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READING THE READING OF THE GERUND: THE SHARE OF NON-EVENTIVE INTERPRETATIONS OF *-ING* NOMINALS

The present paper focuses on the changing interpretations of the English gerund. Since no method can accurately and uniformly account for the meanings of all instances of existing *-ing* forms, previous studies have offered approximate characterizations based on small samples. This study looks at the numbers of *-ing* derivations denoting institutionalized activities, on the assumption that these represent non-eventive readings. The derivations in question are arranged chronologically in terms of their time of coinage to compare changing productivity levels of this process relative to *-ry* derivations. This count shows that *-ing* suffixations outnumber other nominalization processes and this trend has increased in the last two centuries.

Keywords: *historical linguistics, participle-gerund construction, gradience*

1. Introduction

Accurate analyses of the semantic contribution of grammatical constructions have been of special interest to scholars representing various theoretical models and approaches. Rather obviously, producing detailed characterizations of the meanings of constructions is an important goal in Construction Grammar, if only because the association of form and meaning is among the main tenets of this model. To take another example, historical linguists, looking to explore the nature of grammaticalization, focus on the particulars of meaning in order to understand deeper regularities of semantic change. The problem is that any

given grammatical construction resists a simple description. Even a thorough analysis of a large number of attested uses may yield an incomplete picture of a construction's semantic content, leading many researchers to place excessive stress on some of its aspects and neglecting others. One such example is the English gerund, which due to its wide range of usage, reveals itself differently to different researchers. Specifically, some see it as a vehicle for the expression of practically only eventive 'verby' scenarios, while others point out its increasing potential for conveying non-eventive 'nouny' readings. Siding with the latter, this study will attempt to provide arguments for viewing the gerund as being as potentially non-eventive in character as it is eventive.

2. Analyses of the English gerund

One obvious appeal of the English gerund construction, no doubt responsible for the attention it has enjoyed, is its transitional status of being a part-verbal, part-nominal form. In terms of the external syntax of *-ing* nominalizations, they are "obviously and unambiguously nominal in character" (Taylor 1996: 270): They function as subjects and objects, they can take genitive heads (*The president's handling of the issue*), and they tend to be open to pluralization (*sightings, killings*). On the other hand, phrase internally, they are "rather more verbal in character" (Taylor 1996: 270). When they take objects, these may be introduced directly in accusative (*handling the issue*) rather than through *of*-PPs (*handling of the issue*) typically required by nominal phrases (*treatment of the issue, *treatment the issue*).

Other authors emphasize the verbal nature of gerunds more strongly. Huddleston & Pullum (2002) argue that gerunds should be regarded as verbs and the reasons they provide have to do both with their internal and external syntax. Like verbs, gerunds also allow modification by adverbs (*expelled for wantonly killing the birds*). When complemented by NP objects, gerunds do not allow determiners (**the killing the birds*).

Concerning the semantics of gerunds, the general opinion is that gerunds behave more like verbs, too. They focus more on the eventive properties of the nominalized situation (e.g. *governing*), compared with derived nouns like *government*, which "have taken the process of conceptual reification further" (Taylor 1996: 270). Similarly, Demske (2002) and Bauer et al. (2013) claim that *-ing* nominalizations have a strong preference for eventive readings, which are asymmetrically more prominent than non-eventive readings. According to Bauer et al. (2013: 207), *-ing* nominalizations "characteristically display eventive readings and are less prone to lexicalization or semantic drift, although there are a few that exhibit result, product, or means interpretations (...)". Although no specific clarification is offered concerning what proportion of non-eventive readings is represented by "a few" *-ing* nominalizations, the discussion of non-eventive interpretations in Bauer et al. (2013) suggests that

non-eventive nominalizations are populated mainly by forms based on word formation processes other than suffixation by *-ing*. The examples provided are predominantly conversions (*feed, spill, spatter*, etc.), *-ation* nouns (*agitation, rotation, imagination*, etc.), *-al* nouns (*acquittal, arousal, arrival*, etc.), and forms including a number of other suffixes. Rather few nominalizations with non-eventive readings are *-ing* forms.

