds shows that the relation between the verbal gerund and its source construction is more complex than previously thought and cannot be characterized as a ‘large-scale replacement’ of the bare NG. While the rise of the VG has thus far been described as a constructional change in which the internal syntax of determinerless nominal gerunds changed from being nominal to clausal, the development turns out to be more complex than that: as the gerundive system acquired a new, clause-like kind of deixis (through control and indirect temporal grounding), it also developed a *formally* clausal variant that blossomed in and
eventually became the sole option for expressing this new meaning, suggesting that the rise of the verbal gerund is in fact the emergence of a new form-meaning pairing. This raises the question whether the changes within the gerundive system and the emergence of the verbal gerund are adequately described as instances of ‘constructionalization’ (Traugott & Trousdale, 2013). In the following section, we look into the criteria that were established for constructionalization and discuss their relevance for the analysis of the verbal gerund in more detail.

4. Reflections on category change: is the verbalization of the gerund a case of constructionalization?

The categorial status of verbal gerunds, with their unique structural integration of nominal and clause-like features, has been the subject of much debate (see, among others, Jespersen, 1940; Horn, 1975; Milsark, 1988; Pullum, 1991; Yoon, 1996; Malouf, 2000; Heyvaert, 2000, 2003, 2008; Aarts, 2007). Most analyses view verbal gerunds as 'two-node' structures, with a nominal node that accounts for their external behaviour and a verbal node which explains their internal outlook (see, for instance, Pullum, 1991). Hudson (2007, p.183) presents a 'single-node' analysis of verbal gerunds "in which the verbal and nominal classifications are combined on a single node which inherits both verbal and nominal characteristics" (see also Horn, 1975, and Malouf, 2000). In Aarts (2007), English gerunds are treated as cases of ‘intersective gradience’, combining features of the two ‘grammatical kind categories’ noun and verb.

The formal reanalysis of the nominal gerund into a verbal type has been argued to have also implied a change in the type of categorial shift involved: different from the
transcategorization through -ing derivation found in nominal gerunds (i.e. from verb to noun),
verbal gerunds result from what Halliday (1961) has called ‘downranking’ or ‘embedding’
(Heyvaert, 2003, p. 221-228). Like the finite clause in that-nominalisations (e.g. Its owners
cheerfully admitted [that the bird was mad] (CB)), the atemporalized clausal structure in
verbal gerunds is shifted from clausal to NP rank. The atemporalized clausal head (loosely
Corresponding to the traditional category of the verb phrase, including the verb’s non-subject
Complement and modifiers, see Heyvaert, 2003, p. 222-8; Taylor, 2002, p. 391-2) is then
either downranked as such (e.g. they resent [outmanoeuvring them]) or it takes a subject,
which, if pronominal, takes objective case (e.g. They resent [him outmanoeuvring them]) and
if nominal, is in the common case (e.g. They resent [John Major outmanoeuvring them]).

Because they include a verbal rather than a nominalizing -ing suffix, verbal gerunds
have come to be treated as ‘-ing-clauses’ on a par with participial -ing clauses: Huddleston &
Pullum (2002, p. 1187-1193, p. 1220-1222), for instance, have coined the term ‘gerund-
participials’ to refer to -ing-clauses, arguing that the latter have to be distinguished from
nominal gerunds as well as from adjectives in -ing (e.g. an entertaining show) on the basis of
morphological, syntactic, distributional and semantic evidence.

Strikingly, much less study has been devoted to how verbal gerunds relate to nominal
gerunds and whether it is warranted, as is implied in Huddleston & Pullum’s (2002)
classification of -ing forms, to posit a strict divide between them. Our analysis in Section 3
has shown that the diachronic verbalization of the English gerund seems to comprise both the
neoanalysis of its syntactic structure from a nominal to a clausal construction and the gradual
acquisition of clausal deixis or a new kind of referential construal. The developmental path of
these morphosyntactic and deictic changes can be summarized as follows:

**FORMAL CHANGE:**
In the light of these findings, the question arises what the nature of the relation between the verbalization (or rather, clausalization) of morphosyntax and deixis is, and whether the combination of the changes in morphosyntax and deixis constitutes an instance of constructionalization, i.e. the formation of a new form-meaning pairing or node in the constructional network, rather than mere constructional change. We will argue that, while it seems that the clausally grounded verbal gerund that developed in Middle English can be accurately characterized as a ‘new construction’ in that it combines a new form with a new (deictic) meaning, not all verbal gerunds can be treated as such. Whether the clausally grounded VG also fits in with the notion of ‘constructionalization’ as defined by Traugott & Trousdale (2013), however, remains questionable.

