English Historical Syntax and Morphology

EDITED BY

Teresa Fanego

María José López-Couso

Javier Pérez-Guerra

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TERESA FANEGO
MARÍA JOSÉ LÓPEZ-COUSO
University of Santiago de Compostela

JAVIER PÉREZ-GUERRA
University of Vigo

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Addresses

Minoji Akimoto
Aoyama Gakuin University
3–12–35 Azamino
Aoba-ku
Yokohama-shi
Kanagawa-ken 225–0011
Japan
miha-ru@cc.aoyama.ac.jp

Cynthia L. Allen
School of Language Studies
Australian National University
Canberra ACT 0200
Australia
Cindy.Allen@anu.edu.au

Douglas Biber
Department of English
Northern Arizona University
Flagstaff, AZ 86011–6032
USA
Douglas.Biber@nau.edu

Laurel J. Brinton
Department of English
University of British Columbia
#397–1873 East Mall
Vancouver, B. C. V6T 1Z1
Canada
brinton@interchange.ubc.ca

Victoria Clark
Department of English
Northern Arizona University
Flagstaff, AZ 86011–6032
USA
vec@dana.ucc.nau.edu

Teresa Fanego
Department of English
Facultad de Filología
Universidad de Santiago de Compostela
E-15782 Santiago de Compostela
Spain
iafanego@usc.es

Dieter Kastovsky
Institut für Anglistik und Amerikanistik
Universität Wien
Universitätszentrum Altes AKH
Spitalgasse 2–4, Hof 8
A-1090 Wien
Austria
dieter.kastovsky@univie.ac.at

Monika Klages
Englisches Seminar
Universität zu Köln
Albertus-Magnus-Platz
D-50923 Köln
Germany
monika.klages@uni-koeln.de

Lucia Kornexl
Institut für Anglistik/Amerikanistik
Ernst-Moritz-Arndt-Universität
Greifswald
Steinbecker Str. 15
D-17487 Greifswald
Germany
kornexl@mail.uni-greifswald.de

Manfred Krug
Englisches Seminar
Albert-Ludwigs-Universität
Postfach
D-79085 Freiburg
Germany
Manfred.Krug@anglistik.uni-freiburg.de

Ursula Lenker
Institut für Englische Philologie
LMU München
Schellingstr. 3 RG
D-80799 München
Germany
ursula.lenker@anglistik.uni-muenchen.de

María José López-Couso
Department of English
Facultad de Filología
Universidad de Santiago de Compostela
E-15782 Santiago de Compostela
Spain
iacouso@usc.es

Bettelou Los
Vakgroep ATW
Vrije Universiteit
De Boelelaan 1105
1081 HV Amsterdam
The Netherlands
blj.los@let.vu.nl

Anneli Meurman-Solin
Department of English
University of Helsinki
P. O. BOX 4
Yliopistonkatu 3
Helsinki 00014
Finland
Anneli.Meurman-Solin@helsinki.fi

Ruth Möhlig
Englisches Seminar
Universität zu Köln
Albertus-Magnus-Platz
D-50923 Köln
Germany
ruth.moehlig@uni-koeln.de

Javier Pérez-Guerra
Department of English, French &
German
Facultad de Filología y Traducción
Universidad de Vigo
Campus As Lagoas Marcosende
E-36200 Vigo
Spain
jperez@uvigo.es

Julia Schlüter
Fachbereich 3
Anglistik — Amerikanistik
Universität Paderborn
Warburger Str. 100
D-33098 Paderborn
Germany
schlueter@hrz.uni-paderborn.de

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Introduction

Teresa Fanego
University of Santiago de Compostela

The Eleventh International Conference on English Historical Linguistics (11 ICEHL) was held at the University of Santiago de Compostela between 7th and 11th September 2000. The number of participants exceeded 250, while the papers delivered within the conference's main programme came to 120. The distinguished panel of plenary speakers featured Douglas Biber, Laurel J. Brinton, Santiago González Fernández-Corugedo, Raymond Hickey, Chris McCully, Frans Plank, Irma Taavitsainen, Ingrid Tieken-Boon van Ostade and Anthony Warner. There were also several events running concurrently with the main programme, notably a workshop on historical word-formation, a para-session on electronic corpora and a poster session.

This volume is a companion to another one also containing papers from the same conference: *Sounds, Words, Texts and Change. Selected Papers from 11 ICEHL, Santiago de Compostela, 7–11 September 2000*, edited by Teresa Fanego, Belén Méndez-Naya & Elena Seoane (CILT 224). The two volumes together offer a representative sample of the contributions presented at the conference, including some of those delivered during the workshop on historical word-formation. The papers that have survived the successive selection procedures for presentation and publication[1] quite accurately reflect the various concerns of English historical linguistics at the turn of the millennium and the different methodologies applied to address them.

Though grouped together under the convenient heading of 'Syntax and Morphology', the articles contained herein testify to the often noted fact (see e.g. van Kemenade 1999:1002) that some of the current approaches to linguistic research — most notably grammaticalization theory — are increasingly calling into question a number of the basic axioms of structural linguistics, such as the notion of the discreteness of categories or the autonomy of the domains of grammar. In several of the contributions morphology, syntax,

semantics and communicative strategies of various kinds are seen as impinging on one another (see e.g. the papers by Allen, Biber & Clark, Kornexl, Krug, Lenker, Los, or Möhlig & Klages). Largely for this reason, we have made no attempt to organize the papers thematically and have simply presented them in alphabetical order. However, so as to give the reader some preliminary idea of what this volume has to offer, we will give a brief summary of the main issues in each individual paper.

Grammaticalization processes are discussed in the papers by Akimoto, Brinton and Krug. Akimoto ("Two Types of Passivization of 'V+NP+P' Constructions in relation to Idiomatization") examines the passivization of composite predicates like *make allowance for* or *put an end to* on the basis of extensive data from the seventeenth to the twentieth centuries and relates the type of passivization allowed by each predicate to its degree of idiomatization (Akimoto 1995). He shows that deverbal nouns with overt suffixes, such as *allowance*, are less easily fused with their verbs than deverbal nouns without suffixes, such as *end*, which accounts for their different behaviour regarding facts of passivization: inner passives ("allowance ought to be made for the Society") are preferred by the former class of nouns; outer passives ("the pause was put an end to"), by contrast, are more characteristic of nouns without suffixes. Brinton's article ("Grammaticalization versus Lexicalization Reconsidered: On the *late* Use of Temporal Adverbs") discusses a problem in the history of English which seems to present a challenge for concepts such as grammaticalization and lexicalization: the use of temporal adverbs as attributive adjectives, as in *the often remembrance.* Such usage was common in Early Modern English, but for most of the forms it was transient, and they are found only adverbially in Modern English. Brinton looks at possible ways of explaining this categorial shift and, although she tends to view the change as a case of grammaticalization, notes that doing so is not unproblematic: the forms discussed do not exhibit a downgrading of categorial status (i.e. from more major to more minor category) and hence do not meet the principle of decategorialization (Hopper 1991) which is usually considered central to grammaticalization processes. Finally, in "A Path to Volitional Modality" Krug traces the syntactic and semantic changes undergone by the verb *want* from its early use as a transitive verb meaning 'lack' ("the fool wants wit"), and later 'need' ("this room wants cleaning") and 'desire' ("I want an apple"), to its use as a catenative encoding modal meanings like volition ("I want to go to the cinema") or, more recently, obligation ("you want to be careful"). He argues that this semantic development was motivated by the gradual conventionalization of pragmatic inferences (Hopper & Traugott

1993: 63ff.) in appropriate syntactic contexts: what is lacked by somebody will often be needed, and hence desired — from which it is only a small step to the volitional reading where what is desired is no longer a concrete nominal object but an action or a state of affairs. Semantically, *want* has therefore become increasingly abstract and more grammatical. Syntactically, the *want* + *to*-infinitive construction, which involves the concatenation of two verb phrases, is also more grammaticalized than the original transitive verb governing a NP object.

Noun phrase structure is the topic of two papers. In "On the Development of *a friend of mine*" Allen discusses the development of the double genitive construction. She traces the first examples of expressions like "a friend of mine" to the middle of the fourteenth century, and argues that the precursor of the double genitive can be found in Early Middle English constructions without a nominal head like *ȝif þu mare spenest of þine* 'if you spend more of yours' (i.e. 'of your money'); these constructions, which involve partitive *of* and the absolute use of a possessive pronoun, make reference to 'part of a set'. From this the meaning shifted to the 'membership in a set' meaning that characterizes the noun-headed double genitive. In turn Biber & Clark ("Historical Shifts in Modification Patterns with Complex Noun Phrase Structures: How Long Can You Go without a Verb?") examine patterns of noun modification in English from 1650 to the present. They show that over the past 100 years (especially the past 50 years in the case of noun–noun sequences) a major historical shift has taken place to favour the use of nouns as premodifiers (which are now nearly as important as attributive adjectives) and of prepositional phrases (rather than relative clauses) as postmodifiers. One major consequence of this historical shift is the development of a much more compressed, less explicit style of presentation which, Biber & Clark suggest, may have been facilitated by functional factors like recent advances in the technology of literacy, coupled with the 'informational explosion' resulting in pressure to communicate information as economically as possible.

The paper by Los ("The Loss of the Indefinite Pronoun *man*: Syntactic Change and Information Structure") analyses how the indefinite pronoun *man* 'one' fell into disuse in Late Middle English and relates this to the loss of V2 and to the spread of *to*-infinitival complementation. The loss of V2 affected the information structure of English main clauses: with the generalization of SV, subject NPs — unless preceded by another clause constituent fronted for special discourse effects (e.g. "*tennis* I like") — came to function as unmarked themes (cf. Halliday 1994) encoding given information and maintaining textual cohesion. This left little scope for the indefinite *man*, whose main role had been to

provide a contentless subject, and promoted the use of impersonal (i.e. agent-less) passives, which increasingly took over the function of *man* in main clauses. In the transition from Old English to Middle English there was also a decline of *man* in dependent clauses as a result of competition between subjunctive *that*-clauses and *to*-infinitives after certain verbs, which led to *man* in such clauses being largely ousted by generic PRO (e.g. *ic æfre bebead* [PRO$_{gen}$] *þone drihtelican dæg to healdenne* 'I have ever ordered to keep the Lord's day').

Schlüter's paper ("Morphology Recycled: The Principle of Rhythmic Alternation at Work in Early and Late Modern English Grammatical Varia-tion") is concerned with the so-called Principle of Rhythmic Alternation (cf. Selkirk 1984: 37: "[t]here is arguably a universal rhythmic ideal, one that favors a strict alternation of strong and weak beats"), whose effects she illustrates with reference to a number of grammatical variation phenomena taking place chiefly in the Early and Late Modern English periods, such as the distribution of mono- and disyllabic past participle variants (*drunk/drunken*), or the variable marking of infinitives dependent on the verb *make* in the passive (e.g. *made to glisten / made draw water*). All her analyses are concerned with intermediate phases of language change in which morphemes and markers are no longer or not yet quite obligatory in terms of grammatical motivations. Schlüter shows that it is precisely in these phases of indeterminacy that the Principle of Rhyth-mic Alternation may assume the role of an influential determinant.

An area of research pursued with great interest at the 11th ICEHL was word-formation processes. Three of the papers in this line — by Kornexl, Lenker and Kastovsky — appear in this volume. Kornexl ("From *gold-gifa* to *chimney sweep*? Morphological (Un)markedness of Modern English Agent Nouns in a Diachronic Perspective") examines nominal formations and challenges assumptions about the diachronic continuity from Old English times of agentive zero-derivation: according to such assumptions, nouns like *cheat, cook* or *chimney sweep* would be the Modern English analogues of Old English zero derivatives like *bora* 'bearer' or *gold-gifa* 'gold-giver'. Kornexl argues, however, that English has never developed a productive type of zero-derived agentives; alleged zero-derived agentive nouns are either loans (*cook, guide, judge*) or members of a special category of formally unmarked 'attitudinal' nouns (*cheat, bore, tramp*) reflecting the speaker's attitude towards certain people or things and thus crucially differing, both semantically and pragmati-cally, from prototypical agentives. Lenker's paper ("Is It, Stylewise or Otherwise, Wise to Use *-wise*? Domain Adverbials and the History of English *-wise*") discusses the recent emergence of viewpoint adverbials in *-wise* (e.g. "there are

two types of hydrogen atoms *positionwise*"). After an examination of the distribution and productivity of sentence adverbial *-wise* in Present-day English, she connects its emergence to the history of viewpoint adverbials in German and English. Viewpoint adverbials are a new category of sentence adverb not attested until the nineteenth century and apparently arising in scientific registers as a way of indicating the speaker's perspective without having to name the speaker directly (e.g. "*botanically*, this is the region of plants"). English *-(c)ally* is recorded in this use from the second half of the nineteenth century onwards, but is restricted to Latin or Greek adjectival bases. In the course of the twentieth century, *-wise*, which unlike *-cally* can be combined with nominal roots irrespective of their etymological origin, came to fill this obvious gap in word-formation. Finally, in "The Derivation of Ornative, Locative, Ablative, Privative and Reversative Verbs in English: A Historical Sketch", Kastovsky examines the historical development of five classes of verbs sharing a common cognitive-semantic basis and using the same derivational means: the underlying meaning of ornative (*encrown*), locative (*encage*), ablative (*unsaddle*), privative (*behead*) and reversative (*unlock*) verbs is that some Theme is caused to be located in some Location (e.g. *encage*) or is removed from this Location (e.g. *unseat*). Kastovsky shows that, with the exception of ablative verbs, these semantic categories were well established in Old English. An ablative pattern with *un-*, as in *unsaddle* or *unearth*, emerged in Middle English, probably under the influence of ablative *dis-*formations borrowed from French, such as *dislodge*. In addition, the introduction in Middle and Early Modern English of other Romance/Latin prefixes (*de-, en-/em-*) generally strengthened the whole derivational set.

Verbs are also the focus of Möhlig & Klages' "Detransitivization in the History of English from a Semantic Perspective". They adopt a functional framework (Dik 1989, 1997) to look into the historical development from Old English times of four different uses of selected transitive verbs which result in non-transitive constructions. The four patterns of detransitivization in question are co-referential intransitives (*John washed*), ergatives (*the door opened*), generics (*he is wise who reads*) and middles (*this book reads well*). Starting from the functionalist assumption that "the properties of clause structure are predictable from the semantics of predicates" (Faber & Mairal Usón 1999: 37), Möhlig & Klages examine the semantic properties of the verbs involved in these non-transitive presentations of essentially transitive events.

With the paper by Meurman-Solin we move away from Standard English into the fields of dialectology and sociolinguistics. In "The Progressive in Older

Scots" she discusses the use of the progressive in Scots from 1450 onwards, in particular the variants *be doand*, *be doing* and *be in/a doing*, and the linguistic, idiolectal and genre-specific factors affecting their distribution. The frequency of the progressive correlates with the type of discourse: narratives and speech-based texts yield a generally greater number of occurrences of the construction. Regarding the possible influence of Celtic languages on the development of the progressive in English,[2] Meurman-Solin does not find evidence supporting the existence of a 'Celtic connection' and points out that, despite the size of her corpus (over 850,000 words of running text), to say anything conclusive in this respect an even larger database would be necessary. Among other interesting findings, she suggests that the prepositional type *be in/a doing* may have provided a structure with a passive sense (i.e. 'be being done') at a time when the verbal types did not yet have a passive transform.

We would like to close this brief introduction by thanking the many people and institutions that helped to make the 11th ICEHL a success. Among the former, we are grateful to all those who delivered papers, as well as to the several academics who helped us in the difficult task of selecting from the large number of valuable abstracts submitted the contributions that were accepted for presentation at the conference. Our thanks also to the students who collaborated with the Organizing Committee both before and during the conference. Sponsorship was gratefully received from the Xunta de Galicia (Secretaría Xeral de Investigación e Desenvolvemento and Dirección Xeral de Turismo), the Spanish Ministry of Education and Culture, the University of Santiago de Compostela, the Department of English, the City of Santiago de Compostela, the British Council, the Spanish Association for Canadian Studies (AEEC), and the Fundación Pedro Barrié de la Maza.

Notes

1. The selection process was not an easy task, for the number of papers submitted for publication came to 55.

2. On this issue see Mittendorf & Poppe (2000) and Vennemann (2001).

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Two types of passivization of 'V+NP+P' constructions in relation to idiomatization[*]

Minoji Akimoto
Aoyama Gakuin University

1. Introduction

This paper examines so-called composite predicates[1] of the form 'V+NP+P' (e.g. *lose sight of*, *take care of*) in relation to passivization. The structures under analysis involve a verb of general actional meaning (*do*, *give*, *make*, *take*), a (usually) deverbal noun (*charge*, *leave*, *advantage*) and a following prepositional phrase, as in (1):

(1) We took advantage of the students.

As is well known, English allows two possible types of passive for 'V+NP+P' constructions, as illustrated in (2)–(3):

(2) Advantage was taken of the students.
(3) The students were taken advantage of.

Following Nunberg et al. (1994), I will call the former passive the 'inner passive', and the latter the 'outer passive'. In a historical perspective, these two types of passivization present interesting problems. First, which type appeared first? Second, which type is more frequent with the 'V+NP+P' construction? Third, how is the development of these types of passivization related to the process of idiomatization (Akimoto 1995: 588)?