However, the fact of the matter is that the exact nature of *-ing* nominals is not unequivocally verbal. They remain indeterminate both in terms of their syntactic and semantic behavior, and the lopsided emphasis on the verbal properties has been disputed. In a recent study focusing on the semantics of *-ing* nominalizations, Fonteyn & Hartmann (2016) take issue with the view that the English gerund does not exhibit much semantic shift toward non-eventive readings. As Fonteyn & Hartmann (2016: 3) admit, “detecting this shift in corpus data is not a trivial matter”, because different calculations may yield conflicting results, with some counts showing a predominance of eventive readings and others suggesting non-eventive readings on the rise. However, Fonteyn & Hartmann (p. 11) argue that “non-eventive meanings do seem to become a more prominent part of the nominal *-ing* construction”, an observation consistent with similar tendencies in other Germanic languages. For example, in modern German, *-ung* nominalizations (*-ing* cognates) convey exclusively non-eventive meanings (Demske 2000, Hartmann 2016), with eventive readings, formerly also expressed by *-ung* nouns, now being subserved by infinitive nominalizations. Similarly, Cetnarowska (2015: 141) observes that the Polish gerundive *-nie / -cie* derivations may function as non-eventive object-denoting nominals (*zaproszenie*, ‘invitation’, *wezwanie* ‘summons’, *obszycie* ‘lining, edging’), apart from expressing simple events (*zebranie*, ‘meeting, gathering’) or being argument-supporting nominals (*zaproszenie rodziców na ślub* ‘inviting the parents to the wedding’). The question is whether English also exhibits a similar trend toward associating *-ing* nominalizations with non-eventive readings. At the moment, it is too early to tell, and the picture is far from clear, as it seems that while all *-ing* forms are open to eventive interpretations, a great number of *-ing* nominalizations show non-eventive readings too.

One way of demonstrating the increase in non-eventive readings is to compare the most frequent nominalizations appearing in use throughout the history of English. Fonteyn & Hartmann show that the ten most distinctive *-ing* nominalizations in Late Modern English exhibit non-eventive readings, which represents a gain over Early Modern English, where “the ten most distinctive *-ing* forms mainly have eventive readings” (2016: 6).

It should be pointed out that calculating these tendencies based on the frequencies of selected items is a tricky task, involving the need to manually distinguish between the intended readings of the forms in question, an effort naturally saddled with uncertainty and possible error. And as Fonteyn & Hartmann themselves note, “(a)rriving at a more accurate and nuanced picture of the development of English *-ing* nominals thus requires a ‘cumulative’ approach to

the available data, in which several perspectives and methods complement each other, rather than a selective one.” (2016: 3) The present study is an attempt to complement Fonteyn & Hartmann’s findings from their schema-based analysis by offering an additional indication of the increase of non-eventive readings. Specifically, another count will be performed that will suggest that the gerund is indeed not exclusively or primarily devoted to expressing eventive meanings.

Before the study is presented, it is first important to spell out in more detail the characteristics that make the English gerund such an elusive form to define. The purpose of this additional discussion will be to preempt the wrong conclusions from the meandering opinions summarized above. The point of the next section will be that the construction is not nebulously vague, vacillating between the verbal and the nominal. The gerund is not a single constructional amalgam of mixed characteristics. Instead, it should be thought of as a series of structures, each one being more verbal or nominal, depending on its form. Appreciating the gradient nature of *-ing* nominals will make it possible to classify problematic readings with more precision, showing that the share of non-eventive readings is larger than is admitted in the literature.

3. Categorical indeterminacy

3.1. Syntax

The categorical ambivalence between the nominal and verbal status of gerundive nominalizations can, to some degree, be resolved by distinguishing between three types of nominalizations, referred to simply as Type A, Type B and Type C nominalizations in Taylor (1996: 276-279). The first one, exemplified in (1) is the most nominal of the three, and the latter two, shown in (2) and (3), are more verbal in character.

- (1) Type A: our painting of the birds
- (2) Type B: our painting the birds
- (3) Type C: us painting birds

All verbal or nominal properties follow from a gerund belonging to one of these types. Generally, because of their more nominal form, Type A nominalizations can be modified by adjectives, they take determiners, and they can sometimes be pluralized. On the other hand, Type B and C nominalizations are modified by adverbs, they do not allow determiners and resist the plural number.