First, as regards the morphosyntactic and deictic verbalization of the gerund, their ideal developmental path would arguably look like this:
In this ideal scenario, the change in categorial deixis, which proceeded from being strictly nominal through categorially ambiguous bridging cases to clausally grounded bare NGs, would have served as an incentive to the gerund’s formal verbalization. Being semantically/functionally clausal but formally nominal, such clausally grounded NGs would then exhibit “form-function friction” (De Smet & Van de Velde, 2013), causing the gerund to adopt a VP-like internal syntactic structure in its clausally grounded uses. The same goes for ambiguous uses, albeit to a lesser extent (indicated in lighter grey in Figure 5). The result of this development, then, would be in line with the isomorphic principle of ‘one form one meaning’, with NGs forming the ‘deverbal -ing-nominal’ node in the gerundive constructional network and verbal gerunds forming a separate ‘-ing-clause’ node. However, the qualitative and quantitative analysis presented in Section 3 suggests that, in reality, the relation between the changes in form and meaning is much less neat and far more complex. This is illustrated in Figure 6:
Unlike the situation described in the ideal scenario in Figure 5, the formal and deictical types of reanalysis that occurred in the gerundive system do not appear to be involved in a strict cause-result relation. Rather, the two processes seem to be largely separate developments, occurring alongside each other, but operating on different layers of the gerundive construction. The formal neoanalysis of determinerless nominal gerunds to clausal structures affects all bare NGs, regardless of their referential features. However, the categorically ambiguous and clausally grounded gerunds seem to allow the actualization of clausal form somewhat faster than the nominal uses, as verbal gerunds more frequently express clausal or ambiguous deixis than nominal deixis (indicated in lighter grey in Figure 6). As such, there does seem to be strong interaction between the separate processes of formal and deictic reanalysis: in those contexts where the referential behavior of the gerund is structurally ambiguous or experiences form-function friction, the formal verbalization of the gerund is facilitated.

Interestingly, these findings suggest that form-function friction can be considered a possibly more relevant stimulus of the verbalization of the gerund than those factors listed and
assessed by both Jack (1988) and Fanego (2004). One possible contributing factor is the merger of the ending of the -ing noun with the ending of the present participle, which changed from -ende to -ing(e) and the influence of the French gerund (e.g. Old French: sor mon cors deffendant ‘in my life defending’[Jack, 1988, p. 51]), which served as a likely promotor of the use of the verbal gerund once “the mode of construction had entered ME” (Jack, 1988, p. 63). Other influences that have been put forward as contributing factors are the increased morphological productivity of the -ing noun (Dal, 1952) and the functional similarity of prepositional gerunds to adverbial participial clauses (Houston, 1989). Yet, it seems unlikely that any of those factors functioned as the chief factor to promote the verbalization of the gerund, as they apply to all kinds of gerunds rather than just those that were not marked by an overt determiner (Fanego, 2004, p. 13-14, p. 17 footnote 9). The pressure of form-function friction, however, only applies to the group of determinerless nominal gerunds, which Fanego identified as the locus of the gerund’s formal reanalysis.

Once the verbal gerund had become established, clausally grounded bare nominal gerunds were lost, leaving the verbal gerund to be the only gerundive subschema that can take unambiguously clausal deixis. With their newly acquired clause-like status, verbal gerunds then further expanded and strengthened their position in the English ing-network through so-called “horizontal links” with another construction with a similar form that is not interparadigmatically related (Van de Velde, 2014; Norde & Morris, this volume), as they started to interact with present-participial clauses (Fanego, 1996, 1998; Kohnen, 1996, 2001, 2004; Killie & Swan, 2009; De Smet, 2010; Fonteyn & van de Pol, 2015). Yet, crucially, the verbal gerund did not weaken or loosen its ties to the nominal gerund and its overarching noun phrase schema: as the formal neoanalysis of the gerund operated autonomously, verbal gerunds that fully aligned with a zero-grounded nominal analysis gradually increased in frequency as well. Similarly, those uses of verbal gerunds that simultaneously allow a clausal
alongside a nominal reading continued to grow, possibly causing them to serve as ‘reversed bridging contexts’ allowing the VGs’ clausal features to spread to the gerund’s nominal uses (cf. ‘travelling features’, De Smet & Van de Velde, 2014).