   The aim of this paper is to discuss the issues raised above on the basis of examples collected from a variety of written sources (see the list of texts at the end of this paper), and also from the *Oxford English Dictionary on CD-ROM* (*OED*) and from the COBUILD CD-ROM (for Present-day English). Previous studies (see Section 2 below) suggest that the Late Modern English period witnessed an increase in the passivization of 'V+NP+P' constructions, hence in

what follows I will concentrate on the seventeenth, eighteenth, nineteenth and early twentieth centuries.[2]

The texts examined date from the seventeenth to the early twentieth centuries, and comprise fiction, essays, letters and drama among others. In terms of degree of formality, the texts can be considered representative of various styles, ranging from more (e.g. essays) to less formal (e.g. letters). Since the examples gleaned from my corpus were quite limited, I made use of the *OED* and COBUILD CD-ROMs for additional data. The total number of words of the texts examined in each century is as follows: (1) 17th century: around 873,600 words; (2) 18th century: around 609,700 words; (3) 19th century: around 925,500 words; (4) 20th century: around 568,800 words.

The *OED* represents a fairly random collection of data collected for no specific grammatical purpose, but even so, it can still be interpreted as showing general trends. Furthermore, my own collection of data, as listed below, can remedy that arbitrariness to a certain extent.

2.   Previous studies

Poutsma (1926: 118–122) gives four possibilities of passivization for 'V+NP+P' constructions:

a. Passivization of the (pro)noun governed by the preposition as the only possible passive (the outer passive). E.g. *some things had been lost sight of.*
b. Passivization of the noun phrase as the only possible passive (the inner passive). E.g. *every allowance is made for difficulties.*
c. Admission of two passive constructions. E.g. *new means must of necessity be had recourse to / recourse was had to the present participle.*
d. No passive conversion, as is the case with the composite predicates *pay court to*, *set foot on* or *take leave of.*

Jespersen (1927: 315–317) also gives examples of 'V+NP+P' passivization. His examples are mostly from the eighteenth and nineteenth centuries, except Mandeville and North. The type of passivization illustrated by Jespersen is the outer passive; he adduces no examples of the inner passive.

Denison (1993: 153–154) gives examples of the outer passive, such as *be taken heed to* and *be made mind of*, in the fifteenth century. He gives no examples of the inner passive. In an earlier study (1985: 202), he points out that the first "safe example" of the outer passive known so far dates back to the fifteenth century.

Matsumoto (1999:88–89) and Tanabe (1999:119–120) briefly discuss the passivization of 'V+NP+P' constructions in the Middle English period. Matsumoto states that the inner passive is common and that the outer passive is rare, but she does not adduce any examples of her own. Tanabe, like Matsumoto, does not make a distinction between deverbal nouns with and without suffixes (e.g. *appointment* vs. *sight*), a crucial issue to which I will return later in this section.

This latter observation is also true of Claridge (2000). She examines three groups of verbo-nominal combinations in the Lampeter Corpus (1640–1740). The second group consists of 'verb+noun+preposition' units, such as *set fire to* and *take care of*. She refers to the two types of passivization allowed by such structures in various places (80, 161, 276) and, without drawing a distinction between deverbal nouns with and without suffixes, she suggests that there is a predominance of the inner passive over the outer passive.

In his comprehensive analysis of John Dryden's verb syntax, Söderlind (1951:26–27) notes that "[t]he construction verb + object + prepositional adjunct turned into the passive is extremely rare (…) The type was apparently only just beginning to expand". He has found only three instances — all of them of the outer passive — with the predicates *do good to*, *take hold of* and *take notice of*.

Visser (1973:2163–2176) discusses the passivizability of 'V+NP+P' constructions extensively, adducing numerous examples, mostly of the outer passive. With regard to the different passivization possibilities of the predicates listed, he points out that "[i]t is not easy to account for this divided usage". Though valuable, Visser's examples cannot be taken uncritically, since not all of them can be accepted as genuine instances of the pattern under analysis. In any case, except for a few examples such as those involving *find fault with* (1400; with the inner passive) or *take heed at/about/to* (1380; with the outer passive), most date from the seventeenth century onwards.

In their study on idioms, Nunberg et al. (1994) refer to "double passives", that is, the possibility of inner and outer passives with the same construction. They call our attention to the following points:

a. The outer passive is vastly more frequent than the inner passive: in an extensive database of newspaper texts they found 1,200 examples of outer passives with *take advantage of*, as against only 71 examples of inner passives with this same predicate (1994:521).

b. In the examples of inner passive, the head houn is most often preceded by adjectives or quantifiers (47 out of the 71 examples involving *advantage was taken of*).

c. Generally speaking, idioms with only outer passives are semantically more opaque than idioms with only inner passives, since the former are treated as phrases that have been lexicalized into verbs, whereas the latter are typically conventionalized metaphors whose parts have identifiable meanings (1994: 524). For example, *take hold of*, which allows only the outer passive, means roughly 'grasp' and it is difficult to see what part of this interpretation can be assigned to *hold*.

d. Double passives are not very common, constituting less than 10% of the 97 idioms involving *make* and *take*.

With regard to these various studies on the passivization of composite predicates, there are several aspects which are worth noting. First, none of the scholars referred to above describes in any detail the characteristics of the 'V+NP+P' constructions they examine. Yet an aspect of prime importance is whether the preposition is obligatory or not. In this respect, Nunberg et al. (1994) seem to have mixed genuine 'V+NP+P' structures with those which are not, because they include constructions in which the preposition is optional. For example, *make an appointment (with), make an impression (on), make arrangements (for/with), take a chance (on), take a look (at)* and *take a stab (at)*.

Secondly, no distinction is made in previous studies between deverbal nouns with suffixes and those without suffixes. Nouns participating in the construction under analysis are mostly deverbal nouns; those with suffixes, such as *calculation* or *preference*, usually allow only the inner passive. This is partly because the overt nominal suffix increases the nouniness of the deverbal noun, which consequently resists the outer passive. By contrast, deverbal nouns without suffixes (or zero derivational nouns) often allow the outer passive, although at times they allow the inner passive as well. In this study, I will adopt a narrow definition of 'V+NP+P' constructions which includes only nouns without suffixation, although for comparison I give examples with suffixation in Table 1.

Finally, no less important is the fact that the presence of indefinite articles is strongly related to the passivizability of these nouns. Generally speaking, nouns without indefinite articles, such as *catch sight of* and *take care of*, are indicative of the fixed unity of the phrases in question, and hence are more susceptible to the outer passive than nouns with indefinite articles.

Table 1. Frequency of passives from the 17th to the 20th centuries

	17th inner	17th outer	18th inner	18th outer	19th inner	19th outer	20th inner	20th outer
catch hold of				1		(2)		
do harm to			1		1		(2)	
do justice to	1		2 (2)		1 (3)		(1)	
find fault with	3	1 (1)	1	(1)	(2)		(1)	
give countenance to	(1)		1					
give preference to			1 (1)		(8)		(8)	
have attention to			1 (1)					
have recourse to	(1)		2 (4)	(1)	(13)	(11)	(3)	
have regard to	(3)		1 (7)		(6)		(1)	
lay hands on						1 (1)		
lay hold of				1 (1)		2 (3)		
lose sight of				(1)		1 (10)		(3)
make addresses to	1 (1)							
make allowance for	(2)		3 (2)		(26)		(8)	
make allusion to					2 (7)			
make a calculation of			1		(1)			
make choice of	1 (1)	(2)		(1)		(1)		
make complaint of	2							
make conjecture of	1							
make estimate of	(1)		1					
make an example of	1	(1)				(1)	(1)	
make a fool of		(2)		1 (1)		2 (2)		2 (2)
make mention of	5 (5)	1	(6)		(13)		(5)	
make preparations for	1				(5)		(6)	
make provision for	1 (5)		1 (4)		(21)		(30)	
make use of	3 (11)	10 (23)	4 (18)	7 (100)	1 (21)	1 (65)	(47)	(12)
pay attention to			1 (7)		(25)		(30)	
pay regard to			1 (1)		(6)			
put an end to	(1)		(2)	(2)	(1)	5 (5)		
put a stop to	1		(7)	(2)	1 (4)	(3)	(1)	(1)
set bounds to	(1)		1					
set one's mind on	1							
take advantage of	1		(1)	1	(14)	7 (7)	(6)+1	(6)+7
take care of	2 (3)		1	4 (8)		5 (5)	+2	(6)+65
take a dislike against					1			
take leave of					1			
take measure of		1						
take notice of	5 (4)	13 (14)	2 (5)	11 (13)	(4)		(1)+3	+1
take pity on						1		
Totals	*70*	*69*	*94*	*157*	*188*	*141*	*157*	*105*

3.   Analysis and discussion

3.1 Distribution of passivizations in the data

The passives in Table 1 have been obtained from the various sources examined; figures for passives in the *OED* CD-ROM are indicated in parenthesis. For the high frequency phrases *take advantage of*, *take care of* and *take notice of*, I have added data from the COBUILD CD-ROM.

It seems that the general trend is for the inner passive to be more frequent than the outer passive except in the eighteenth century. However, one has to take into consideration the number of deverbal nouns with suffixes in the 'V+NP+P' constructions listed. The 'V+NP+P' patterns which allow both inner and outer passives are usually limited to nouns without suffixation. Nouns with suffixation usually allow only the inner passive. As I will discuss later, the nominals forming the more idiomatic phrases are those without suffixes. Deverbal nouns with suffixes, because of their strong nouniness, are not suitable as constituents in idiomatic phrases, their fusion into the verbal phrase as a whole being prevented. If we exclude from the list the predicates containing deverbal nouns with suffixes, such as *do justice to*, *give countenance to*, *give preference to*, *have attention to*, *make allowance for*, *make allusion to*, *make a calculation of*, *make complaint of*, *make preparations for*, *make provision for* and *pay attention to*, then the totals for the inner and outer passives in each century are as shown in Table 2.[3]

Table 2. Revised frequency of passives in each century

17th inner	17th outer	18th inner	18th outer	19th inner	19th outer	20th inner	20th outer
57	69	66	157	89	141	74	105

The revised Table 2 shows that, while the frequency of inner passives remains constant through time, outer passives have been predominant particularly since the eighteenth century onwards, a trend which corresponds to the process of idiomatization to be discussed later.

Because of space limitations, I can only give a few examples of the passive structures occurring in my data:

(4)   *great justice was done to* the collation by the guests in general (Smollett 243)

(5) a. and so pleasing is the snare as, till it hath ruined one, *no fault is found with* it (*Anthology of Seventeenth-Century Fiction* 176)
   b. Lucan is *found fault with* for not writing according to the lawes of a Poeme (*Conway Letters* 31)

(6) Be that as it may, *recourse* will always be *had to* this place (Smollett 181)

(7) There is also another consideration not to be *lost sight of* (Mill 212)

(8) *much allowance* ought to be *made for* the Society (Burke 72)

(9) though it was possible that *some passing allusion* might still be *made to* the hospital (Trollope 100)

(10) *Complaint* being *made* yesterday *of* the great abuse in selling of offices & places of trust (Marvell 35)

(11) a. *some severe example* might be *made of* such who (…) (Marvell 187)
    b. They must be *made an example of.* (1803 *Pic Nic* No. 4 (1806) I.140; *OED* s.v. *example* n. 3)

(12) a. *No mention* hath yet been *made of* Sr John Coventryes misfortune (Marvell 124)
    b. whereas in mine to Him was *made mention of* a cap and a paire of pistole barrells (*Conway Letters* 284)

(13) a. *no advantage* may be *taken of* your proceedings hitherto (Marvell 84)
    b. As the variety of each species (…) will be *taken advantage of* by natural selection (Darwin 348)

By comparison with Present-day English, the following aspects deserve mention:

a. It appears that the phrases *make use of* and *take notice of* were originally more frequently used in the outer passive, whereas in Present-day English the inner passive is more common. On the other hand, *take care of* and *take advantage of* show a shift in frequency from the inner to the outer passive (see also fn. 4 below).

b. The phrase *have recourse to* allowed both types of passivization, but in Present-day English neither passive is possible (see Cowie & Mackin 1975: 154).

c. In Visser's examples, *lose sight of* and *make love to* permitted both types of passive, but in Present-day English only the outer passive is possible. On the other hand, *take account of*, which is not recorded in my material but appears in Visser (1973: 2174), permitted only the inner passive, but now allows two types of passive (see Cowie & Mackin 1975: 324).

d. The phrase *make mention of* is used mostly in the inner passive. As a phrase containing a noun with a zero suffix, this phrase is slightly exceptional, because nouns without a suffix such as *mention* usually allow the outer passive. Incidentally, *make mention of* was modelled on the French expression 'faire mention de' (Prins 1952:206), and French influence may have had some connection with the use of the inner passive.

e. Phrases containing deverbal nouns with suffixation, such as *attention*, *preference*, *allowance* and all those listed in Table 1, permit only the inner passive. That is, the deverbal noun becomes the subject.

4.   Idiomatization

Idiomatization can be described as the linguistic process, both synchronic and diachronic, of reorganizing certain phrases into fixed / fossilized expressions, whose meanings cannot be deduced from their constituents (Akimoto 1999: 225; see also Akimoto 1995:588). Idiomatization usually involves semantic change, lexical fixing and syntactic ossification. I consider the development of 'V+NP+P' constructions as a four-stage process of idiomatization, as follows (cf. Akimoto 1989:354–358):

a.   in the first stage, all of the constituents are unrestricted;
b.   in the second stage, the relation between the verb and noun becomes stabilized, the verb and preposition become fixed, and the noun loses some of its nominal features (number, definite/indefinite articles), i.e. becomes decategorialized;
c.   in the third stage, reanalysis of the constituent structure occurs; and
d.   in the fourth stage, all of the constituents are idiomaticized into a single lexical item.

Let us take *lose sight of* as an example. In the first stage, there is variability in the verbs that can collocate with the noun *sight* (*OED* s.v. *sight* n.[1]):

   have/lose/take + *the* + (modifier) + *sight* + *of*

The phrase occurred with a definite article and was used for anything that can be seen:

   (14)   They loste ye syght of ye castell, it was clene vanysshyd a way (a1533 Lᴅ
           Berners *Huon* xxiii 68; *OED* s.v. *sight* n.[1] II.4.a)

In the second stage, the verb *lose* becomes more strongly collocated with *sight* than the other verbs, the definite article *the* being sometimes deleted. In the third stage, reanalysis takes place, as follows:

[*lose*] [*sight of* X] > [*lose sight of*] [X]

In the fourth stage, *lose sight of* is idiomaticized into a single lexical item. The phrase can now be used for something unseen:

(15)   There is also another consideration not to be *lost sight of.* (Mill 212)

A similar process can be observed in the case of *take advantage of.* The noun *advantage*, unlike its Present-day English counterpart, was formerly a full noun that could take modifiers, definite/indefinite articles, and plural forms (see Akimoto 1999: 212–213, 226), and could also be followed by a variety of different prepositions (e.g. *to, on, of*). Example (16) below illustrates stage 3 (reanalysis of the constituent structure), as described above:

(16)   they may have means on any emergency occasion, or sudden need, to resist, or *take advantage on* their Enemies (Hobbes, *Leviathan* 239)

Thus, semantically idiomatization is a process whereby meaning becomes more opaque, and, syntactically, the phrasal unity becomes more fixed than before. In this respect, *take care of* and *take advantage of*, with both of which the outer passive is now predominant, have become more idiomatized than *make use of* and *take notice of*.[4] Other phrases, such as *lose sight of* and *make love to* (the latter not recorded in my material), show a higher degree of idiomaticity in Present-day English; these phrases used to permit both types of passivization (see Visser 1973: 2168, 2170), but in Present-day English they permit only the outer passive.[5] *Have recourse to*, which formerly allowed both the inner and outer passives, does not allow either type of passivization in Present-day English.[6] This could be interpreted as indicating a high degree of idiomaticity, since idioms usually resist grammatical transformations such as passivization and topicalization (see Chafe 1968). But a more general principle may also be at work. Because of its stative nature in Present-day English, the verb *have* cannot be passivized. Formerly, however, in composite strings with *have* this verb seems to have had a relatively dynamic meaning, as discussed by Traugott (1999: 255). Thus the non-passivizability of *have*-phrases (in this respect see also *have attention to* and *have regard to* in Table 1) may be a consequence of the change of this verb from dynamic to stative.

As pointed out above, of the 'V+NP+P' patterns *take care of, take advantage of, take notice of* and *make use of,* the first two have gone in different directions from the second two in terms of idiomatization. *Take care of* and *take advantage of* have shifted their frequency from the inner to the outer passive, and *take notice of* and *make use of* from the outer to the inner passive. This difference is partly attributable to the strength of the fusion of the noun into the verb in the phrase. The nouns *care* and *advantage* are more strongly fused into their verb phrases than *notice* and *use* in theirs. The degree of fusion can be largely determined by whether the noun can be modified or not (cf. Nunberg et al. 1994: 500–503). The nouns in *take care of* and *take advantage of* are normally used with no or a limited number of modifiers,[7] whereas the nouns in *take notice of* and *make use of* are usually accompanied by modifiers. In this way, the idiomatic bond is weakened, so that, as pointed out by Quirk et al. (1985: 1160), in idiomatic phrases where the object contains a modifier or determiner, it is easier "to separate the object from the rest of the construction by the regular passive transformation" (e.g. *some notice was taken of …*).

Also characteristic of idiomatization is the gradual abstractness of nouns, as illustrated above with the noun *sight* in *lose sight of.* This direction from concreteness to abstractness is very common, and the development of outer passives matches this direction: an abstracted noun that has lost such nominal features as the ability to take an indefinite article can easily be fused into the verb phrase, which promotes the possibility of the outer passive.

It should be borne in mind, however, that some composite predicates have failed to move in the expected direction. Thus, as pointed out above, in the case of *make use of* inner passives have grown more frequent in the course of time, rather than the other way round. This is an issue that clearly deserves further investigation.