- (4) Type A: the (skillful/* skillfully) painting(s) of the birds
- (5) Type B and C: (*the) (skillfully /* skillful) painting(*s) the birds

3.2. Semantics: The continuum division

It should be recognized that the distinction between eventive and non-eventive readings is not a simple, binary choice. Instead, it is perhaps more profitable to think of the two interpretations as extremes of a continuum with a number of transitional readings. This point was made by Quirk et al. (1985: 1290-1291), who showed that the uses of *painting* as an unambiguously eventive participle and a clearly non-eventive noun *painting* in the ‘picture’ sense are separated by uses intermediate between eventive and non-eventive readings. For example, the painting in (6) can be interpreted either in the ‘action’ sense (eventive) or in the ‘mode’ (less eventive) sense. Quirk et al. demonstrates gradience by contrasting eventive participial uses with nominal uses, but the problem is that according to authors like Bauer et al. (2013) the latter are more of an exception, and are rare.

- (6) The painting of Brown is as skillful as that of Gainsborough. (example 3 in Quirk et al. 1985: 1291)

Still, there is no need for providing classic concrete-object uses of *-ing* nominals to observe the shift toward non-eventive readings. That is because gradience effects can be observed much closer to eventive readings. At the eventive end, *-ing* nominals convey simple achievement- and accomplishment-type scenarios with event frames and clearly identifiable arguments. For example, the nominal *breaking up* in the following example is a pure eventive. The situation can be placed in time, and the main participants can be identified.

- (7) How effective was Charlotte in breaking up the fight? (Claudia Moscovici, *Romanticism and Postromanticism*)

Slightly more complex than such simple situations are activities and habitual activities, which can be more indeterminate as to their exact occurrence in time, and consequently, less prototypically eventive.

- (8) She was tired of Blaine’s constant complaining and his whining. (Dianne Lininger, *The Valley of Shadows and Shame*)

When activities are dispersed in time, they are increasingly more open to a manner (non-eventive) interpretation, rather than an action interpretation, as in (9) below.

- (9) ...the new president’s clumsiness in handling the politics of governing. (James Chace, *1912*)

As the above examples show, gerundive nominalizations can be divided into (at least) three types. However, divisions are blurred and some instances of use may be difficult to categorize. Furthermore, when analyzing certain words, it is hard to determine whether they play an eventive or non-eventive role, and can thus be interpreted in both ways, an issue to which we turn now.

4. Occupational designations based on -ing nominal

Such habitual activities also have a tendency to be construed as occupations, and these are even less eventive still, because although they may be based on performing a given central action, they are typically combinations of multiple activities. To take one example, the nominal *banking* is primarily a non-eventive nominal. Although it can refer to an eventive act (10), as Bauer et al. (2013) predict, in most cases it is intended as a classic noun label for a discipline (11).

- (10) Technology-based banking services need to allow customers to enjoy banking at convenient times and locations. (Caroline Howard, *Strategic Adoption of Technological Innovations*)
- (11) ...the number of employees in banking and similar industries (Harold Arthur Wolf, *Readings in money and banking*)

The reason why most uses of *banking* are similar to (11) is that it is conceived of as a totality of highly diverse activities, involving operations and concepts like billings, transfers, loans, deposits, savings etc. This inherent complexity makes it difficult to think of banking as a discrete event. Furthermore, disciplines like banking (or marketing, advertising and others for that matter) do not carry argument structures normally associated with simple events. It is possible to think of banking in the abstract, as a sum of knowledge, techniques, responsibilities, and possibilities, without having to identify participants involved in it. As a result, typical episodic event interpretations are either hard to find or they sound odd:

- (12) ?The banking occurred at 4pm.
 (13) ?The banking took 3 minutes.

The noun-like status of *ing*-suffixation profession names is evident from one more important property they exhibit. When they specify an object, they take compound form. For example, the occupation involving ‘the verification of factual assertions in a piece of text’ is referred to as *fact checking*, not *the checking of facts* or *checking facts*. That is, such names of occupations assume neither Type A nor Type B/C form, and are more nominal than either. There is a considerable number of occupational descriptions based on this pattern (a full list can be found in the appendix):

- (14) broadcasting, crash-testing, filmmaking, fingerprinting, networking, print-making, screenwriting, speedwriting, etc.