The developmental path illustrated in Figure 6 also serves as a (reduced) schematic representation of what can be considered the English -ing-form network with links “in multiple directions between the semantics, pragmatics, discourse-function [and] morphology” of each node (Traugott & Trousdale, 2013, p. 55). While virtually the entire set of gerunds in this constructional network is affected by formal constructional change (Fanego, 2004), it is the loss of the bare nominal gerunds’ ability to express the function of clausal deixis combined with the rise of clausally grounded verbal gerunds that is particularly eye-catching, as the combination of these changes have led to what can be considered to be a new, more distinctly clause-like node in the gerundive network. In accordance with Traugott & Trousdale’s (2013) definition of constructionalization, the verbal gerund with clausal deixis is the result of a gradual “succession of micro steps” leading to “the creation of a form\textsubscript{new}-meaning\textsubscript{new} pairing” (2013, p. 22).

While it may seem fairly obvious that clausally grounded verbal gerunds establish a new constructional node, combining a new form with a new meaning, the application of the core criteria of the process of ‘constructionalization’, as defined by Traugott & Trousdale (2013), turns out to be somewhat more problematic. Traugott & Trousdale define constructionalization as follows:

Constructionalization is the creation of form\textsubscript{new}-meaning\textsubscript{new} (combinations of) signs. It forms new type nodes, which have new syntax or morphology and new coded meaning, in the linguistic network of a population of speakers. It is accompanied in changes in degree of schematicity, productivity, and compositionality. The constructionalization of schemas always results from a succession of micro-steps and is therefore gradual. (…)
We focus on two main kinds of constructionalization, namely grammatical
collectionalization and lexical constructionalization. These are at the poles of the contentful-
procedural gradient (…).

(Traugott & Trousdale, 2013: 22)

First, the output of the changes affecting the English gerund seems to be neither at the
grammatical-procedural, nor the lexical-contentful end of the constructionalization cline. As
pointed out by Fanego (2004, p. 48) “the class of abstract action nouns to which the nominal
gerund belonged cannot properly be described as a more open, less grammatical class than the
class of verbal gerunds”, and hence, the process cannot be considered one of grammatical
constructionalization. On the other hand, the process of lexical constructionalization, defined
as “the development of new signs which are form_{new}-meaning_{new} (…) in which the meaning
pole is associated mainly with concrete semantics and the form pole with major categories
such as N, V, or ADJ” (Traugott & Trousdale, 2013, p. 147), does not straightforwardly apply
either: while the verbalization of the gerund consists of a shift from the major category ‘noun’
towards the major category ‘verb’, the observed deictic shift is not associated with concrete
semantics.

Second, the emergence of the clause-like verbal gerund seems to involve no real
changes in the construction’s productivity, schematicity or degree of compositionality. As
regards productivity, it can be pointed out that the token frequency of the clausal verbal
gerund experiences a sharp increase after ME, but the same holds for verbal gerunds with
nominal deixis. In terms of type frequency, it is easy to observe that in Present-day English,
clausal verbal gerunds allow for more predicate types than the nominal gerund, allowing, for
instance, not only dynamic verbs, but also states. Still, (i) the historical data seem to suggest
that it is not the case that the type frequency of verbal gerunds has expanded, but rather that
its source construction, i.e. the nominal gerund, experienced a decrease in type frequency, as
Middle English NGs also occurred with stative predicates (e.g. *To be knowynge of by-self maȝt hou comen wiþ ofte penkynge* [c1390, LEON0.3 < PPCME2]), and (ii), the range of predicate types possibly profiled by clausally grounded verbal gerunds is not unlike that found with verbal gerunds that have nominal deixis. Finally, the new clausal verbal gerund does not differ in degree of schematicity or abstraction either (Tuggy, 2007; Barddal, 2008), as it does not constitute a more general overarching or more specified schema than the nominal gerund. Rather on the contrary, it seems to have established itself as a particular constructional subschema on a par with a wide range of other nominal as well as verbal *-ing* structures, each with their own combination of formal and deictic properties.

Thirdly, while it could be argued that the clausal verbal gerund’s compositionality has decreased because the *[ØDET + V-ingN]NP* schema can no longer account for all deictic kinds of the verbal gerund, it seems far-fetched to consider the zero-determiner as a ‘constituent’ part of the construction since it has no physical presence. As such, both nominal and verbal gerunds are largely transparent constructions, with neither of them exhibiting a greater degree of “match or mismatch between aspects of form and aspects of meaning” (see Francis & Michaelis (2003) on incongruence and mismatch).