5.   Conclusion

I have discussed the two types of passivization allowed by 'V+NP+P' constructions — the inner passive and the outer passive — from the seventeenth to the twentieth centuries. Prior research on this topic has failed to make a distinction between phrases involving nouns with suffixes and those without suffixes, yet it has been shown here that establishing such a distinction is crucial, as nouns like e.g. *calculation* or *sight* behave differently with regard to facts of passivization.

Another finding of the present study is that since at least the seventeenth century the outer passive has been more frequent than the inner passive, a trend that matches the increased process of idiomatization of the structures under analysis. While this is true of most of the idioms examined, phrases like *make use of* and *take notice of* seem to resist the direction of idiomatization.

Notes

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1. For the label cf. Cattell (1984).

2. I tried to find examples of these types of passivization in sixteenth-century authors, such as Deloney, Nashe and Sidney, but did not come across any. This result may be natural in view of the development of the passive construction. The passive voice only became frequent from Early Modern English onwards (Görlach 1991:116; Seoane-Posse 1996:222–223, 407; 1999:134–136), and it seems reasonable that the more 'marked' passive construction of 'V+NP+P' should have appeared even later.

3. I excluded *choice* and *sight* from the category of deverbal nouns with suffixation.

4. Although in Table 1 there seems to be no clear difference in the frequency of the inner and outer passives with *take advantage of*, Nunberg et al. (1994:521) found 1,200 examples of outer passives, as against 71 examples of inner passives.

5. As regards the passivization of *make love to*, I am relying on Nunberg et al.'s (1994:533) judgement.

6. See Cowie & Mackin (1975:154), although Poutsma (1926:121) gives two types of passive.

7. As regards the modifiers of *advantage* in the phrase *take advantage of*, see Nunberg et al. (1994:522). With respect to the modifiers of *care* in *take care of*, in COBUILD I recorded a total of 67 passive examples, of which only one — with the modifier *great* — was an example of the inner passive.

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On the development of *a friend of mine*[*]

Cynthia L. Allen
Australian National University

1. Introduction

In this paper, I will present some findings of an investigation into the development of the construction illustrated in (1):

(1) He's a friend of mine/yours/her neighbor's.

I will refer to this construction as the 'double genitive', which is one of the traditional terms for it; the construction has also been called the 'post-genitive' or simply the 'friend of mine' construction. Various investigations have been made into the origins and early development of this construction; important references include Einenkel (1905), Jespersen (1927), van der Gaaf (1927), Hatcher (1950) and Mustanoja (1960). Altenberg (1982) includes a valuable discussion of the construction in Early Modern English. However, these investigations have by no means exhausted the subject.

Van der Gaaf's (1927) article on this construction purports to identify the earliest examples, so one might expect that we must at least know when the construction first appeared in English. But it turns out that there are problems with van der Gaaf's dating of the advent of the construction. There are two problems here. First, the dates of the examples themselves are often faulty. For instance, he dates examples from *The North English Legends* edited by Horstmann (1881) c.1300. But the *Middle English Dictionary* (*MED*) dates the manuscript which Horstmann used (Harley 4196) as "a1425(?c1375)", which means that the manuscript itself was probably written before 1425 but not before 1400, while the text is thought to have been composed earlier, perhaps (but not certainly) around 1375. Thus van der Gaaf's date is too early by at least 75 years.

In some instances, van der Gaaf's dates are probably off because scholarship since his time has revised earlier opinions. But a more pervasive problem, still

found in much more recent works, is a conflation of the date of a manuscript with the probable date of composition of a text which the manuscript contains. It is important to keep these two dates apart, because it is always possible that a later scribe may have changed the original text. As discussed in Allen (1992), we have clear evidence that scribes sometimes did substitute newer syntax for the older syntax of an original. We cannot simply use the supposed date of composition of a text as the date of an example, and we cannot assume that a given construction existed at the time of the date of composition when it is found only in a manuscript of a significantly later date. While van der Gaaf's pioneering work remains a wonderful source of examples, the examples must be scrutinized carefully.

Another problem with dating the advent of this construction involves defining the 'friend of mine' construction. Van der Gaaf included examples like (2) as examples of this construction:

(2)   *Haue we nought of þe kinges.*
       "We have nothing of the king's."   (CM Vesp. MS 4908)

While it can be called a 'double genitive', the construction of (2), which is headed by what is traditionally called an 'indefinite pronoun', is arguably a different construction from what I will refer to as the 'noun-headed' construction found in *a friend of mine* (see Section 3.1 for more discussion). Furthermore, examples of double genitives without nominal heads (e.g. (12)) appear in the texts before noun-headed ones do, and this fact alone is reason to keep the two types separate. I believe that if we do not differentiate examples of the noun-headed construction from ones with no nominal head, we run the risk of obscuring some facts about how the construction with a nominal head entered the language. Although I believe that a full explanation of the origins of the double genitive must consider the relationship of the construction with a nominal head to the one without one, I have focused in this investigation on the appearance and development of the construction which has an explicitly mentioned head noun, whether it is preceded by an overt quantifier or determiner, as in (1), or the quantifier/determiner is unexpressed because the noun is plural, as in *men of the king's.* Previous investigations have not made it clear when the noun-headed construction first appeared and have sometimes given a mistaken impression of the relative timing of this construction with the noun modified by an indefinite article or quantifier, a demonstrative and a definite article. Accordingly, in this paper the term 'double genitive' should be taken to be restricted to the noun-headed type unless otherwise indicated.

I have also excluded examples like *the king had no children of his own* from my investigation. While van der Gaaf included such examples in his survey, it seems to me that this should be treated as a distinct construction, which appeared earlier.

2. Earliest examples

Since van der Gaaf's early examples cannot all be treated as genuine examples of the (noun-headed) double genitive construction, we need to look again at when the earliest examples are to be found. The *Oxford English Dictionary* (*OED*) discusses the double genitive construction in more than one place. There is a discussion of the construction in general in the entry for OF (*OED* s.v. *of* prep., 44). There is also a brief mention of the construction in the entry for HERS (possessive pronoun):

(3) *OED* s.v. *hers* poss. pron.[1]
     [In form, a double possessive, f. poss. pron. hire, HER, thus *hires, her's, hers* (cf. *ours, yours, theirs*), app. by association with the possessive case in such phrases as 'a friend of *John's*', whence 'a friend of *her's*', formerly 'a friend of *her* (*hire*)'. Of northern origin; the midland and southern equivalent being HERN[1].]

This brief mention contains two comments which I think merit revision. First, it suggests that *a friend of hire* is found before *a friend of hers* is. Second, it suggests that the 'double possessive' form *hers* apparently comes from association with the possessive case found in double genitives with nominal possessives.

Regarding the first of these claims, note that the *OED* does not offer any evidence that *of hire* antedated *of hers,* either in its entry for HER (s.v. *her* poss. pron.) or in any other entry as far as I can determine. Nor did a full-text search of the on-line *OED* for the string *of hire* provide any evidence. Of 260 hits for this string and the 602 hits for *of hir*, in none of them was HER genitive. An extension of my search to all the forms[1] which the *OED* listed for all the personal pronouns also failed to yield any examples earlier than c.1350 of any double genitive constructions where the pronoun is unstrengthened.

Why then does the *OED* claim that the construction appeared first with unstrengthened possessives? It seems likely that the claim is based on the assumption that the double genitive had already made its appearance by the late

OE stage. I know of two OE examples which look rather like double genitives. Both are from the same manuscript, edited by Skeat (1871):

(4)   *eac sume wif   of urum   us bregdon.*
       also some women of our-DAT us amazed
       "Also some women of our people amazed us." (WScp Luke 24.22)
       Latin: *et mulieres quedam ex nostris terruerunt nos*

(5)   *þa   ferdun sume of urum   to þære byrgune.*
       then went   some of our-DAT to the   tomb
       "Then some of those who were with us went to the tomb."
       (WScp Luke 24.24)
       Latin: *quidam ex nostris*

I agree with van der Gaaf (1927: 19) in rejecting these examples, both in a fairly close translation from Latin, as early examples of the double genitive construction. It is true that the fact that these examples exist at all suggests that they were not completely alien to the grammar. But the fact that no convincing examples of the double genitive construction are found until the fourteenth century suggests that there was no unbroken transmission of the construction. A translation often stretches the grammar beyond its normal limits, and that seems to me what has happened here. Van der Gaaf suggests that such translations are parallel to the use of *an of þissum* by some OE writers to translate *unus ex istis.*

If we accepted these two examples as forerunners of the double genitive construction, we would indeed expect an intermediate stage, which would develop when inflection for case agreement dropped off the possessives, in which we found *a friend of hire* but not *a friend of hers.* But there does not seem to have been any such intermediate stage. It does in fact turn out that the very first example I have found of a double genitive which I would consider genuine has an unstrengthened, rather than a strengthened, genitive. This example is from the Vespasian version of the *Cursor Mundi* of c.1350:[2]

(6)   *a man o þair*
       a man of their
       "a man of their(s)"   (CM (Vsp, c1350) 7465)

However, the fact that I found no examples of the double genitive construction with a strengthened genitive in this text cannot be given much significance. (6) is in fact the only example[3] of the double genitive construction I found in the portion I read. Since both strengthened and unstrengthened forms[4] are used in

this manuscript in other constructions, including the double genitive construction which has no overt noun (e.g. *If yee me aught of yurs giue* at line 15109), we cannot make much of the fact that it is the unstrengthened form that is used in this example. We do find a few more examples of the double genitive construction with an unstrengthened possessive pronoun, but nearly all come from a much later date than the earliest examples with a strengthened pronoun in this construction, in writings from dialects which did not adopt the strengthened pronoun in any construction until late. I conclude that there is no reason to assume that the double genitive with an unstrengthened pronoun antedated the same construction with a strengthened pronoun in all dialects.

The second questionable suggestion that the *OED* makes in the HERS entry is that the 'double possessive' form *hers* apparently comes from association with the possessive case found in double genitives with noun possessors, in other words, that the earliest examples of our construction should have a noun as the genitive. The *OED* gives no evidence for such a development, and I found none in my own investigation, as the Appendix below demonstrates. Indeed, Kellner (1892:114) suggested that it was the pronouns which came first as the possessor in this construction. Both van der Gaaf and Jespersen mention that an example of the construction with a noun can be found in Chaucer's *Canterbury Tales*:

(7)   *Oon Maximus, that was an officer /Of the prefectes and his corniculere*
      "One Maximus, who was an officer of the prefect's and his aide"
      (Chaucer CT G 369)

Restricting our definition of the construction as suggested above and correcting van der Gaaf's dates, this is the earliest example of the construction with a noun that I have found.

The earliest example I have found with a pronominal possessor has already been given as (6). This example is probably a bit earlier than Chaucer's writings. Given the uncertainty of the *Cursor Mundi* date and the small number of examples at the time, it would probably be going too far to say that pronouns were possible in the construction before nouns were. However, it is definitely true that examples with pronouns were more numerous than examples with nouns were at the earlier stage. For example, there are at least three examples of the construction with a pronominal possessor in Chaucer's writings, but (7) is the only example which I know of with a nominal possessor. Nominal possessors are hard to find until the early fifteenth century, when they become reasonably common but are still outnumbered by the examples with a pronoun:

(8)   *Julian Lampit, that was fre tenant of the kynges there*
      "Julian Lampit, that was (a) free tenant of the king's there"
      (Lon. Eng. 226.47 (1413–1419))

So while we cannot say for certain that the construction was ever impossible with a nominal possessor when it was possible with a pronominal one, it is clear that there is no reason to believe that the use with a pronoun was modelled on an earlier use with nouns.

I conclude that the first examples of expressions like 'a friend of mine' and 'a friend of hers' come from the middle of the fourteenth century and that they were not based on expressions like 'a friend of the king's'. It appears that the double genitive construction was used in any given dialect with whatever the 'independent' form of the pronouns was, whether strengthened or unstrengthened (4).

3.   Expansion of the construction

3.1   Original meaning of the construction

Now let us turn to the question of whether the double genitive construction has expanded its limits. In its entry for OF, the *OED* states that all of the early examples of the double genitive construction are "capable of explanation as a partitive". There have been objections to the use of the term 'partitive' for the double genitive construction. For example, Jespersen (1927:§1.5) points out that (9a) and (9b) are not synonymous:

(9)   a.   The general and some of his friends left the house.
      b.   The general and some friends of his left the house.

The double genitive construction of (9b) does not imply that the general has more friends than this group, while the construction of (9a) does.

It seems to me that although we might not want to use the term 'partitive', the construction does have a meaning of membership in a set when it is used with an indefinite determiner or a quantifier. It is just that the set may have only one member. What is required is that there be a potential for a membership greater than one. Consider:

(10)   It is not the sort of pleasantry which I like to hear from a daughter of mine.
       (*Tempest-Tost*, by Robertson Davies 1951; p. 108 of *The Salterton Trilogy*,
       London, Penguin, 1986)

Professor Vambrace, who utters this sentence, is able to do so even though he has only one daughter. This is because the construction merely says that his daughter Pearl is a member of a particular set, the set of people in a particular relationship: daughter to me. No implication is made that there are necessarily other members in this set, although the use of the indefinite article indicates that the set is one which could in principle contain more than one member. Using a simple possessive *my daughter* here would focus on the individual, rather than on the membership of the individual in question in a particular set.

Let us consider briefly how this construction with a meaning of membership in a set might have developed in the first place. Space does not permit a full discussion of this question. However, it is notable that in Old and Early Middle English, the possessive pronouns could be used to mean something like 'those/ that connected with Pro':

(11)   *and macode hine wel bliðe mid his*
         "and made himself merry with his (people)"
         (Vesp. A.xxii 233.7)

It seems reasonable to suggest that examples like (12) resulted when the partitive *of* combined with this sort of meaning:[5]

(12)   *ȝif þu mare spenest of þine*
         "if you spend more of yours" (= 'your money')
         (Lambeth Hom. 79.13 1185–1225, comp. OE?)

I agree with Mustanoja's (1960:165–166) comment that the construction of (12) was "probably the prototype of the *a friend of mine* construction". (12) talks about a part of a set (what belongs to me); it is a small step to picking out an entity which is a member of a set which denotes a relationship.

3.2 Examples with a demonstrative

While the double genitive construction has an implication that the designated set could have a membership of more than one when it is used with an indefinite determiner, the construction with a demonstrative has no such implication in examples like *that nose of his*. However, the earliest examples with a demonstrative are open to an interpretation that there could be more than one member in the set:

(13)   *Or thou gettis this stede of myne*
       "before you get this place of mine"
       (Ipom.A[6] 7747 a1500 (a1400))

The construction with a demonstrative seems to be an extension of the original construction, and it appears that the extension was first to adding deixis (pointing to a specific member or members of the set being referred to) and then to allowing the demonstrative to be used when the set could only logically contain one member.

The examples in the *OED*'s ᴏꜰ entry (s.v. *of* prep., 44) are consistent with the idea, first put forward by Kellner (1892: 115), that the use of the construction with a demonstrative was a later development, since the *OED*'s earliest examples with a demonstrative are later than its earliest examples with an indefinite article. Jespersen (1927: §1.5) does not dispute Kellner's claim, but only notes (p.16) that "there is nothing strange" in the later occurrence of the demonstrative. But van der Gaaf (1927) includes examples with a demonstrative in the constructions which he claims were "more or less usual about the middle of the 14th century" (1927: 25). So it's worth looking again at this question.[7]

In fact, (13) is the only example which van der Gaaf offers which he dates as belonging to the fourteenth century; he dates it at c. 1350. But it appears that this is much too early a date for this manuscript. The *MED* puts it at a1500 (a1400), meaning that expert opinion does not even date the translation of this text from French as being as early as van der Gaaf's date.

So when are the earliest examples from? The *OED* does not offer any examples from before the seventeenth century in its discussion of the construction in its entry for ᴏꜰ (*OED* s.v. *of* prep., 44), although it does give examples from the sixteenth century in its entries for ᴏᴜʀs and ʏᴏᴜʀs. But van der Gaaf offers this genuine-looking example from 1449:[8]

(14)   *These godis of myne* (…) *mowen be seid the goddis of poor men*
       "These goods of mine (…) may be called the goods of poor men"
       (Peacock *Repressor* p. 409)

Van der Gaaf lists several unassailable examples from later in the fifteenth century, and so we can conclude that the construction was established by the middle of the fifteenth century. Neither Mustanoja nor Jespersen mention any earlier examples, nor have I found any. We remain indebted to van der Gaaf for locating so many early examples.

3.3 Examples with a definite determiner

Let us conclude by looking at a type which appears, to some extent at least, in earlier English but is not possible in Present-day English. This type uses a definite determiner:

(15)   *vnder the fellys of Tomas Bettsons*
       "under Thomas Bettson's sheepskins"
       (Cely 131.46 (1481, William Cely))

As has often been noted, in Present-day English a definite determiner is only possible in this construction if the possessed thing has a restrictive modification, typically a relative clause:

(16)   I (…) took off the old, comfortable navy blue pullover of Elliot's that I
       liked to wear for walking (…)
       (Lucille Kallen, *C. B. Greenfield: No Lady in the House*, p. 85. Ballantine
       Books, 1983)

Examples like this are possible because a relative clause has the effect of turning its head into a member of a set.

Both Jespersen and van der Gaaf comment on the disappearance of the construction with no such modification, although their comments are rather different. Jespersen comments only that "[e]xamples with the definite article are comparatively frequent in Shakespeare, but rare in PE" (1927: 22). He makes no claim about Middle English. Van der Gaaf, however, comments that the construction with the definite article is "often met with in M. E. and early Modern English" (1927: 26) but seems to be obsolete now. Van der Gaaf thus rather gives the impression that the construction with the definite article is as old as other types of the construction, although he does not explicitly say this anywhere in his paper.