It seems that the most accurate approach to their form is to view them as compounds for the following reasons. First, they are stressed on the first element (*'fact-finding*, *'peace-keeping*, *'baby-sitting*). Unlike phrases (15), they leave the noun in the non-head position unmarked for definiteness or number (16):

- (15) checking (the) (most mysterious) fact(s)
 (16) fact checking, *facts checking, *a (the fact checking) assignment

It is theoretically possible to regard them all as verbal compounds, but this idea should be dismissed for at least two reasons. Viewing examples in (14) as verbal compounds would mean deriving them by *-ing* affixation directly from VPs, and that would carry the problematic presupposition of the existence of compound infinitives like *to fact-find*, *to filmmake*, or *to print-make*. The main problem is that “most Germanic languages do not have productive processes for verbal compounding” (Booij 2005: 91), and while some forms like *to baby-sit* or *typeset* do exist, they are backformations from nominal compounds *baby-sitter* or *typesetting*. Secondly, and consequently, most of them are not available in participle form, which rules out uses like *?We were filmmaking / ghostwriting / metalworking all morning*. And predictably, compounds like *fact-checking* or *peace-keeping* are not normally modified by adverbs:

- (17) a. challenges for international peacekeeping (*internationally)
 b. course in successful speedwriting (*successfully)
 c. diploma of professional(*ly) screenwriting
 d. tips for effective(*ly) bodybuilding
 e. trends in digital(*ly) broadcasting

These characteristics suggest that gerundive compounds are the most nominal *-ing* forms, and they represent the extreme opposite participial forms of verbs:

More verbal Participles	Type C	Type B	Type A	More nominal Compounds
<i>We're checking facts</i>	<i>Us checking facts</i>	<i>Our checking facts</i>	<i>Our checking of facts</i>	<i>Our fact-checking</i>
<i>(meticulously)</i>	<i>(meticulously)</i>	<i>(meticulously)</i>	<i>(meticulous)</i>	<i>(meticulous)</i>

Figure 1. Participle-gerund continuum

If it is correct to regard names of institutionalized activities as predominantly nominal forms, this suggests that there may be more of them than authors like Bauer et al. (2013) or Huddleston & Pullum (2002) suggest. The present study will focus on precisely this kind of *-ing* nominalizations to explore the possibility that non-eventive gerunds may be on the rise in present-day English.

5. Study

The transitional nature of the division between eventive and non-eventive readings makes it difficult to classify meanings. It is likely that some non-eventive readings may be misidentified as eventive, which could explain the disproportion of the latter over the former in studies like Bauer et al. (2013).

The present study focuses on descriptions of occupations coined by adding the morpheme *-ing* compared to other suffixes. Reasons behind the choice of the lexical area of work include the possibility of quantifying the numbers of non-eventive *-ing* nominalizations within a conveniently circumscribed area by comparing them relative to other nominalizations. If Fonteyn & Hartmann's hypothesis of an increased share of gerundive nouns with non-eventive meanings is correct, it should be reflected in the growing numbers of professional designations ending in the suffix *-ing*. If, on the other hand, it is the case that non-eventive gerundive nouns represent a negligible percentage, one would expect to find that few occupational disciplines like *hunting* have names ending in *-ing*.

The study includes the following types of suffixations (a full list is included in the appendix).

- (18) *-ing*: building (1250), casting (1250), sewing (1275), molding (1300), recording (1300), shipping (1300), glazing (1325), bricklaying (1475), tanning (1475), brickmaking (1695), logging (1700), publishing (1700), cost accounting (1910), scriptwriting (1910)
- (19) *-ry*: husbandry (1250), armory (1300), butchery (1300), jewelry (1300), pottery (1475), gunnery (1490), fishery (1520), smithery (1615), turnery (1635), joinery (1670), dentistry (1830), plastic surgery (1830), rocketry (1925)

Among occupational designations are also a number of other types of derivations, such as *management* (1590), *journalism* (1825), *education* (1525), *architecture* (1555), but these are not nearly as frequent as the *-ing* and *-ry* affixations and they are not included in the comparison. On the other hand, the nouns ending in *-ry* (e.g. *forestry*) include not only those based on the allomorph *-ery* (e.g. *smithery*) but also, despite its independent status, the morpheme *-ary* (e.g. *military*).

As can be seen from the sample in (18) and (19), the estimated dates of the first attestations are included. The reason why an approximate period of coinage is taken into account is that we are not merely concerned with total numbers of *-ing* nominals. That is because a high number of *-ing* nominals would mean little if most of them were shown to have been coined only in early periods of the history of English. The really interesting question is whether *-ing* suffixation has retained its productive potential for non-eventive meanings in recent history. To explore this question, coinage dates were included, so numbers of *-ing* could be compared for various periods.