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3 As pointed out by Dal (1952), productivity change did play a role in the development of the verbal gerund, as the frequency of formations in *-ing* increased during the Old and Early Middle English period. This allowed them to be derivable from virtually any verb type. As such, Dal argues, *ing*-derivations “came to have the same status in the verbal system as the infinitives and the participles, and were thus able to develop syntactic properties of the verb, such as the capacity to govern a direct object” (Fanego, 2004, p. 13). However, as rightly pointed out by Jack (1988, p. 44) and Fanego (2004, p. 13), the fact that the verbalization of the gerund initially only affected bare gerunds indicates that this increase in morphological productivity of *ing*-derivations is merely a prerequisite for the verbalization of the gerund and cannot be considered the chief factor. In addition, it is important to note that the increased productivity affected all gerundive constructions and hence cannot be considered a parameter in or a side effect of the constructionalization process that led to the development of the new clausally grounded verbal gerund node.
5. **Concluding remarks**

Over the past decades, the morphosyntactic verbalization of the English gerund has been a much-studied phenomenon. However, as rightly pointed out by De Smet (2008), “the history of the English gerund cannot be understood without a close understanding of the functioning of the entire system of gerund constructions” (2008, p. 95). Schachter (1976) and Heyvaert (2003, 2008) were the first to address the constructional semantics of the gerund construction and suggest that, essentially, even verbal gerunds semantically resemble more prototypical nominals in that they show similar deixis, profiling generic or specific referents. Applying these functional-semantic types in the analysis of Middle and Early Modern English gerunds, De Smet concluded that the “use of verbal gerunds is clearly anticipated by the use of bare nominal gerunds, and the rise of verbal gerunds consists more in a large-scale replacement of bare nominal gerunds” (2008, p. 96), later adding that the link to nominal behaviour in verbal gerunds gradually became less pronounced and gave way to a more clause-like deictic behaviour.

The analysis of the referential features of historical nominal and verbal gerunds presented in this paper has revealed that the picture is somewhat more complex than that sketched in the literature thus far. It has been argued that the English gerund can be categorized in three main deictic groups: (i) unambiguously nominal gerunds, of which the deixis can be predicted through a $[\emptyset_{\text{DET}}+\text{Ving}N]_{\text{NP}}$ analysis, (ii) clausal gerunds, which establish their referent by means of control and temporal integration rather than zero-grounding, and (iii) deictic bridging contexts, which are categorially ambiguous. Through detailed quantitative analysis of a larger corpus than had thus far been used, we have been able to determine that the first instances of the formally verbalized gerunds mainly occurred in the categorially ambiguous or clause-like uses, and hence did not have such a strong
affinity to nominal behaviour as previously assumed. Furthermore, we have suggested that it is not unlikely that the presence of clausal deixis in an originally nominal system has facilitated the formal verbalization through the phenomenon of form-function friction. At the same time, however, we showed that the morphosyntactic verbalization and the deictic verbalization of the English gerund seem to have been two separate developments operating autonomously in different layers of the gerundive construction, since verbal gerunds with nominal deixis eventually – albeit less rapidly – also quite frequently came to occur with clause-like internal syntax. In sum, the categorial shift that characterizes the English gerundive system in general does not nicely fit the definition of constructionalization offered by Traugott & Trousdale (2013) as the formation of a form-new-meaning-new pairing: the observed verbalization process is predominantly a morphosyntactic constructional change in which the bare nominal gerund is largely (but not entirely) replaced by a new, more clausal form, but it also at least partially entails the acquisition of clause-like deixis as a new function, at least in certain uses.