But examination of van der Gaaf's examples must cause us to dismiss several of them. Two examples from the *Paston Letters* turn out to be plurals, not genitives:

(17)   *set or cause my lord to do þynges otherwise than accordith to the pleasir of my
       lordes*
       "set or cause my lord to do things otherwise than accords with my Lords'
       [not Lord's] pleasure" (Paston Letter 908. 9, 1469)

(18)   *I have wretyn by the meanes of my Lordes heere*
       "I have written through the agency of my lords here"
       (Paston Letter 785.8, 1469)

His only genuine example from the *Paston Letters* involves a relative clause:

(19)   *the horse that he hathe of myne*
       "the horse of mine that he has"
       (Paston Letter 383.13, 1471)

Of the six examples before 1450 which van der Gaaf adduces, four examples (three from *Ipomadon*) suffer from the dating problems mentioned earlier. One from 1399 has a possessive pronoun which should arguably be interpreted as meaning 'of her possessions' and at any rate involves a relative clause:

(20)   *I bequethe* (…) *for þe gode I haue had of heres by any way, fourty pounde of gold.*
       "I bequeath (…) because of the goods I have had of hers in any way, forty pounds of gold."
       (Will, Robert Folkingham, Yorksh. Wr. II 449 (1399))

And the very earliest example, from the *Aʒenbite of Inwit*, must be rejected:

(21)   *And þe mesure of þe purse of his þet is zorʒuol and scarse*
       "And the measure of the purse of him (?) that is miserable and parsimonious" (Aʒen. 54.3)

In her edition of this text, Gradon (1979: 132) has a note concerning this sentence indicating that we should read *ine his* meaning 'in his own house'. She considers this to be a calque on the French *ou sien* 'in his own (house)'. Van der Gaaf admits that Dan Michel made a mistake with his French here, but suggests that Michel simply substituted an idiom which was familiar to him for some French which he didn't understand. But given that there are no similar examples for more than a century and a half, it does not seem likely that this was a familiar idiom at the time. Gradon's explanation for the unusual sentence seems superior.

This leaves us with a1450 as the date of the first indisputable example not involving a relative clause:

(22)   *to tente þe tree of his*
       "to tend his tree"
       (York Plays, 25/86 a1450)

Van der Gaaf offers several other examples from the second half of the fifteenth century which indicate that this was an established construction by this time, although it is interesting to note that a disproportionate number of the examples come from North Midlands or Northern texts, suggesting that the construction may have been limited to specific dialects. I have myself noted five examples from the *Cely Letters* of the late fifteenth century.

It does not appear that the construction with a definite determiner ever really flourished. It is true that there are some examples in Shakespeare's works, e.g. (23):

(23)   unity in the proofs, The mantle of Queen Hermione's, the jewel about the neck of it
(Sh. WT V.ii.33–4)

But even in the texts where the construction with the definite determiner is used, it is never as common as the construction with the indefinite determiner or a quantifier. I recorded all examples of the double genitive construction in *King Lear* and *The Winter's Tale*. (23) is the only example I found with a definite determiner, compared with 11 examples with a demonstrative and two examples with an indefinite determiner. Altenberg (1982:72) found only two examples in which the head of the double genitive was preceded by a definite article in his seventeenth-century corpus, and remarks: "it is difficult to say whether these cases should be taken as mere lapses or as instances of uncertain usage". I think that enough examples are to be found of this construction with the definite article to make us unable to dismiss all of them as mistakes, and it seems likely that a careful study of the contexts of these examples would reveal some discourse and/or stylistic factors that distinguish the double genitive with a definite article.[9]

I conclude that although the construction with the definite determiner existed from the second half of the fifteenth century to at least into the early seventeenth century, it was a rather marginal construction which never really took firm root.

Why should this construction be different from the one with a demonstrative, which did take firm root? After all, both of these constructions seem to appear in English texts around the same time and both allow an English speaker to get around the restriction against having a determiner followed by a possessive adjective/determiner.

First, we saw above that the double genitive construction does not by itself (in Modern English) imply that the set of which the head noun is a member necessarily has other members in it (cf. example (10)). Many uses of the demonstrative in the double genitive construction have no implication that the head noun is the sole member of the set of things in a particular relationship; if we say *let's talk about that problem of John's*, there is no implication that John has only one problem, only an implication that you know which of John's problems I mean. Such uses of the demonstrative do not seem particularly problematic, since they are not at a terribly far remove from the original partitive meaning of the double genitive construction. This would give the demonstrative an advantage over the definite article, which explicitly indicates uniqueness. Nevertheless, we still need some explanation of why one would ever want to use the double genitive construction when only one entity could logically be involved in the 'possessive' relationship, e.g. *that nose of yours*. Why not just say *your nose*?

I think the answer lies in the discourse functions of the demonstratives. Consider the difference between (24a) and (24b):

(24) a. We've got to do something about the water heater.
      b. We've got to do something about that water heater.

Either of these could be said upon emerging from a shower which ran out of hot water. But I believe that I would be likely to use (24b) when I have already mentioned that there is a problem with the water heater. The definite determiner would be enough to signal 'you know what I'm talking about', since we only have one water heater. But the demonstrative *that* is very useful for signaling annoyance. I think this is because it is used to signal a further bit of information: 'we've talked about this before'. Not only is the noun assumed to be accessible to the hearer, it is also assumed to have been the subject of previous discussion, which is why we can use demonstratives with proper nouns, as in *I'd like to meet this Thomas Brown*. So the *that* of annoyance follows from the fact that if the water heater has been discussed, the hearer ought to have done something about it already.

The definite determiner has no such discourse function. Using the definite determiner does not usually give an advantage over using the possessive by itself, since the construction with a simple possessive is already definite.

4.   Conclusion

The double genitive construction seems to have gone through these stages:

1. Early Middle English: Poss. Pro. used to mean 'people/things associated with Pro', e.g. (11), combined with partitive *of* to produce examples like (12), with no nominal head and referring to part of a set.
2. Fourteenth century: partitive meaning shifts to 'member of a set' meaning; noun-headed double genitive construction arises.
3. Fifteenth century: double genitive extended to demonstratives (and marginally to definite determiner), e.g. (14) and (15).

While space has not allowed a thorough discussion of the origins of the double genitive construction, I hope to have demonstrated conclusively that stage 2 preceded stage 3 and that the construction with a definite determiner never really flourished in the language. Further research into the discourse functions of the variants of the construction is likely to help explain its limitations and distribution.

Appendix: Some findings of the investigation

Text	Date	(Q) N of N's	(Q) N of GPro	Dem N of Gen	The N of Gen
PC(Cont.)	c1131–1154	NO	NO	NO	NO
Vsp.A.xxii	a1150, OE	NO	NO	NO	NO
Vsp.D.xiv	a1150, c1125	NO	NO	NO	NO
Trinity	a1225, OE	NO	NO	NO	NO
Lambeth	c1185–1225, OE	NO	NO	NO	NO
V&V	c1200	NO	NO	NO	NO
Orm	c1200	NO	NO	NO	NO
Dialect AB	c1220–1225	NO	NO	NO	NO
Wohunge	1st half 13thC	NO	NO	NO	NO
Gen&Ex	c1250	NO	NO	NO	NO
BrutC	post 1189, s.xiii	NO	NO	NO	NO
O&N	1189–1216, s.xiii	NO	NO	NO	NO
Kentse	c1275	NO	NO	NO	NO
Havelok	c1300, c1295–1310	NO	NO	NO	NO
SEL	c1300	NO	NO	NO	NO
Rob.Glo.	c1325, c1300	NO	NO	NO	NO

Text	Date	(Q) N of N's	(Q) N of GPro	Dem N of Gen	The N of Gen
Aȝenbite	1340	NO	NO	NO	NO
Cursor M	c1350	NO	1ex	NO	NO
PiersP	c1400, c1377–1381	NO	NO	NO	NO
Chaucer	1368–1400, c1400–10	1 ex	YES	NO	NO
Lon. Eng.	1385–1425	1 ex	YES	NO	NO
Vernon	c1390	NO	1 ex	NO	NO
BBrut	c1400	1 ex	1 ex	NO	NO
Thornton	MS 1430–1440	NO	1 ex	NO	NO
Kempe	a1450	YES	NO	NO	NO
Shillingfd	1447–1450	NO	1ex	NO	NO
Capgrave	b.1398, MS 1451	NO	YES	NO	NO
Stonor	1424–1475	YES	YES	NO	NO
Gregory	MS c1475	YES	YES	NO	1 ex
Malory	fl. 1475	YES	YES	NO	NO
Caxton	b. 1422 (?)	NO	YES	NO	NO
Cely	1472–1488	YES	YES	NO	YES
J. Paston II	b. 1442, 1461–1479	YES	YES	1 ex	NO
Ricart	1479–1506	NO	NO	NO	NO
Elyot	b. ?1490	NO	NO	NO	NO
Ascham	b. 1515 (1552)	NO	YES	NO	NO
Lyly	b. 1554 (?), (1579)	NO	1 ex	1 ex	NO
Shkspre	b. 1564	1 ex	1ex	YES	1 ex
Harley	1626–1643	NO	1 ex	NO	NO
Barrington	1629–1630	NO	YES	YES	NO
Nicholas	1641–1660	YES	YES	YES	NO

Notes:

When I have indicated more than one date for a text, the first is the presumed date of the manuscript while the second is the presumed date of composition of the text. I have sometimes given an author's birth date instead of the date of the work. Columns 3 and 4 provide data bearing on the question of whether pronominal possessors antedated nominal ones in the post-genitive construction. 'Q' stands both for quantifiers (e.g. *none*) and for the indefinite determiner *a*; thus column 3 provides data on *friends of John's*, *some friends of John's*, *a friend of John's*, etc. Column 4, where 'GPro' stands for any genitive pronoun, whether a strengthened or an unstrengthened form, includes *(some) friends of his*, *friend of our(s)*, etc. Columns 5 and 6 provide data concerning whether the construction is found with a demonstrative or a definite determiner, respectively, and here I have not distinguished between nominal and pronominal possessors, using 'Gen' to stand for any genitive form, including any unstrengthened forms of genitive pronouns. 'YES' in any cell indicates that I found more than one example.

The data come mostly from my own readings of the texts listed. In a few instances, the data reflect additional examples found in the *OED* or *MED* or other sources. I have supplemented my reading with searches for genitive NPs in some of the selections found in the Penn-Helsinki Parsed Corpus of Middle English (PPCME), an annotated and somewhat extended version of the Helsinki Corpus of English Texts created under the direction of Matti Rissanen at the University of Helsinki. The annotations were carried out under the direction of Anthony Kroch at the University of Pennsylvania with the support of the National Science Foundation. I gratefully acknowledge the contribution which this corpus has made to my research.

Notes

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1. I looked at every example occurring in an entry before 1500 to ascertain that the string in question was not to be construed as having an 'independent' genitive form, rather than a possessive 'adjective' modifying a following noun.

2. The Göttingen MS of perhaps 50 years later has *a man of ouris* in this line.

3. I have not included *if any barn of hir war þine* (l. 2601) as a double genitive because I think it is more likely that the pronoun here should be interpreted as an object pronoun ("any child from her") rather than a possessive pronoun. Note that none of the manuscripts of this edition have an unambiguously possessive pronoun (i.e. some version of *hers*) here, although the Göttingen MS typically has a strengthened genitive where the Vespasian MS has an unstrengthened one.

4. The *Cursor Mundi* is not the first text to exhibit the 'strengthened' forms. The forms *hires, hores, ures* and *owres* are found in the Titus MS of the *Ancrene Riwle* (as noted by Dieth 1919) and *hiren* and *heoren* are found in the *Ancrene Wisse*. There seems to be no reason in principle to expect that the double genitive construction with unstrengthened forms should have antedated the same construction using strengthened forms in the dialects in which the strengthened forms emerged early.

5. Hatcher (1950: 10) suggests the progression 'to take of mine' > 'aught of mine' > 'anything of mine' > 'a book of mine'.

6. Citations for *Ipom.A* refer to line numbers in Kölbing's (1889) edition of the A MS.

7. One question which I will not address here is that of the possible relationship between the double genitive construction with a demonstrative and what I will refer to as the 'Dem Poss N' construction, in which a demonstrative precedes a possessive, as in *this my son*. Hatcher (1950: 12) comments "the type *this my book, this thy face* gave way (in time, exclusively) to *this book of mine, this face of thine*". Hatcher also comments in her footnote 37 "Old English could combine so easily possessive and demonstrative (article): *þis min sunu* etc". But it is unsafe to assume a direct descent of an Early Modern English construction from an Old English one that looks similar without evidence of the continued existence of the construction

through the intervening period, and Mitchell (1985: §108) comments that the OE Dem Poss N pattern is "perhaps less frequent than the last [the pattern in which the possessive is followed by a demonstrative + N] but is common in eMnE, e.g. 'this our old friend' and 'these my gifts'. Whether it has had a continuous existence since OE and whether it was in origin a *calque* on Latin remains to be established". My own impression is that the Dem Poss N construction is uncommon in OE texts and is not to be found again until the early fifteenth century, although I must emphasize that I have not carried out an investigation into this question. A systematic examination of the relationship between the double genitive construction with a demonstrative and the Dem Poss N construction, including an examination of the limitations of the Dem Poss N construction and possible discourse differences between the two constructions when both are found in a given text, is likely to yield some very interesting results. However, although I have suggested a possible pathway of development for the double genitive construction with a demonstrative, my main concern here has been not to explain the appearance of this construction, but rather to establish the relative timing of the appearance of the different variants of the double genitive construction in the texts.

8.   This example contrasts the use of the genitive with a demonstrative with the use of a non-genitive with the definite article. Van der Gaaf offers a putatively earlier example from the *Towneley Plays*, but his date of a1400 is not in accordance with the date given by the *MED, viz.* a1500(a1460). Cawley & Stevens (1976: xvii, fn. 19) comment that the manuscript is "certainly not earlier than the 1480s".

9.   It can also be mentioned that a large proportion of the earlier examples with a definite determiner and no relative clause are used in situations where the possessive is placed to rhyme. This is true, for example, in all four examples from *Ipomadon A*. All of these examples strike me as peculiar in comparison with other texts of the period, and it would not be surprising if this rather second-rate poet had stretched a construction beyond its normal limits to fit a rhyme scheme.

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Historical shifts in modification patterns with complex noun phrase structures

How long can you go without a verb?

Douglas Biber and Victoria Clark
Northern Arizona University

1. Introduction

Formal written prose has long been regarded as more complex than spoken discourse, but there has been surprising disagreement concerning the structural locus of complexity. For example, several scholars have claimed that written discourse has longer sentences and a greater use of subordination (e.g. O'Donnell et al. 1967; O'Donnell 1974; Kroll 1977; Akinnaso 1982). Others have claimed that writing is more explicit and more decontextualized than speech (e.g. DeVito 1966, 1967; Kay 1977; Olson 1977). And some have focused on the way that writing tends to be more carefully planned and organized than speech (Ochs 1979; Brown & Yule 1983; Gumperz, Kaltman & O'Connor 1984).

More recently, large-scale corpus-based investigations have been undertaken to provide more generalizable comparisons of spoken and written discourse. Many of these studies have focused on the noun phrase as the central distinguishing structure: formal written prose frequently incorporates long, complex noun phrases, while spoken registers rely much more heavily on pronouns and other simple noun phrase types (see e.g. Biber et al. 1999: Ch. 8). At the same time, these studies show that some earlier generalizations are not accurate. In particular, it turns out that subordination is prevalent in both conversation and academic writing, although spoken and written registers rely on different types of embedded clauses (see e.g. Biber et al. 1999: Chs. 8–10).

These differences were noted as early as 1979 by Halliday (see also Halliday 1988). Chafe (1982) characterizes written prose as being tightly "integrated", referring in part to the ways in which information is packed into noun phrases.

This complex nature of noun phrases in written prose was documented much more fully in studies such as Varantola (1984) and de Haan (1989).

The title of our paper illustrates the kind of complex noun phrase structure typical of formal written prose. Note especially that the main title consists of a single noun phrase (with the head noun *shifts*), modified by an attributive adjective (*historical*) and two prepositional phrases as postmodifiers (*in… patterns*; *with… structures*). Each of those prepositional phrases also contains a complex noun phrase, with multiple examples of attributive adjectives and nouns occurring as premodifiers (*modification*; *complex noun phrase*). Although this is a long and complex noun phrase, it contains no clausal modifiers. Such structures suggest that the answer to the question raised in the subtitle is "a very long time".

In the following section, we show that non-clausal modifiers are much more common than clausal modifiers in Present-day English. In addition, these structures are sharply stratified across registers: while readers regularly encounter structures of this type in academic writing, they are virtually unattested in normal conversation. This situation differs from that found in earlier historical periods: written registers in earlier historical periods showed a greater reliance on clausal modifiers, and there was less difference between technical and colloquial written registers in the use of these features.

After describing the present-day patterns of use, we attempt to track the historical shift towards non-clausal modifiers as the preferred pattern of use in informational written registers. In Section 2, we first summarize findings from the *Longman Grammar of Spoken and Written English* (*LGSWE*; Biber et al. 1999) that document the present-day patterns of use. Section 3 provides additional background, summarizing previous research on historical changes in noun modification patterns over the past four centuries. Then, in Section 4, we present a series of detailed linguistic investigations based on the ARCHER Corpus, to more accurately pinpoint when these shifts occurred and how these changes were realized across different registers. Finally, we summarize the patterns of use in Section 5 and attempt to provide functional explanations for this recent dramatic shift towards non-clausal modification; in particular, we suggest that recent advances in the technology of literacy coupled with the recent 'informational explosion' have facilitated these historical developments.