The words included in the present study are arranged chronologically. However, the dates refer to the first attestations of a given nominalization, and not the actual beginnings of the corresponding profession. For example, although the noun *advertising* is a 16th century coinage, the highly specialized line of business of advertising, as it is known today did not develop until at least the 19th century. Still, the word *advertising* is identified as a coinage originating in 1520, because what matters for our purposes is not the history of the profession, but the morphology behind the name.

Another objection to head off is the possibility that increasing numbers of nouns based on a given suffix may reflect little beyond the fact that the numbers of occupations have increased with time, especially in recent decades, when new kinds of jobs have appeared exponentially as a result of technological developments. Put another way, increasing numbers of *-ing* coinages would merely show that the process is still productive, but they would *not* suggest any drift toward non-eventive meanings of *-ing* nominalizations. It is for this reason why *-ing* coinages were plotted against another nominalization process and shown to increase at its expense.

The collection considered here is by no means complete. Excluded were, for example, criminal practices (*stalking*, *mobbing*, *waterboarding*), due to their dubious status as “professions”. Sometimes decisions were made on an individual basis, especially in the case of similar-looking names, some of which referred to non-remunerated activities (e.g. *stagediving*) compared to those that can be actual income-generating jobs (e.g. *skydiving*). Some were, of course, omitted by oversight.

In total, 142 *-ing* words and 55 *-ry* words were collected. This in itself shows that *-ing* is almost three times as frequent as *-ry* suffixation. A more interesting finding concerns the relative frequencies of the two processes unfolding over time, especially in the last two centuries. What Figure 2 illustrates is a clear increase in the number of *-ing* derivations against a clear decrease in *-ry* derivations. While *-ing* words increase from 10 in the 18th century to 29 in the 19th century and then to 43 in the 20th century, *-ry* derivations go up slightly from 4 to 7 between the 18th and 19th centuries, they then drop to just 2 in the 20th century. Even allowing for the possibility of a large number of *-ry* occupational terms being overlooked, thus assuming that *-ry* professions may be as frequently coined as gerundive terms, the fact remains that *-ing* nominals are

far from being a construction with predominantly eventive readings. The sample considered in this study shows that the shift toward non-eventive readings is a strong productive tendency.

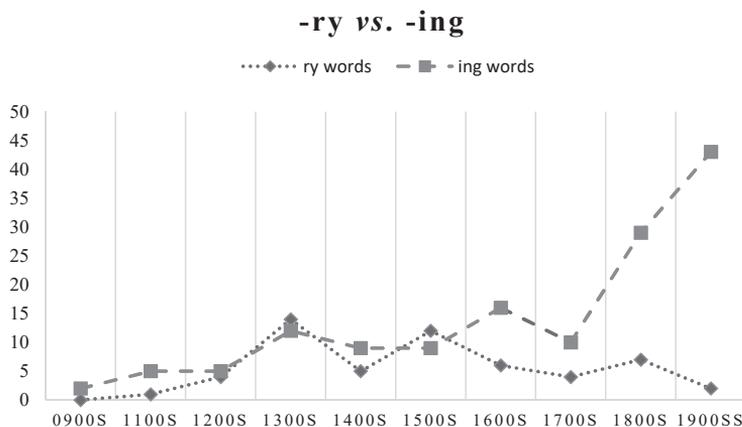


Figure 2. Frequencies of *-ing* and *-ry* derivations over time

6. Implications

Having pointed the verbal properties of *-ing* nominalizations, Huddleston & Pullum (2002) conclude that the gerund is essentially not only more of a verb than a noun, but also that it does not differ significantly from its even more verbal instantiation, the present participle. They propose that “[a] distinction between gerund and present participle can’t be sustained.” They do admit that “[h]istorically the gerund and present participle of traditional grammar have different sources”, but they go on to claim that the “historical difference is of no relevance to the analysis of the current inflectional system.” They therefore apply the “compound term ‘gerund-participle’ for the verb-form” (Huddleston & Pullum 2002: 82).

I would like to argue that this attitude is not merely another case of the familiar opposition between lumpers and splitters in science, where some scholars invoke commonalities to subsume related phenomena into broader categories, while others emphasize distinct features separating categories. The participle-gerund distinction remains clear enough, and the commonalities, however undeniable, found between participles and especially the more verbal uses of gerunds do not really justify disregarding the differences between the overall categories of the gerund and participle.