The state resulting from these intricate (and highly subtle) micro-changes can best be understood from a constructionist perspective, which allows us to describe the complex vertical and horizontal relations between micro- and higher level constructions in the form of a constructional network consisting of a set of nodes that have “form and meaning content (albeit of varying degrees of complexity and specificity – some may be underspecified)” and are linked “in multiple different directions between the semantics, pragmatics, discourse function, syntax, morphology” (Traugott & Trousdale, 2013: 51).
Figure 7 shows a simplified illustration of the form-deixis make-up of the constructional -ing-network. Before 1250, the English gerund was unambiguously nominal and very marginally allowed clausal deixis. The rise of the verbal gerund as the only form that can express clausal deixis in the gerundive system (indicated in bold in Figure 7), then, can be considered as the start of a new node in the -ing-network. This new construction is, at the same time, ‘interparadigmatically’ connected with the present-participial clause through formal resemblance (-ing ending) and functional likeness (clause-like behaviour, cf. Houston, 1989). Importantly, however, our analysis has shown that, even though there is some evidence to consider the rise of the verbal gerund as the development of a new type node in the constructional network, this development did not lead to a distinct boundary between the nominal and the verbal gerund: the verbal gerund has continued to maintain strong ties with the nominal gerund through formal and functional resemblance, and it continues to inherit the sentential distribution of the overarching noun phrase schema. Thus, the verbal gerund, which combines nominal and clausal features, is a truly categorially hybrid construction (cf. Aarts, 2007). The network presented in Figure 7 is consistent with the constructionist notion of “degeneracy”, which holds that “languages, as complex adaptive systems, do not rely on a
A sole strategy to express abstract syntactic-semantic meaning; (...) rather than a one-to-one relationship between form and meaning, or a many-to-one relationship between form and meaning, degeneracy mostly consists of many-to-many relationships between form and meaning” (Van de Velde, 2014, p. 172-173). The diachronic form-function change in the -ing-network does not consist of the loss of a grammatical strategy (the bare nominal gerund) that is compensated for by the development of the verbal gerund, and neither does it consist of “the loss of one of many redundant strategies” (Van de Velde, 2014, p. 173); instead, the development involved a restructuring of the network’s form-deixis links.

As such, the stance taken by Huddleston & Pullum, who posit a categorical split between the ‘gerundial noun’ (i.e. nominal gerund) and the language-specific category of ‘gerund-participial’ (2002, p. 1188), seems inaccurate. The most appropriate way to grasp these multiple cross-categorial links in the gerundive system is to adopt a constructionist view of syntactic categories along the lines of that suggested by De Smet in his account of the relationship between verbal gerunds and participials, recognizing that “(i) Not all members of a grammatical category have to share the same features, (ii) grammatical categories can be internally heterogeneous, (iii) grammatical categories can be interconnected [and] (iv) inclusion in a category and autonomy as a category are partly independent” (2010, p. 1185). From characteristics (i) and (ii), it follows that a category can be internally heterogeneous, comprising different more and less prototypical members with different features, but at the

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4 Despite the fact that that gerundive and participial ing-forms cannot be distinguished on semantic grounds (De Smet, 2010, p. 1169-1171; De Smet & Heyvaert, 2011), and that gerunds and participles engage in a diachronic trend of becoming less distinctive over time (De Smet, 2010, p. 1171-1182), De Smet (2010) convincingly points out that the data do not straightforwardly support the claim that language users no longer distinguish gerunds from participles. First, Huddleston & Pullum’s claim that gerunds and participles are morphologically identical “only fully holds for standard noncolloquial written English” (De Smet, 2010, p. 1164), since in nonstandard varieties of English, language users distinguish between an /in/- and /in/-realization of the (ING)-morpheme in a way that largely coincides with the gerund-participle divide. Second, the internal syntax of gerundive and participial ing-clauses reveals that overt subjects in the possessive case clearly only associate with ing-clauses in nominal positions, thus separating gerunds from other types of ing-clauses (De Smet, 2010, p. 1181). If these observations are taken into account, one can only conclude that the behaviour of ing-clauses is essentially contradictory.
same time, “the subcategories that create internal heterogeneity are related through (and to) the overarching category, which unifies them despite their distinctness” (De Smet, 2010, p. 1185; cf. ‘inheritance links’ Goldberg, 1995, p. 74-75). Applying this view to the English gerund, and including the nominal gerund, we can suggest that, while the English gerund is a heterogeneous category consisting of two (especially formally) distinguishable higher-order constructions and several lower-level constructional schemata with varying degrees of semantic overlap (cf. for instance the overlap between nominally grounded generic nominal and verbal gerunds), the language user still seems able to generalize over nominal and verbal gerunds based on their similarities. Characteristics (iii) and (iv), inspired by the constructionist idea of language as a network of connected constructions, can help to explain why the verbal gerund seems to simultaneously drift away from and again partake in the deictic behaviour of the NP category. All gerunds are atypical members of the NP category (Croft, 2001, p. 67), making them suitable candidates for being lured into the related category of non-finite clauses. However, “because categorial inclusion and categorial autonomy are to some extent independent, language users can both generalize and differentiate within the same grammatical category” (De Smet, 2010, p. 1185). In particular, as we have shown in this paper, the verbal gerund has come to partake in the properties of the category of non-finite clauses without, however, being completely absorbed by it, and maintaining its ties to its nominal origin. The constructionist picture emerging from this may not be the neatest one, but it does offer intriguing new perspectives on both the categorial status of the English gerund system and the theory of constructional change.
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