2.   Present-day patterns of noun modification in English

The *Longman Grammar of Spoken and Written English* (Biber et al. 1999) provides a detailed account of noun modification in English. That work describes the major patterns of use associated with each grammatical variant, employing a corpus-based analysis of texts from four registers: conversation, fiction, newspaper language and academic prose. The analyses were carried out on the Longman Spoken and Written English (LSWE) Corpus, which contains approximately 40 million words of text overall, with approximately 4–5 million words from each of these four registers. To provide a baseline for the historical analyses reported in Sections 3–4, we describe here some of the major synchronic patterns of noun modification.
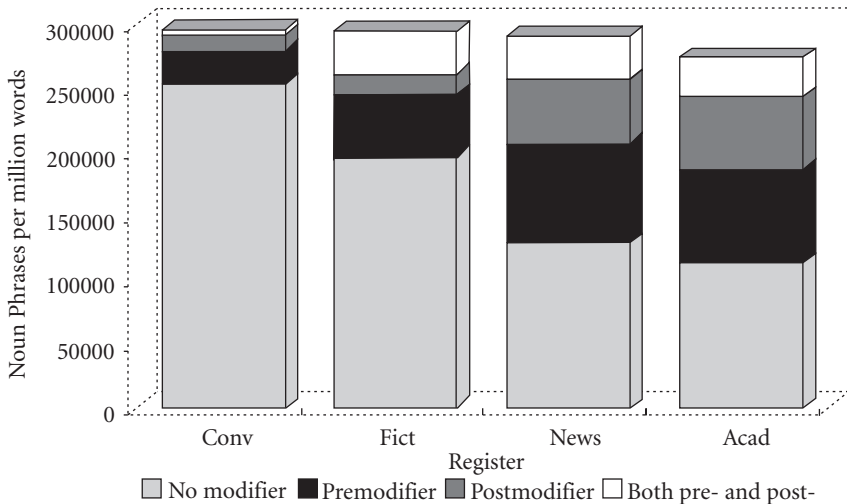
Figure 1. Distribution of Noun Phrases with Premodifiers and Postmodifiers (based on Biber et al. 1999, Figure 8.4).

First, as Figure 1 shows, noun phrases occur with roughly the same frequency in all registers. However, the internal complexity of those noun phrases differs dramatically across registers: in conversation, most noun phrases (85%) have no modifiers at all. Over half of those noun phrases are realized by a simple pronoun. Newspaper language and academic prose show strikingly different patterns, with approximately 60% of all noun phrases having some modifier, and many noun phrases having multiple modifiers.

There are a number of different structures that serve as premodifiers and postmodifiers:

MAJOR PREMODIFIER TYPES:
Attributive adjectives: "a *special* project", "an *internal* memo"
Participial adjectives: "*hidden* variables", "*detecting* devices"
Nouns as premodifiers: "the *bus* strike", "the *police* report"
MAJOR POSTMODIFIER TYPES:
Relative clause: "the penny-pinching circumstances *that surrounded this international event*"
Ing-clause: "the imperious man *standing under the lamp-post*"
Ed-clause: "a stationary element *held in position by the outer casting*"
Prepositional phrase: "compensation *for emotional damage*"
Of-phrase: "this list *of requirements*"

We tend to think of attributive adjectives as the major device used for pre-modification, and relative clauses as the major type of postmodification. However, as Figures 2–4 show, these perceptions about use are not entirely accurate. With premodifiers (Figure 2), nouns are nearly as important as attributive adjectives, accounting for 30–40% of all premodifiers in news and academic prose. The actual situation of use is even more surprising with postmodifiers (Figure 3): prepositional phrases (rather than relative clauses) are overwhelmingly the most common type of postmodification, accounting for almost 80% of all postmodifiers in news and academic prose. Relative clauses are the most common type of clausal postmodification (Figure 4), but they account for only 10–15% of all postmodifiers.

Overall these findings show the dominance of non-clausal types of noun modification in Present-day English. In the following sections, we briefly describe noun modification patterns in earlier historical periods, and then go on to trace the shifts to the current patterns of use.

3.   Previous historical research on noun modification patterns

There have been few historical studies that specifically address the preferred patterns of noun modification in earlier historical periods. Probably the most useful for our purposes is Raumolin-Brunberg (1991), who described the typical characteristics of noun phrases in sixteenth-century English, based on analysis of the writings of Sir Thomas More.
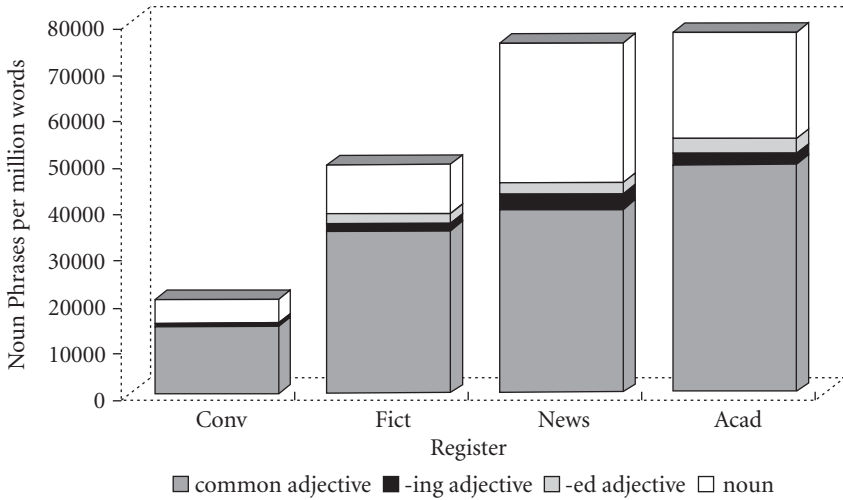
Figure 2. Distribution of Noun Phrases with Single Premodifiers (based on Biber et al. 1999, Figure 8.7).
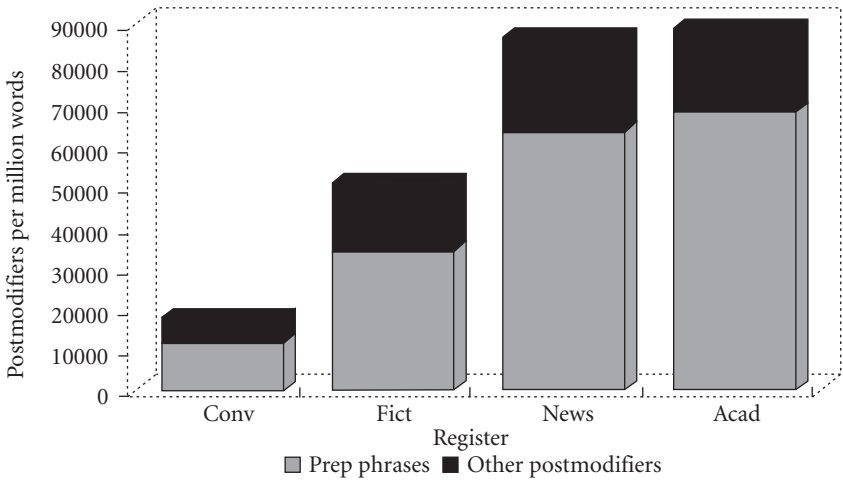

Figure 3. Prepositional vs. other postmodification across registers (based on Biber et al. 1999, Figure 8.12).

The typical patterns of use in Sir Thomas More's writings differ in important ways from Present-day English. First, attributive adjectives are by far the preferred type of premodifier, occurring ten times more often than noun premodifiers. Further, when nouns are used as premodifiers, they are usually a title (such as *King*, *Master* or *Doctor*). Turning to postmodifiers, Raumolin-
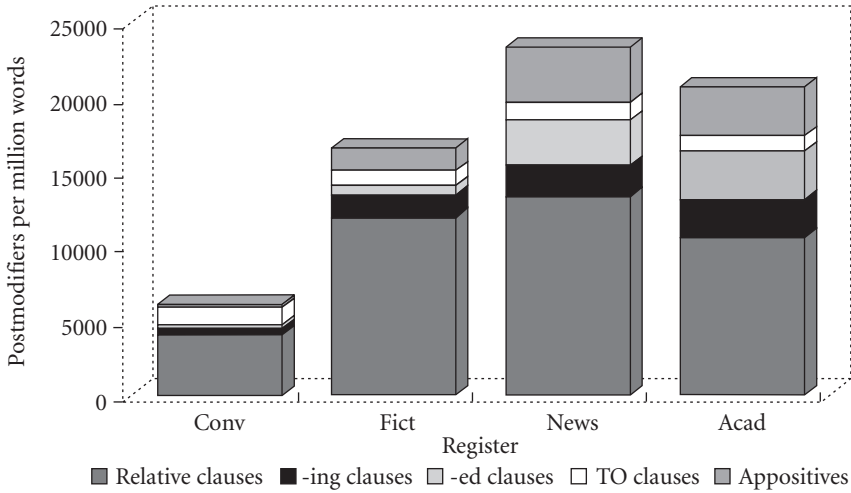
Figure 4. Non-prepositional postmodification across registers (based on Biber et al. 1999, Figure 8.13).

Brunberg shows that prepositional phrases are already slightly more common than relative clauses in the sixteenth century. However, the difference is not nearly as marked as in Present-day English. Further, Raumolin-Brunberg points out that the range of prepositional phrases used for postmodification is restricted, with 70% of these being *of*-phrases. These patterns of use are strikingly different from the present-day patterns documented in Biber et al. (1999), raising the question of when and how the present-day patterns emerged.

Previous 'multi-dimensional' studies of register variation provide some partial answers to this question. The Multi-Dimensional (MD) analytical framework (Biber 1988) is useful here in that it allows comparison of texts and text varieties with respect to a large number of co-occurring linguistic features, representing underlying 'dimensions' of variation. In particular, two of the dimensions identified in previous research have functional/linguistic correlates that are directly relevant to issues of noun phrase complexity: Dimension 1 ('Involved versus Informational Production') and Dimension 3 ('Situation-Dependent versus Elaborated Reference'). The 'informational' pole of Dimension 1 includes co-occurring features like nouns, attributive adjectives and prepositional phrases. The 'elaborated reference' pole of Dimension 3 includes several different types of relative clause constructions. Thus both dimensions include co-occurring features that reflect increased complexity in the noun phrase.

The MD framework has been used for a number of historical analyses of register variation (e.g. Biber & Finegan 1989, 1997; see also several of the papers in Conrad & Biber 2001). Most of these studies have used the ARCHER Corpus.

ARCHER — A Representative Corpus of Historical English Registers — was designed for a specific major research agenda: to analyze historical change in the range of written and speech-based registers of English from 1650 to the present. The general design goal for the corpus has thus been to represent as wide a range of register variation as possible, sampled systematically across texts from the last three and a half centuries.

The overall structure of the corpus comprises ten major register categories, sampled in 50 year periods from 1650 to the present, as summarized in Table 1. Altogether, the complete corpus includes 1,037 texts and approximately 1.7 million words. Among the written registers, the corpus includes personal styles of communication (journals/diaries and personal letters), prose fiction, popular exposition represented by news reportage, and specialist expository registers, represented by legal opinions, medical prose and scientific prose. The corpus similarly includes several different kinds of speech-based registers: dialogue in drama and dialogue in fiction as reflections of casual face-to-face conversation, and sermons as a reflection of planned monologue styles.

Registers are represented by at least 10 texts per 50-year period, in most cases chosen using random selection techniques (with available bibliographies

Table 1. Overview of ARCHER

Total size: 1,037 texts; approximately 1.7 million words

Time-span covered: 1650–1990, divided into 50-year periods
Dialects covered: British (all periods) and American (1 period per century)
Genres/Registers:
    7 Written Categories: journals/diaries, personal letters, fiction prose, news reportage, legal opinions, medical prose, scientific prose
    3 Speech-based Categories: drama, fiction dialogue, sermons

Target Sampling: 10 texts, at least 2,000 words, per genre (and dialect) in each period A full sampling for a genre includes 100 texts: 1650–1699, British: 10 texts 1700–1749, British: 10 texts 1750–1799, British: 10 texts 1750–1799, American: 10 texts 1800–1849, British: 10 texts 1850–1899, British: 10 texts 1850–1899, American: 10 texts 1900–1949, British: 10 texts 1950–1990, British: 10 texts 1950–1990, American: 10 texts

serving as sampling frames). American English registers are sampled for only one 50-year period per century. Table 2 summarizes the final composition of the corpus by register category. Biber, Finegan & Atkinson (1994) and Biber, Conrad & Reppen (1998: Methodology Box 2) provide more details about the design, sampling and compilation of ARCHER.

Table 2. Breakdown of texts in ARCHER by register category

Text category	Number of texts
Journals	100
Letters (more than 10 texts per period; most texts shorter than 1,000 words)	275
Fiction prose	100
News	100
Legal (1750–1990; American only)	57
Medicine (no 18th c. American)	90
Science (from *Philosophical Transactions of the Royal Society*; no American texts)	70
Drama (only 5 texts from 18th c. American)	95
Fiction dialogue	100
Sermons (only 5 texts per period)	50

Biber & Finegan (1997) use ARCHER to track overall changes in the patterns of register variation over the past four centuries. The developments along Dimensions 1 and 3 are especially relevant for our purposes here. Along Dimension 1, specialist written registers (e.g. medical prose and science prose) steadily evolve towards an increased use of the 'negative pole' features, including more frequent nouns, attributive adjectives and prepositional phrases. Popular speech-based registers, like drama, shift in the opposite direction, representing a less frequent use of those same features. The patterns of change along Dimension 3 are similar: specialist written registers shift towards a greater use of relative clause constructions over time, while speech-based registers shift towards a less frequent use of those features. Biber & Finegan interpret these historical developments as reflecting a major split between specialist written registers and popular registers (both written and speech-based). In earlier periods, all of these registers were relatively similar in their linguistic characteristics. Over time, though, the specialist registers have shifted to become sharply distinguished from the other registers, marked by a steady increase in the structural and informational complexity of noun phrases.

These studies document the general trends towards greater complexity in the noun phrase, especially in informational written registers such as academic prose. However, they do not allow detailed consideration of the particular structural resources employed at different stages of this shift. In the following section we take up that question.

4. Tracking the shifts towards non-clausal modification

For our analysis of noun phrase modification, we decided to compare the patterns of use in four registers from ARCHER: drama, fiction, newspaper reportage and medical prose. We chose these four because they cover much of the range of register variation available in ARCHER, and because they allow easy comparisons to the findings from the *LGSWE* (summarized in Section 2 above). In Section 4.1 we discuss the patterns of change for premodification, and then we focus on postmodifiers in Section 4.2.

4.1 Premodification patterns

For premodification, we focused on attributive adjectives (Figures 5 and 6) and noun–noun sequences (Figure 7). Figure 5 shows the same major split between specialist written registers (news and medical prose) and popular registers (fiction
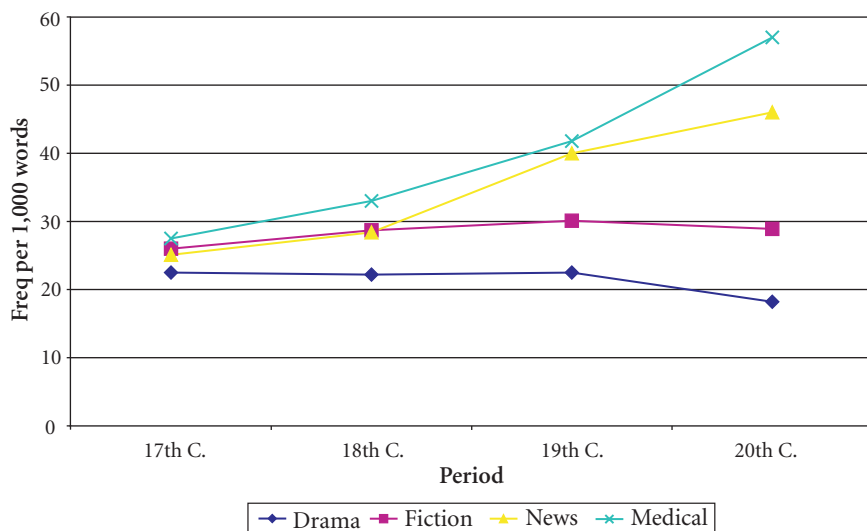
Figure 5. Attributive adjectives across periods.
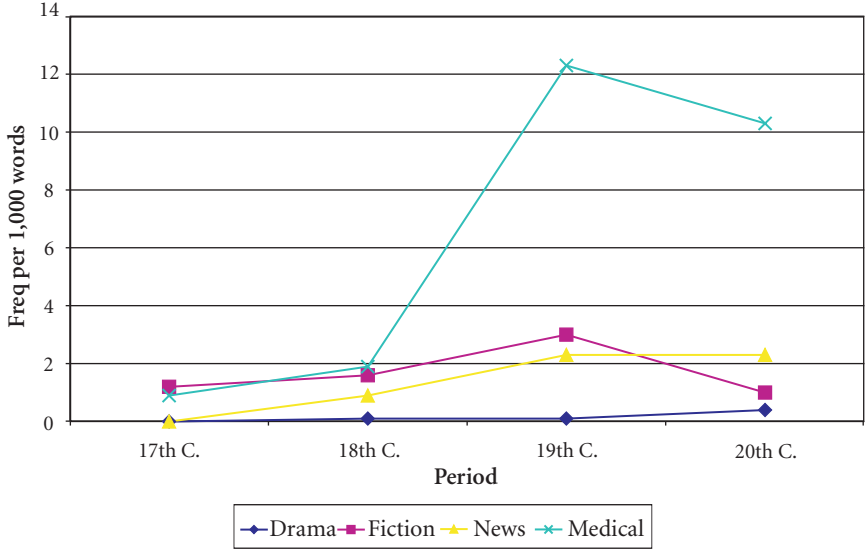
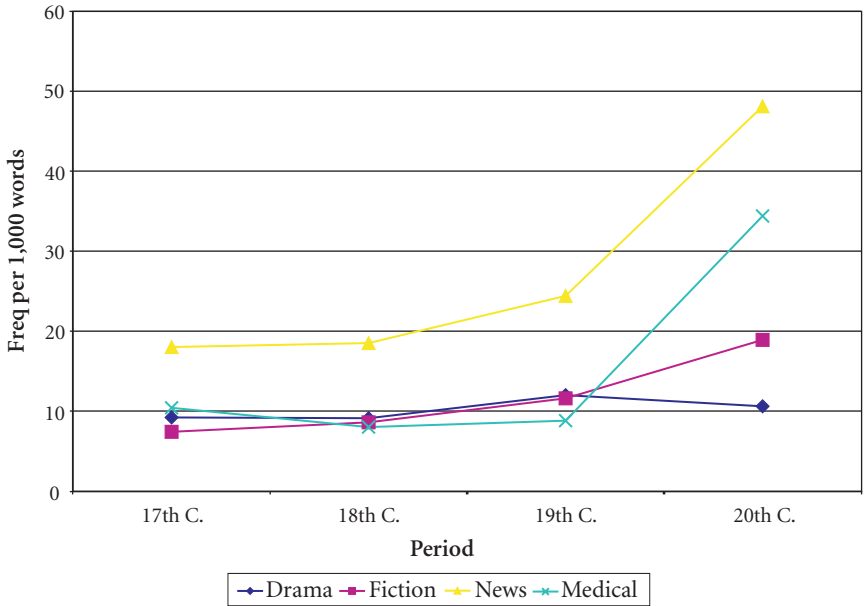**Figure 6.** ADJ AND/OR ADJ sequences across periods.