This and other attempts to question traditional distinctions can be shown to carry a subtle but obvious logical error, which should invalidate any similar

proposals to suspend categorial differences. For example, the realization that the traditional distinction between the lexicon and syntax is a continuum with a blurred division has prompted cognitive linguists to propose treating the two traditionally separate components of language as one “expanded lexicon” (Goldberg 2006: 64) store, referred to as the “constructicon”. This *de facto* revocation of the lexicon-syntax distinction has been justified by, among other things, the conviction that its fluidity makes it a “fundamental mistake” to continue insisting on it (Jackendoff 2007: 53). However, as Szcześniak (2013) demonstrated, it is a non-sequitur to point out a blurred division of a continuum kind and then argue for a non-existent division. In fact, it is a familiar fallacy, ironically, known as the “continuum fallacy”, which involves arguing that if two extremes are connected by small intermediate differences and if at no step can one indicate a decisive difference, then the extremes are the same. To use an analogy, inability to specify at what temperature cold turns to hot should not lead to the conclusion that cold is really the same as hot. But this is more or less what happens when the fuzziness of the distinction is taken as a justification of viewing the lexicon and syntax as inhabiting the same plane and granting them equal status. And it is similarly wrong to invoke similarities between participle and gerund uses to argue in favor of discarding the division between them. Admittedly, there may be little discernible difference between the participle in (20) and the Type C gerund in (21), but it would be stretching the similarity to draw any direct parallels between (20) and the evidently nominal gerund (22).

(20) Journalists are blowing the whistle on corruption; the politicians are lying.

(21) Journalists blowing the whistle on corruption, the politicians are lying.

(22) Whistleblowing takes real courage.

Does all this mean that English is on its way to dedicating the gerund to non-eventive readings only, the way this happened in German, where *-ung* forms, historically used to express both eventive and non-eventive readings, now no longer serve to convey eventive readings? This scenario is not likely for English, because of the effect exerted by participial *-ing* forms. Given the gradient co-existence of participial with the eventive and then non-eventive readings, progressive uses like (20) seem to guarantee a continued presence of eventive gerunds with which they can sometimes be ambiguous. German does not have a progressive construction equivalent to the English present participle, so in German nothing impeded a shift toward non-eventive uses to the complete exclusion of eventive uses of forms like *Lesung*, which now means ‘lecture’, and no longer ‘reading’.

7. Conclusions

The frequently noted disproportion between eventive and non-eventive readings of *-ing* nominals has led some researchers to claim that the latter readings are accidental rather than being part of their standard functions. This conclusion is misguided for at least three reasons. First, the relatively low frequency of *-ing* nominalizations with non-eventive readings is something of an illusion. Some of it is a result of misclassifying gerunds as eventive when they do not refer to concrete objects. These do not have to be actual artifacts to be considered non-eventive. As I hope to have demonstrated in sections (3.2) and (4), gerunds denoting occupations (and probably many other similar examples) should be considered non-eventive. Second, part of the purported low frequency can be explained by pointing out that many non-eventive meanings simply cannot be expressed through gerunds (like *destroying*) when they are blocked by an existing noun (*destruction*), because “when a verb has its own idiosyncratic nominalization use of the *-ing* form is may well sound awkward or even be excluded” (Spencer 2005: 85). In other words, in these cases, the reason behind the observed scarcity of non-eventive gerunds is not that gerunds are incapable of expressing such meanings, but because the need is filled before gerunds are even mobilized for this job. Third, as the comparison of frequencies presented in this study illustrates, the frequencies of non-eventive nominals are not as low as they are claimed to be. In some cases, the gerund does get mobilized for the expression of non-eventive readings more often than other word formation processes. Terms referring to occupations and institutionalized activities are derived through *-ing* affixation more spontaneously than through other processes.

It could be proposed that *ing-* nominalizations denoting occupations and institutionalized activities represent a schematic model followed by new derivations. Under this view, the model would be similar to exemplars (Bybee 2010), mental representations “built up from tokens of language experience that are deemed to be identical”. Like exemplars, the occupational *-ing* nominalization model would also be sensitive to “each experience with language [which] has an impact on cognitive representations” (Bybee 2010: 8), strengthened by each new attestation of an occupational gerund. The constantly growing number of such nominalizations can be taken as an indication that, through a self-feeding loop mechanism, similar nominalizations will continue to be coined, further strengthening the non-eventive interpretation functions of the English gerund.