Figure 7. Noun–noun sequences across periods.

and drama) documented in earlier MD studies (see Section 3 above). That is, the frequency of attributive adjectives remains constant in drama and fiction across these periods, but it increases dramatically in news and medical prose.

Conjoined sequences of adjectives (e.g. *male and female workers*; *racial or religious cohesion*) show a somewhat different distribution (Figure 6): relatively rare across all periods in drama, fiction and news, but showing a marked increase in frequency in medical prose over the last two centuries. Thus, while news reportage is similar to academic prose in many respects, features like this indicate that academic registers depart to an even greater extent from the norms of earlier historical periods.

Interestingly, Figure 7 shows that news reportage has consistently used noun–noun sequences (e.g. *bus station*) to a greater extent than medical prose. In fact, medical prose, fiction and drama are nearly the same in their infrequent use of noun–noun sequences over the seventeenth, eighteenth, and nineteenth centuries. In the twentieth century, though, both medical prose and newspaper reportage show marked increases in the use of noun–noun sequences, with these features remaining more common in news.

In Section 3 above, we noted that premodifying nouns were used primarily as titles in the sixteenth century. It turns out that this same distinction is important in accounting for the greater use of these features in newspaper reportage. Figure 8 shows that roughly half of all premodifying nouns in news function as titles modifying a proper noun (e.g. forms like *Duke*, *Archbishop*, *President*). It is only in the last 50 years that we see a marked increase in the use of nouns premodifying common nouns. Medical prose represents strikingly different patterns of use, as shown in Figure 9: premodifying nouns used as titles (i.e. modifying a proper noun) are rare in all periods, and they actually become less common in the last century. In contrast, the use of nouns modifying a common noun increases dramatically, especially in the last 50 years. A comparison of Figures 8 and 9 shows that medical prose and news use noun + common noun to nearly the same extent; the higher frequency of noun–noun sequences in news (shown in Figure 7) reflects the greater use of premodifying nouns as titles in that register.

Text samples 1–3 illustrate these patterns of use. Text Sample 1 is from an eighteenth-century news report; Text Sample 2 is from a twentieth-century news report; and Text Sample 3 is from a twentieth-century medical article. Noun–noun sequences are underscored in all three texts.
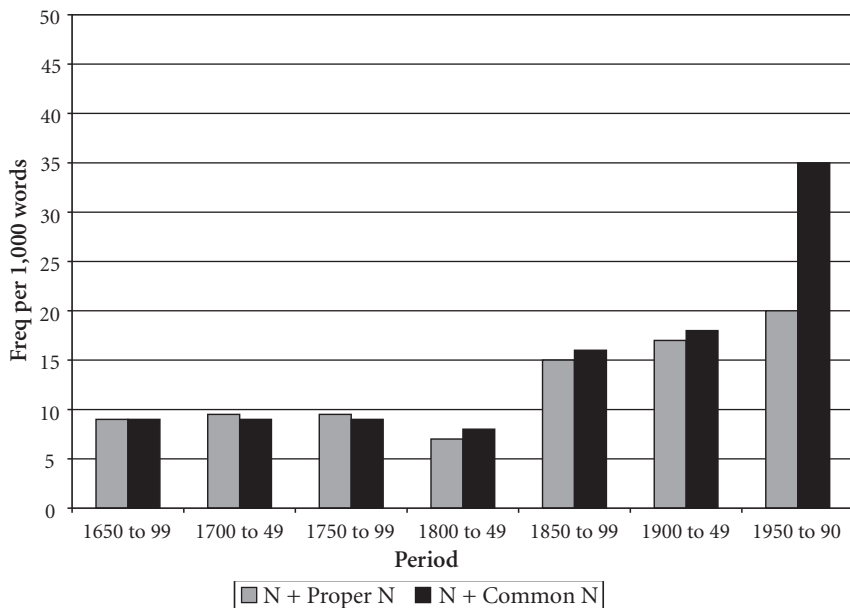
Figure 8. Breakdown of N+N sequences in News.

Key to text samples:
– <u>blood pressure</u> (underscored) marks noun–noun sequences

– **OF** (bold, CAPS) marks postnominal *of*-phrases
– ***in*** (bold, italics) marks other prepositional postnominal phrases

(1) NEWS. 1743. *The London Gazette.* #8294, 8295, Jan. 17–21, 21–24, Feb. 18–21.

> AT the Court *at* St. James's, the Nineteenth Day of January, 1743. PRESENT,
> The King's most Excellent Majesty ***in*** Council.
> His Majesty having been graciously pleased to deliver the Custody **OF** the Seals **OF** the Dutchy and <u>County Palatine</u> **OF** Lancazster, to the Right Honourable <u>Lord Richard Edgeumbe</u>, the Oath **OF** Chancellor **OF** the said Dutchy was this Day, by his Majesty's Command, administred to his Lordship.
> […]
> Naples, January 4. In the last Week the King performed the Ceremony **OF** investing <u>Cardinal Corsini</u> with the <u>Cardinal Cap</u>. The Chamber **OF** Financaes has fixed the Manner **OF** raising the
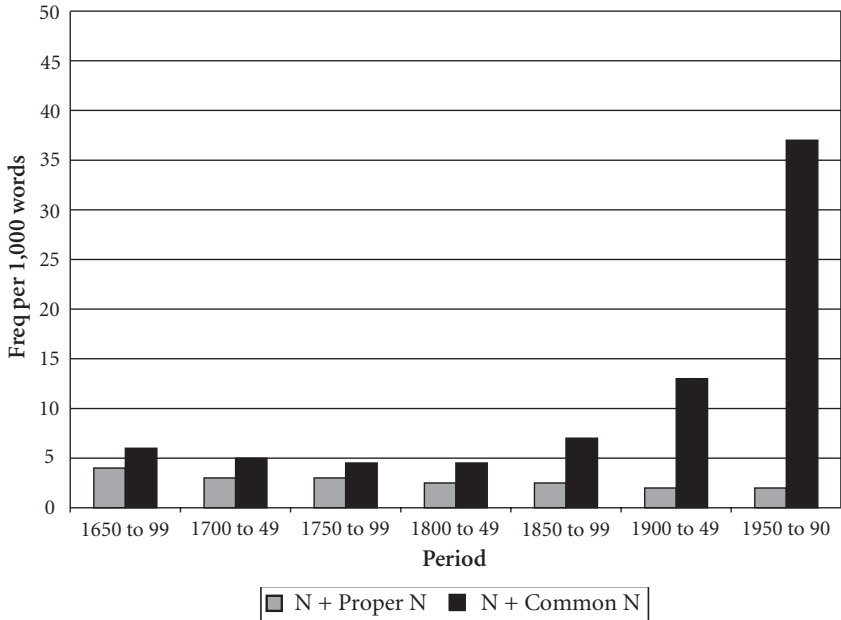
Figure 9. Breakdown of N+N sequences in Medical Prose.

> extraordinary Contribution **OF** a Million **OF** Ducats, required by
> the King, *towards* the Expences **OF** putting his Forces in the best
> Posture *against* all Events; which is exacted with Rigour, and
> occasions an extraordinary Uneasiness and Discontent. Frequent
> Councils are held at Court on the Dispatches brought by the
> Couriers *from* Spain, and upon the daily Arrival **OF** Officers *from*
> M. de Gages's Army. The <u>Military Dispositions</u>, and the Raising
> **OF** the Militia, are continued with great Assiduity. From
> Calabria we have received the melancholy Account **OF** an Earthquake
> that happened there, by which the City **OF** Chieti has suffered
> greatly. The Accounts **OF** the Sickness *in* that Province are this
> Week rather more favourable, the Malady seeming to decrease
> daily.

(2) NEWS. 1989. *The Times.* 1/2/1989. No. 63, 280. Pp. 1 & 18.

> Thatcher says no to revenge *for* Lockerbie
> Eye for an <u>eye warning</u> *to* the United States.
> By Philip Webster, Harvey Elliott and Christopher Thomas.

The Prime Minister declared her opposition *to* avenging the <u>Lockerbie air disaster</u> yesterday, as American <u>intelligence chiefs</u> admitted failing to link the crash with any <u>terrorist organization</u>. […]

With the incoming <u>Bush administration</u> *in* America certain to face pressure *for* retaliation, Mrs Thatcher's outspoken rejection **OF** <u>reprisal raids</u> could pose the first difficulties *in* her relationship *with* the new President. […]

Meanwhile, a further tightening **OF** <u>baggage inspection procedures</u> is likely to emerge from a review **OF** Britain's <u>airline and airport security</u>. It will be launched this week at a meeting **OF** the national <u>Aviation Security Committee</u>, comprising <u>government, airline, union and safety officials</u>.

The committee, *under* the chairmanship **OF** the senior Civil Servant *in* the Department **OF** Transport's Civil <u>Aviation Policy Directorate</u>, will report urgently to Mr Paul Channon, Secretary **OF** State *for* Transport, and is certain to recommend rearranging the areas **OF** responsibility *for* <u>baggage checks</u>.

(3) Medical Prose. Irvine, N., et al. 1985. The results of coronary arteriography in young men after myocardial infarction in north-east Scotland. *Scottish Medical Journal* 30:8–14.

The <u>case records</u> **OF** 50 consecutive <u>male patients</u> aged 40 years or under who were investigated by selective coronary arteriography after myocardial infarction were reviewed. Fourteen patients had normal coronary vessels and 36 patients had significant occlusive disease. Eighteen were considered to be in need **OF** surgical treatment. The features **OF** myocardial infarction *on* the ECG were less marked in the group **OF** patients *with* normal coronary arteriograms. Many **OF** these patients were asymptomatic and had complete resolution **OF** the ECG changes. As well as having normal coronary arteries, many also had normal left ventricular angiograms.

<u>Cigarette smoking</u> was very common in the whole group, 86 per cent **OF** patients being moderately heavy <u>cigarette smokers</u>. Five **OF** the 14 patients *in* the 'non-occlusive' group were non-smokers and only two **OF** the 36 patients *in* the 'occlusive' group were

non-smokers (P ⟨is less than⟩ 0.01). The <u>fasting serum cholesterol</u> was significantly lower in the 'non-occlusive' group than in the 'occlusive' group. There was no significant difference **between** the two groups regarding <u>blood pressure</u>, <u>family history</u> **OF** ischaemic <u>heart disease</u>, obesity or <u>alcohol consumption</u>. There was, however, a high incidence **OF** heavy <u>alcohol consumption</u> **amongst** patients who subsequently required coronary <u>artery surgery</u>.
[…]
   The present study was carried out to investigate the pattern **OF** coronary <u>artery disease</u> **in** young men **in** North East Scotland following myocardial infarction and to determine whether there is any relationship **between** the clinical features **OF** infarction, <u>risk factors</u>, <u>post-infarction progress</u> and the presence or absence **OF** obstructive coronary <u>artery disease</u>.

Text Sample 1 illustrates the primary use of premodifying nouns as titles in earlier newspaper reports (e.g. *County, Lord, Cardinal*). This use continues in present-day news reportage, but there is an even greater increase in the use of nouns modifying common nouns, as illustrated in Text Sample 2 (e.g. *air disaster*; *intelligence chiefs*; *terrorist organization*). Text Sample 3 illustrates the dense use of these same modification patterns in present-day medical prose (e.g. *case records*; *male patients*). In fact, both Sample 2 and Sample 3 illustrate how multiple nouns can be used in sequence modifying following head nouns (e.g. *baggage inspection procedures*; *fasting serum cholesterol*).

   In sum, there has been a steady increase in the use of both attributive adjectives and nouns as premodifiers over the past three centuries. However, the most dramatic change has been the extremely recent increase in the use of nouns premodifying common nouns.

4.2 Postmodification patterns

In Section 2 we identified prepositional phrases and relative clauses as the two most productive types of postnominal modifier in Present-day English. Prepositional phrases are in fact many times more common than relative clauses, but relative clauses are the most common type of clausal modifier.

   Figure 10 displays the overall patterns of change for these two features, and confirms the greater reliance on prepositional phrases as postmodifiers. For relative clauses, there has been relatively little change in use over these periods.
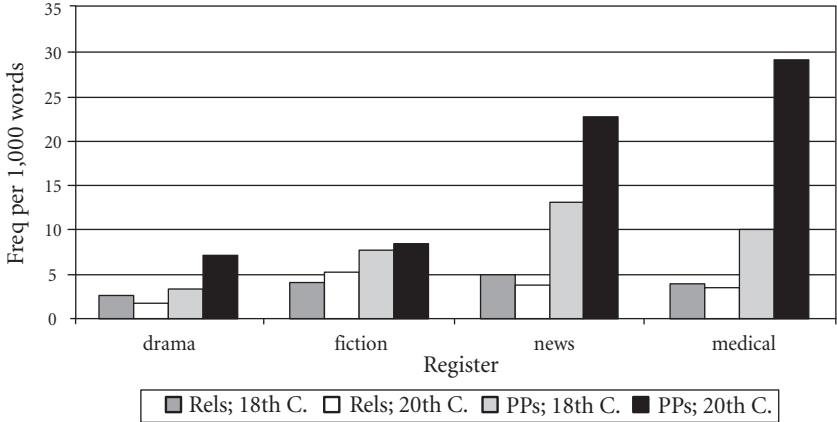
Figure 10. Frequency of relative clauses and prepositional phrases as postmodifier.
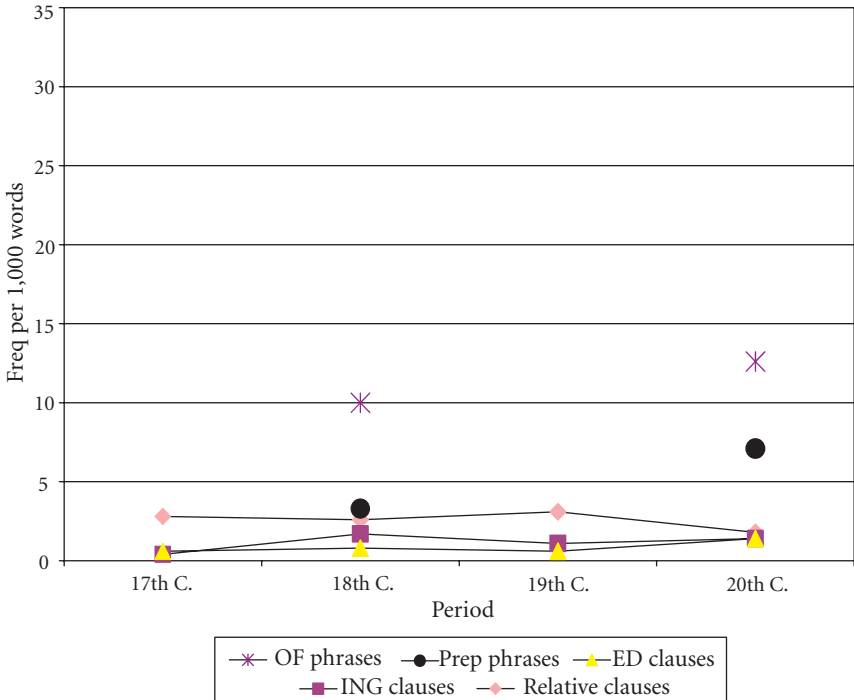

Figure 11. Postmodifier types in Drama across periods.

Prepositional phrases were already more common as postmodifiers in the eighteenth century, especially in registers like news and medical prose. However, the
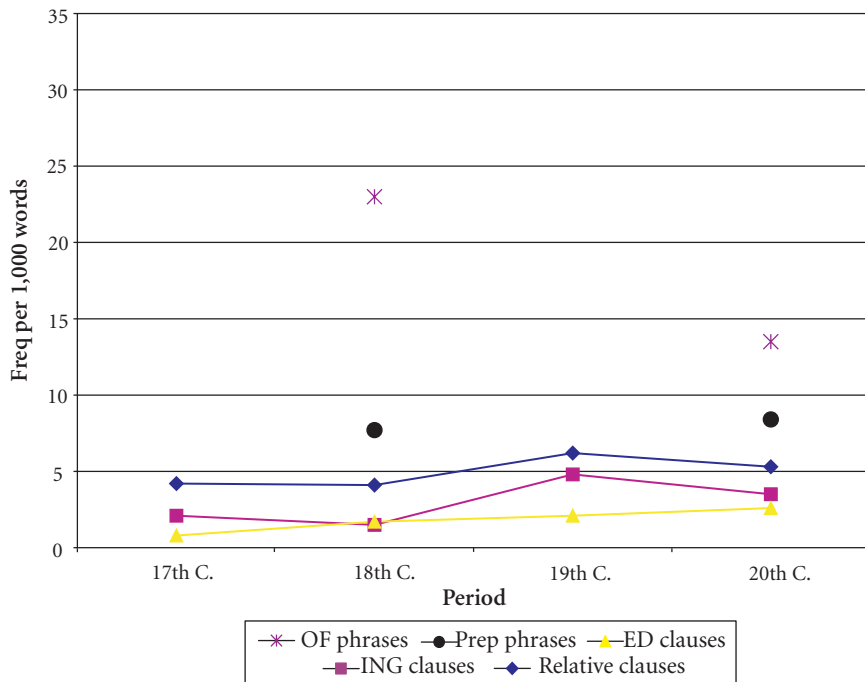
Figure 12. Postmodifier types in Fiction, across periods.

difference in the use of these structures has increased dramatically over the past two centuries, so that prepositional phrases are many times more common than relative clauses by the twentieth century.

To more fully document the patterns of change for postnominal modifiers, we plot the full range of modifiers for each register in Figures 11–14. These figures show the frequencies of the three major types of postnominal clauses (relative clauses, -*ing* clauses and -*ed* clauses) across all periods, together with the frequencies of postnominal prepositional phrases in the eighteenth century and twentieth century.[1] These figures show that clausal modifiers are rare in all registers when compared to the frequencies of prepositional postmodifiers. Further, these clausal modifiers show little change in their frequency of use across periods.

In contrast, prepositional phrases are common in all periods and show a marked increase in more recent periods. Because of the heavy reliance on *of*-phrases in sixteenth-century English (see Raumolin-Brunberg 1991, discussed in Section 3), we distinguish between *of*-phrases and other prepositional phrases in these figures. This distinction is especially important in news and
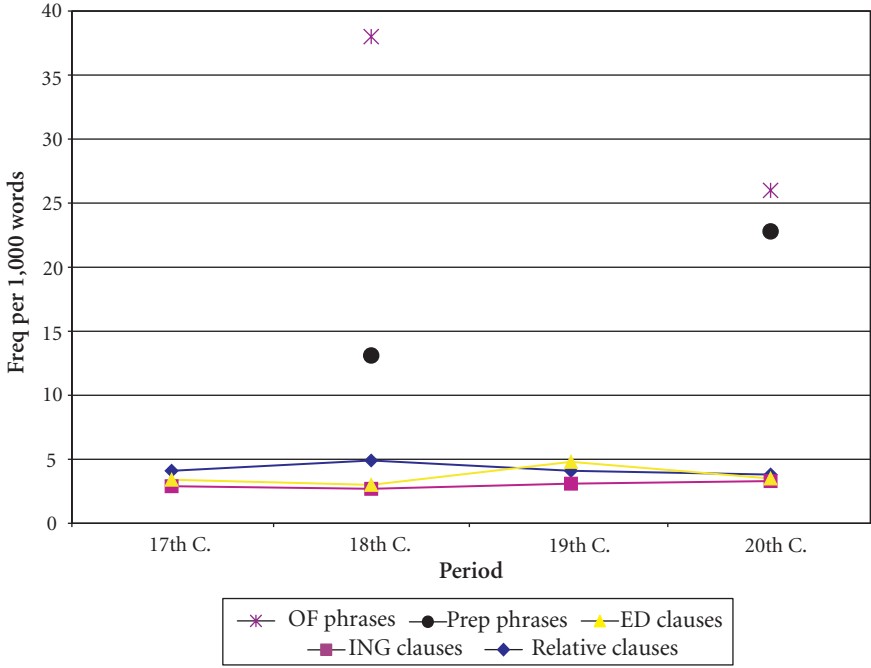
Figure 13. Postmodifier types in News, across periods.

medical prose (see Figures 13–14): *of*-phrases are overwhelmingly the dominant type of nominal postmodifier in eighteenth-century English. However, there has been a dramatic increase in the use of other prepositional phrases over the past two centuries (coupled with a decrease in the use of *of*-phrases, at least in news reportage), resulting in the present-day pattern with *of*-phrases and other prepositional phrases being used with about the same frequencies.

Figure 14 shows that this shift has not come about gradually. Rather, other prepositional phrases continued to be relatively rare in medical prose through the nineteenth century, showing an extreme increase in use only in the past 100 years. Figure 15 shows that this increase is due largely to a marked increase in the use of prepositional phrases headed by two specific prepositions: *in* and *with*. (We have unintentionally illustrated the use of both structures in the title to our paper.)

Text Samples 1–3 (in Section 4.1) illustrate these patterns of use. *Of*-phrases are shown in **BOLD CAPS**, while other prepositional phrases are shown in ***bold italics***. Text Sample 1 illustrates the dense use of *of*-phrases in eighteenth-century newspaper reportage (e.g. *the Custody* **OF** *the Seals* **OF** *the Dutchy and*
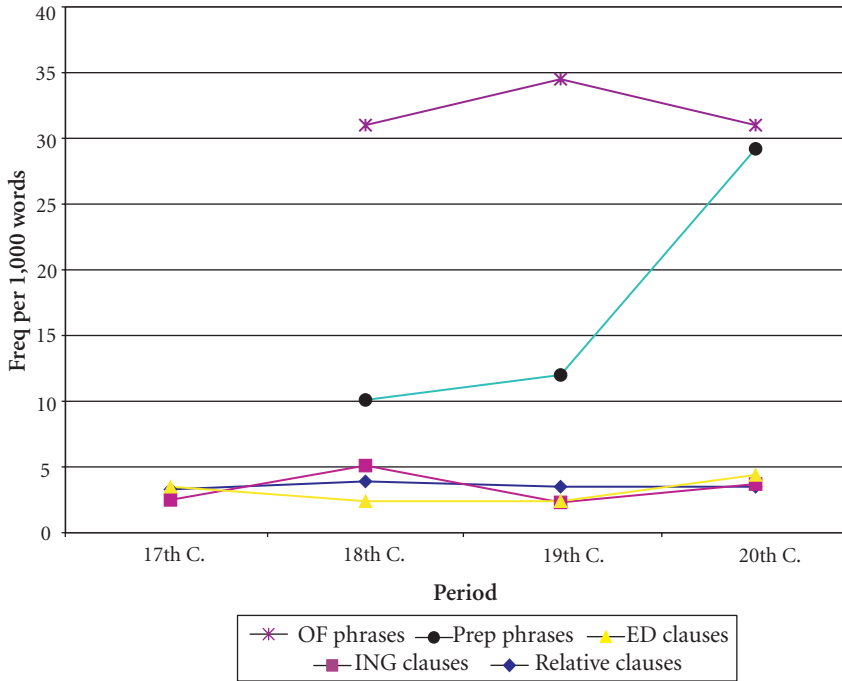
Figure 14. Postmodifier types in Medical Prose, across periods.

*County Palatine **OF** Lancazster; the Chamber **OF** Financaes; the Manner **OF** raising the extraordinary Contribution **OF** a Million **OF** Ducats*). This frequent use of *of*-phrases continues in twentieth-century news, but Text Sample 2 additionally illustrates the frequent use of other prepositional phrases (e.g. *the incoming Bush administration **in** America; pressure **for** retaliation; the first difficulties **in** her relationship **with** the new President*). Finally, Text Sample 3 illustrates the dense use of other prepositional phrases (in addition to *of*-phrases) in twentieth-century medical prose (e.g. *myocardial infarction **on** the ECG; patients **with** normal coronary arteriograms*). Note especially the use of *in* to identify group membership in addition to the literal meaning of physical location (e.g. *the 14 patients **in** the 'non-occlusive' group; the 36 patients **in** the 'occlusive' group; the pattern **OF** coronary artery disease **in** young men **in** North East Scotland*).
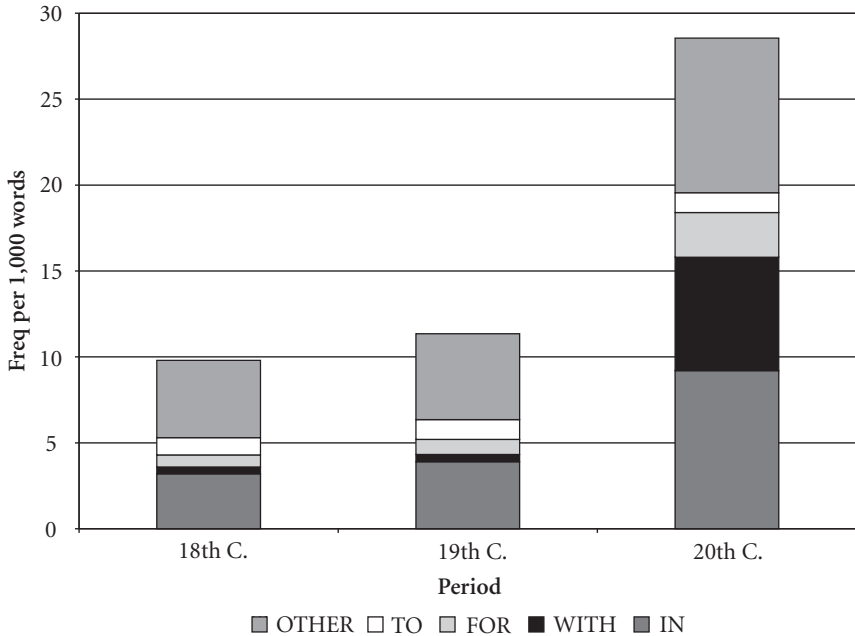
Figure 15. Frequency of individual prepositions as postmodifier (excl. OF), in Medical Prose.

5.   Summary and conclusion

Four major patterns of use documented in the present study are especially noteworthy. First, for nominal premodifiers, we have shown that nouns are as productive as attributive adjectives, with a major historical change to favor nouns modifying a common noun as head (rather than a proper noun). Second, for postnominal modifiers, we have shown that prepositional phrases are many times more common than clausal modifiers, with a major historical shift to favor prepositional phrases beginning with 'other' prepositions (in addition to *of*-phrases). Third, we have documented the extremely rapid rate of change in the past 100 years (especially the past 50 years in the case of noun–noun sequences). And finally, we have shown how these patterns of change have been sharply stratified across registers, occurring primarily in the informational written registers (like newspaper reportage and medical prose), while the patterns of use in popular registers (like drama and fiction) have remained relatively stable.

One major consequence of these historical shifts is the development of a much more compressed style of presentation, which is at the same time less explicit in the expression of relational meaning. That is, nominal modifiers could be ranked along a cline of compression as follows:

COMPRESSED – premodifiers <   phrasal   < non-finite < relative – EXPANDED
EXPRESSION   postmodifiers   clauses   clauses   EXPRESSION

Over the past three centuries, nominal modifiers have been used with increasing frequencies, with the largest expansion in use occurring at the 'compressed' end of this continuum (premodifiers and phrasal postmodifiers).

These increasingly compressed styles of expression are at the same time less explicit in meaning. For example, noun–noun sequences can represent a bewildering array of meaning relationships, with no overt signal of the intended meaning. The following list illustrates only a few of these meaning relationships:

NOUN–NOUN SEQUENCE	MEANING RELATIONSHIP
air disaster	N1 expresses the location of N2
reprisal raid	N1 expresses the purpose of N2
baggage inspection	N1 expresses the 'patient' of N2
airline officials	N2 is employed by N1
blood pressure	N2 is caused by N1
glass bottle	N2 is composed of N1

Similarly, prepositional phrases headed with the prepositions *of*, *in* and *with* can represent a wide range of different meaning relationships to the preceding head noun. In contrast, relative clauses are much more explicit about the intended meaning relationships (e.g. compare *systems which provide feedback continuously but have chaotic behaviour* versus *continuous-time feedback systems with chaotic behaviour*). Thus, the movement towards a more compressed style comes with a high price: the loss of explicit signals expressing the meaning relations among constituents.

Interestingly, these shifts have been restricted primarily to informational written registers, accelerating only in the last 50–100 years. Two functional factors have probably been influential in these developments. First, there has been an increasing awareness of the production possibilities of the written mode, offering almost unlimited opportunities for crafting and revising the final text. Typewriters, and more recently word processors, have been technological developments that facilitate authors' abilities to manipulate the language in written texts. At the same time, we have witnessed an 'informational explosion',

resulting in pressure to communicate information as efficiently and economically as possible. Although there may be additional structural and social factors, these two factors can be taken together to explain in part the rapid increase in the use of compressed noun modification devices over the past 100 years.

Additional research could be undertaken to track these changes across smaller time periods and additional registers. It will be especially interesting over the coming years to observe whether the rate of these changes slows down, similar to the S-curve patterns found with the lexical diffusion of sound changes (McMahon 1994:50–53). It will also be interesting to observe whether popular spoken and written registers (such as conversation and fiction) follow this same course of change, or whether a stable stratified pattern is maintained distinguishing 'oral' and 'literate' registers. At present, though, we appear to be in the midst of a dramatic period of change for the preferred patterns of noun modification.

Note

1. Prepositional phrases can serve either adverbial or postnominal functions. Because these functions could not be reliably distinguished by computer, all prepositional phrases were analyzed by hand in the present study. As a result, we report findings here for only two major periods: eighteenth century and twentieth century. For medical prose, we also analyzed the patterns of use in the nineteenth century, to identify the actual period of change with greater accuracy.

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Grammaticalization versus lexicalization reconsidered

On the *late* use of temporal adverbs

Laurel J. Brinton
University of British Columbia

1. Introduction

Despite being the subject of intense study in recent years — and the topic of several conferences — the process of grammaticalization is not yet fully understood. In particular, the distinction between grammaticalization and lexicalization (or degrammaticalization) remains vexed. In this paper I will examine these concepts as they are defined in the literature, focusing on the concept of lexicalization, about which there exists perhaps even more confusion than there does about grammaticalization. I will then pursue a problem in the history of English which presents a challenge for these concepts: the use of temporal adverbs as attributive adjectives, as in *my late father* or *the then practice*, a usage which was common in the Early Modern English period but is now fairly restricted.

2. Grammaticalization vs. lexicalization

There are at least four different ways in which grammaticalization and lexicalization are thought to be related to one another. The most widely accepted view is that they are opposite, or mirror image processes. In other words, lexicalization is a process of degrammaticalization. They move in different directions, as shown in Figure 1.

However, recently it has been proposed that the two processes are complementary. Moreno Cabrera (1998) has argued that lexicalization is lexicotelic
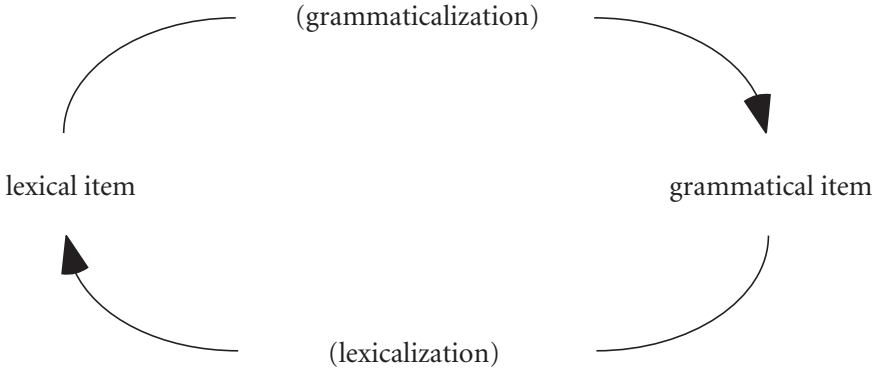
Figure 1. Grammaticalization and lexicalization as mirror-image processes.

('leading towards lexical items') and syntactogenetic ('originating in syntax'), that it involves metonymic concretion and that it feeds the lexicon but bleeds syntax. In complementary fashion, grammaticalization is syntactotelic and lexicogenetic, involves metaphorical abstraction and feeds syntax but bleeds the lexicon. Giacalone Ramat (1998: 121) has likewise suggested that the two processes may be "complementary or overlapping" in that both involve loss of autonomy and univerbation. Hagège (1993: 171) sees the relation in a comparable way: while both processes involve "partial or total loss of the ordinary trappings", lexicalization is mostly unconscious, the semantic results of it are unpredictable and the newly formed units behave like lexical items, while grammaticalization is always unconscious, it involves semantic broadening and the newly formed units are increasingly subject to grammatical constraints.

A third view of the relationship is that the two are parallel processes occurring on different levels, or in different domains. Traugott (forthcoming b) points out that the processes of "conflation and opacity" found in lexicalization have much in common with the processes of "bonding and coalescence" found in grammaticalization, the former involving changes at the level of lexical expression and the latter involving changes in morphosyntactic status. More specifically, Wischer (2000) argues that both involve syntactic reanalysis, demotivation, conventionalization, fossilization and phonetic reduction. She represents the parallelism as in Table 1. The asterisk in the table denotes Wischer's belief that the change from grammatical item to lexeme is "highly unlikely". She notes, however, that the processes differ semantically: grammaticalization is characterized by the loss of semantic content, lexicalization by the addition of semantic content.