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Appendix

ministry	1175	wizardry	1575
surgery	1250	military	1575
drapery	1250	oratory	1580
dairy	1250	topiary	1585
husbandry	1250	chemistry	1590
armory	1300	foundry	1595
butchery	1300	chandlery	1595
jewelry	1300	smithery	1615
masonry	1325	turnery	1635
augury	1325	joinery	1670
lapidary	1325	millinery	1670
archery	1350	pawnbrokery	1680
cookery	1350	forestry	1685
costumery	1350	furriery	1760
embroidery	1350	bookbindery	1765
poetry	1350	hosiery	1780
carpentry	1350	perfumery	1790
laundry	1350	dentistry	1830
palmistry	1375	plastic surgery	1830
saddlery	1400	costumery	1830
housewifery	1400	basketry	1850
haberdashery	1425	curriery	1885
pottery	1475	optometry	1890
gunnery	1490	tree surgery	1910
fishery	1520	rocketry	1925
puppetry	1520	animal husbandry	1925
confectionery	1535		
peasantry	1545		
falconry	1565		

Figure 3. *-ry* nominalizations

sailing	900	plumbing	1660	automaking	1900
hunting	950	gamekeeping	1660	stockkeeping	1900
wrestling	1100	cabinetmaking	1675	sportswriting	1900
teaching	1150	bookkeeping	1680	chemical	
seafaring	1150	feltng	1680	engineering	1900
writing	1175	whaling	1680	bodybuilding	1900
painting	1175	shipbuilding	1690	filmmaking	1905
fishing	1250	glass cutting	1695	city planning	1910
spinning	1250	brickmaking	1695	copywriting	1910
building	1250	logging	1700	cost accounting	1910
casting	1250	publishing	1700	scriptwriting	1910

Figure 4 – continued

sewing	1275	boxing	1705	surfing	1915
molding	1300	engineering	1710	ice dancing	1920
recording	1300	banking	1725	broadcasting	1920
shipping	1300	hairdressing	1765	fingerprinting	1920
glazing	1325	bookbinding	1765	screenwriting	1920
undertaking	1325	mapping	1765	dirt farming	1920
weaving	1325	landscape		speedwriting	1920
accounting	1350	gardening	1795	factfinding	1925
packing	1350	dressmaking	1795	printmaking	1925
knitting	1350	trucking	1800	cycling	1935
lawmaking	1350	winemaking	1805	networking	1935
printing	1350	glassmaking	1810	drag racing	1940
bookmaking	1375	beekeeping	1810	crashtesting	1940
clockmaking	1400	drycleaning	1820	babysitting	1945
peacemaking	1400	glassblowing	1820	sportsfishing	1945
ironworking	1400	toolmaking	1835	data processing	1950
roofing	1400	winegrowing	1840	groundkeeping	1950
surveying	1425	woodcarving	1840	skydiving	1955
fencing	1425	photofinishing	1850	peacekeeping	1960
bricklaying	1475	typesetting	1855	language testing	1960
tanning	1475	housecleaning	1860	image consulting	1962
angling	1490	book reviewing	1860	genetic	
bookselling	1520	conferencing	1860	engineering	1965
advertising	1520	shellfishing	1865	number crunching	1965
soothsaying	1525	figure skating	1865	whistle-blowing	1965
housekeeping	1530	fireproofing	1865	windsurfing	1965
farming	1545	typewriting	1868	parasailing	1965
horse racing	1580	woodworking	1870	hang gliding	1970
fortunetelling	1580	wood turning	1875	gene splicing	1975
acting	1595	speed skating	1880	mountain biking	1980
engraving	1595	metalworking	1880	desktop	
quilting	1605	programming	1885	publishing	1980
quilting	1605	skiing	1890	break dancing	1980
watchmaking	1620	lobstering	1890	boardsailing	1980
etching	1625	copyreading	1890	DNA	
matchmaking	1630	belly dancing	1895	fingerprinting	1985
dairying	1640	ambulance		bioengineering	1960
computing	1640	chasing	1895		
		copyediting	1895		
		ghostwriting	1895		

Figure 4. -ing nominalizations

journalism	1825	evangelism	1620
criticism	1600	pugilism	1785
tourism	1805	ventriloquism	1790

Figure 5. *-ism* nominalizations

education	1525	aviation	1865
edition	1545	transportation	1530
construction	1350		

Figure 6. *-ation / -tion* nominalizations

law	1000	dance	1250	architecture	1555
medicine	1175	science	1300	management	1590
art	1175	funeral services	1500	athletics	1595
music	1200	police	1520		

Figure 7. Other nominalizations