Table 1. Lexicalization and grammaticalization as parallel processes (adapted from Wischer 2000: 365)

Lexicalization	Grammaticalization
syntagm becomes new lexical item	syntagm becomes new grammatical item
*	lexeme becomes grammatical item
lexeme becomes more lexical	grammatical item becomes more grammatical

A fourth view of the relation between grammaticalization and lexicalization is expressed by Lehmann (2002) as "orthogonal" 'at right angles'. Both are "reductive" processes, he says, but while grammaticalization reduces the autonomy of an item and regulates it, lexicalization reduces the inner structure of an item and adds it to an inventory. For Lehmann, the opposite of grammaticalization is degrammaticalization (giving autonomy to a hitherto dependent expression), while the opposite of lexicalization is folk etymology (the bestowing of structure onto a hitherto opaque expression).

2.1 Complex prepositions

Giacalone Ramat (1998: 120) points out a further source of confusion between grammaticalization and lexicalization, namely, that "in [the] linguistic literature the same phenomena are sometimes cited as exemplary cases of either linguistic process". The formation of complex prepositions, such as *ahead of, in case of* or *on top of* (see Quirk et al. 1985: 669–673), constitutes a striking example of this observation.

According to Traugott (forthcoming a; cf. also Schwenter & Traugott 1995; Tabor & Traugott 1998: 244–253), substitutive complex prepositions such as *instead of, in place of* and *in lieu of* provide a "fairly uncontroversial example" of grammaticalization. They involve decategorialization of the nominal, generalization to a larger class of complements and syntactic reanalysis, as well as semantic changes, all of which are typical of grammaticalization. In contrast, Huddleston (1984: 342) thinks that complex prepositions arise historically through lexicalization; likewise, Lehmann (2002), discussing Spanish complex prepositions such as *desde < de ex de, bajo < baxo de* and *cabe < a cabo de*, argues that they undergo reanalysis characteristic of lexicalization in that they are subtracted from the rules of syntax and their internal structure becomes no longer relevant. Central to his argument is the claim that there are grammatical and lexical members of every word class, so that the primary prepositions such

as *de* are "grammatical" and the secondary prepositions such as *desde* are "lexical".

Ramat (1992:553–554) suggests that the English complex prepositions *between < be tweonum, among < on gemang* and *beside < be sidan* are part of a spiral from the lexicon (via syntax) to the grammar and back to the lexicon. While the change from the analytic source to the synthetic target can be seen as grammaticalization, with the targets clearly belonging to the grammatical words of English, he notes, "they are, however, part of the English lexicon and cannot be considered on a par with other grammatical means like affixes and ablaut (…)" (554).[1] Ramat thus sees both processes at work, conceding that "the boundary between lexical and grammatical units is not neat" (555).

Likewise, Quirk et al. (1985:1530) seem to equivocate in this respect. They point out that in their grammar they have considered the formation of complex prepositions (as well as of complex subordinators and phrasal and prepositional verbs) "as a grammatical phenomenon (…) though without ignoring the lexicalization aspect". Their reason for treating these forms grammatically is that the unit of lexicography is the word. However, they admit that a process of what they call "phrasal lexicalization" may appropriately describe just such forms, which often have semantic and grammatical integrity and signs of coalescence. Their conclusion, much like Ramat's, is that "this illustrates the gradience between grammar and lexicon, including a gradience in lexicalization" (1985:1530).

3.   Lexicalization

Before we can understand the relation between grammaticalization and lexicalization, we would do well to have a clearer sense of what is meant by 'lexicalization'.[2]

3.1 Definitions

As Lessau notes in his dictionary on grammaticalization, "[t]his term [lexicalization] has acquired various, partly quite incompatible, uses within the scholarly discourse" (1994: s.v. *lexicalization*). These uses are not entirely discrete but overlap in a number of ways. Moreover, lexicalization, like grammaticalization, is used ambiguously to refer to both synchronic and diachronic processes (Traugott forthcoming b). There is consequently "a great deal of confusion" (Wischer 2000:359) about lexicalization.[3]

At least nine definitions of lexicalization can be found in the literature, which I will discuss beginning with the broadest one.

1. *Adoption into the lexicon*

The "intuitive sense" of lexicalization, Lessau asserts, is "a process that leads from something that is not a (or, one) lexeme to a lexeme, i.e. to something that 'belongs in the lexicon'" (1994: s.v. *lexicalization*). A similar definition of "synchronic" lexicalization as the adoption of a word into the lexicon as a usual formation — as opposed to a nonce formation — is given by Bussmann (1996: s.v. *lexicalization*). In this view, the result of lexicalization is an item which is stored in the lexicon or becomes part of the "inventory" (Lehmann 2002).[4]

2. *Falling outside the productive rules of grammar*

According to Anttila (1989: 159), "[w]henever a linguistic form falls outside the productive rules of grammar it becomes lexicalized". A more extended definition in this same vein is given by Bauer (1983); for him, lexicalization, which is the third step following "nonce formation" and "institutionalization", can be said to have occurred when a lexeme "has, or takes on, a form which it could not have if it had arisen by the application of productive rules" (1983: 48). He sees four types of lexicalization: (a) phonological (e.g. the separation of *hus* in *husband* from *house,* which results from phonetic change); (b) morphological (see definition 7 below); (c) semantic (see definition 8 below); and (d) syntactic (e.g. the opaqueness of the verb–object relation in a compound such as *pickpocket*).

3. *Ordinary processes of word formation*

For Hagège (1993: 171ff.), lexicalization is the association of two free units through derivation or compounding to yield a new complex unit. Quirk et al. (1985: 1525–1530) classify not only derivation and compounding, but also conversion and back formation as lexicalization.

4. *Grammatical word (category) > lexical word (category)*

This is the most widely used sense of the term 'lexicalization', though 'degrammaticalization' is also used in this sense (see below). For example, in their textbook on grammaticalization, Hopper & Traugott (1993: 49, 127) understand lexicalization as the development of a fully referential lexical item from a nonlexical, or grammatical item, such as the development of the verb *up* from the homophonous particle *up* or the German verb *duzen* from the pronoun *du.* Similarly, Ramat (1992: 550–551) defines lexicalization as "a process whereby linguistic signs formed by rules of grammar are no longer perceived (parsed) in this way but simply as lexical entries", citing examples such as comparatives that

have lost their grammatical status (*elder, mayor*) or participles that are no longer part of the verbal paradigm (*shorn, cloven*).

5.   *Syntactic construction > lexeme*

A common understanding of lexicalization is the univerbation of a syntactic phrase or construction into a single word. For example, Hopper & Traugott (1993: 127; see also Traugott 1994: 1485) speak of the "incorporation and fossilization of earlier independent grammatical morphemes into lexical material". Moreno Cabrera (1998: 214) says that lexicalization "obtains when a phrase or a syntactically-determined lexical item (…) becomes a full-fledged lexical item in itself"; it is "the process of creating lexical items out of syntactic units" (1998: 214). This is the process of "desyntacticization" referred to by Wischer (2000: 258). The classic example of this type of change is *today < to + dæge.*

Lehmann (2002) seems to have a similar sense of lexicalization. Beginning with a complex unit, he claims, lexicalization destroys the regular syntactic construction, renouncing its internal structure, leading to lost or irregular internal relations.

6.   *Bound morpheme > lexeme*

Anttila (1989: 151) notes that the change of a suffix to an independent word (e.g. *ism, ology, onomy, ocrasy, ade, itis*) is "a clear case of lexicalization" (see also Newmeyer 1998: 269). Likewise, Ramat (1992: 549–550) cites examples such as *ade* (from *lemonade*), *teen* (from *teenager*) and *gate* (from *Watergate*) as examples of degrammaticalization (the same as lexicalization by his definition).[5] Note that the examples cited all involve derivational, not inflectional affixes.

Combining the two directions of change implied by definitions 5 and 6, we have a process of lexicalization as shown below, with movement inward from either below or above:

morpheme → *lexeme* ← syntactic construction

The focus of these processes is the *end point*, the lexeme.

7.   *Independent morphemes > monomorphemic form*

The development of idiosyncratic lexical pairs due to phonological change and morphological loss, such as *lie/lay* or *foot/feet*, is cited by Hopper & Traugott (1993: 127, 223n) and Traugott (1994: 1485) as an additional type of lexicalization. Newmeyer (1998: 263–264) describes the fusion of affixes with roots to create new, morphologically opaque lexical items, as in *⋆drank + jan > drench,* as "lexicalization".[6] Similarly, Bauer (1983: 53–54) cites non-productive affixes such as *-th* and word sets such as *eat/edible* or *right/rectitude*, where one

member is productive and one non-productive (and hence lexicalized), as instances of what he calls "morphological lexicalization".

8.   *Idiomaticization*

Lexicalization is often equated with idiomaticization, or the loss of semantic compositionality (Lehmann 2002; Traugott forthcoming b). This is what Bauer calls "semantic lexicalization" (1983: 55–59), instancing compounds such as *blackmail* and *butterfly* or derivatives such as *unquiet* and *inspector*. Bussmann considers this to be the diachronic element of lexicalization, which occurs when "the original meaning can no longer be deduced from its individual elements" (1996: s.v. *lexicalization*; see also *idiomaticization*). The motivation of the form can only be deduced etymologically; it has undergone "demotivation" (see Wischer 2000: 358).

9.   *Semanticization*

Finally, Hopper & Traugott (1993: 223n) and Traugott (1994: 1485) suggest that the term 'lexicalization' can also refer to what they prefer to call 'semanticization', or the incorporation of conversationally inferred meanings into the conventional meaning of the word.

How can these many senses of lexicalization be reconciled? Traugott (forthcoming b) points out that several of them have in common the concept of "morphosemantic opacity". However, if one adopts the view that lexicalization is in some sense the reverse of grammaticalization, as is traditionally assumed, it might also be possible to arrive at a working definition of lexicalization by reversing accepted definitions of grammaticalization. For example, one might reverse Haspelmath's (1999: 1044) definition ("grammaticalization shifts the linguistic expression further towards the functional pole of the lexical-functional continuum") to read: "lexicalization shifts the linguistic expression further toward the lexical pole of the lexical-functional continuum".

Or one might, as Wischer (2000: 359) suggests, reverse Kuryłowicz's (1965: 69) well-known definition ("grammaticalization consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status, e.g. from a derivative formant to an inflectional one") to read: "lexicalization is the process that turns linguistic material into lexical items, i.e. into lexemes, and renders them still more lexical".

Recently, Traugott (2000) has suggested a revision of Kuryłowicz's definition of grammaticalization. She proposes a split between "primary grammaticalization", which involves a functional change (the first half of the definition) and "secondary grammaticalization", which involves a formal change (the

second half of the definition). A comparable move reconciles several of the different definitions of lexicalization given above, viz.:

a. Primary lexicalization: the process that turns linguistic material into lexical items. This is a functional change, the change of operants into lexemes, such as pronoun > noun, auxiliary > verb (definition 4 above).

b. Secondary lexicalization: the process that renders lexical items still more lexical.[7] This is a formal change. It would refer to the loss of morphophonemic texture, such as the change from a morpheme or clitic to an autonomous word (definitions 6 and 7 above). It would also refer to the loss of syntactic texture, such as the change from a syntactic construction to a word (definition 5 above).

It can be argued, I believe, that these changes may or may not result in semantic opaqueness or non-compositionality (definition 8 above).[8]

3.2 Related concepts

Before turning to my test case, I would like briefly to examine several related concepts.

1. *Degrammaticalization*

For many scholars, degrammaticalization is the same as lexicalization (e.g. Kuryłowicz 1965; Ramat 1992), though for others it is not (e.g. Wischer 2000; van der Auwera 2002). Similarly, while some examples of degrammaticalization have been cited in the literature,[9] for many scholars the phenomenon is still considered extremely rare. For example, Heine, Claudi & Hünnemeyer find instances of degrammaticalization to be "statistically insignificant" (1991: 5), Lehmann finds "no cogent examples of degrammaticalization" (1995: 19) and Haspelmath (1999: 1046) believes it to be "extremely restricted".

　　Again, there are several uses of the word 'degrammaticalization'. The most common is identical with the fourth definition of lexicalization given above, namely the process of converting a grammatical word to a lexical word, thus reversing the first half of Kuryłowicz's definition. For example, Chen (1998) suggests that when a grammatical item has lost its grammatical function and become "merely a lexical item", it has been degrammaticalized. Ramat (1992) argues that degrammaticalization occurs when an item (either a morpheme or a word) becomes devoid of grammatical function and acquires concrete lexical status. Wischer (2000: 359) stipulates that degrammaticalization involves a grammatical item turning back into a lexeme. A related, but somewhat more

specialized sense of degrammaticalization is that it involves a hitherto dependent expression gaining autonomy (Lehmann 2002).

The phenomenon of bidirectionality implied by the concept of degrammaticalization obviously poses a threat to the unidirectionality hypothesis of grammaticalization (see, for example, Hopper & Traugott 1993: Chapter 5; Haspelmath 1999). This hypothesis has come under attack on both philosophical and empirical grounds (see Newmeyer 1998: 260–275; Fischer 2000; Lass 2000), though space does not allow a full discussion of this controversy here.

A second sense of degrammaticalization is the movement from more to less grammatical (Heine, Claudi & Hünnemeyer 1991: 4), thus reversing the second half of Kuryłowicz's definition of grammaticalization. Chen (1998) argues that degrammaticalization can also refer either to a grammatical item acquiring a lexical sense while retaining a grammatical function or to the disuse or extinction of a grammatical item; Allen (1995) suggests that degrammaticalization is the loss of a word's grammatical role.[10]

Van der Auwera (2002) distinguishes between "wide degrammaticalization" and "narrow degrammaticalization". The former includes both degrammaticalization and lexicalization, as in the evolution of *if* into a noun. The latter includes only degrammaticalization, as in the evolution of the genitive *'s* inflection into a clitic (see below).

2. *Decliticization/ demorphologization*

Decliticization refers to the emergence or re-emergence of a clitic as an independent word (Lehmann 1995: 18), or the movement from morphology into the lexicon. A commonly cited example is the change in the English genitive: from inflectional *'s* (*the King's dog*) to enclitic *'s* (*the King of England's dog*) to independent *his* (*the King his dog*).[11] Decliticization is usually understood as a type of degrammaticalization (equivalent to definition 6 of lexicalization).

The term 'demorphologization' (or 'demorphemization'), though it might suggest a comparable change, is normally used to refer to the opposite direction of movement, namely from morphology into phonology (see Joseph & Janda 1988: 196; Lehmann 1995: 13–14). It refers to the movement from agglutination to inflection or from morphology to morphophonemics (cf. definition 7 of lexicalization above). It represents a species of what Hopper (1994; cf. also Hopper & Traugott 1993: 164) terms "phonogenesis": a morpheme loses its grammatical-semantic contribution to a word, but retains some remnant of its original form and thus becomes an indistinguishable part of the phonetic construction, as in the case of the dative plural inflection *-um* in *seldom* or the

nasal infix in *stand.* Again, combining senses (1) and (2), we arrive at the diagram given below:

morphophonemic element ← inflection ← *agglutinative affix* → clitic → word (→ syntax)[12]

The focus of these processes is the *starting point*, the affix, with movement outward in either direction, up or down.

For Hopper (1994: 31; cf. also Lehmann 1995: 14) phonogenesis or demorphologization is the end stage of the grammaticalization process, while van der Auwera (2002) cites examples of phonogenesis as cases of degrammaticalization. Moreover, Joseph & Janda (1988: 204) suggest that demorphologization may involve movement towards "(greater) lexicalization".[13]

3. *Regrammaticalization*

Regrammaticalization would seem to refer to three possible circumstances: (a) a form without any function acquires a new grammatical function; (b) a form is reinterpreted in a new grammatical function; and (c) a form which has lost its function regains it (see Anttila 1989: 150; Heine, Claudi & Hünnemeyer 1991: 4, 262n; Lessau 1994: s.v. *regrammaticalization*; Allen 1995).

4.   Test case: temporal adverbs as adjectives

The evolution of a set of temporal adverbs, such as *late* or *then,* into attributive adjectives in English (as in *my late husband* or *the then president*) presents an opportunity to explore, once again, the distinction between grammaticalization and lexicalization.

The set of temporal adverbs used as adjectives fall into the following semantic classes:

a. Anterior time reference: *aforetime, before, erstwhile, hitherto, late, long-ago, long-time, quondam, since, then, whilom, yesterday.*
b. Present time reference: *now, today.*
c. Posterior time reference: *after, hereafter, soon.*
d. Durative/iterative time reference: *ever, evermore, oft, often, once, one-time, seldom, short-time, sometime, thrice, twice, two-time.*

4.1 Discussion of the phenomenon in synchronic grammars

Only brief mention of the use of temporal adverbs as adjectives is made in traditional grammars, generally under the rubric of word formation (e.g. Kruisinga 1932: 128–129; Quirk et al. 1985: 453). Both Jespersen (1948: 353–355) and Poutsma (1926: 698–704) cite a number of examples of adverbs of time which function as adjuncts; Jespersen (1948: 290–291) points to their frequent use with verbal or adjectival ideas.

Traditional grammarians have two main concerns in regard to these forms. First, they question whether they are 'really' adjectives. Their opinion — expressed quite decisively — is that they are not; rather, they see them as ad hoc formations which are essentially still adverbial in nature:

> the attributive use of adverbs cannot be said to have struck firm root in the language. Although frequently seized on for the syntactic convenience it affords, it mostly grates on our linguistic instinct (…) [The forms] have largely preserved their adverbial character, owing to the fact that they do not suggest any equivalent adjective (Poutsma 1926: 699; cf. also Quirk et al. 1985: 453).

Only Kruisinga expresses mild disagreement: pre-position, he argues, causes the adverb to have "a somewhat more adjectival character, i.e. causes it to express some quality rather than position in time or space" (1932: 232).

The second question concerns why these adverbial forms are used in this context in place of 'true' adjectives. Jespersen (1948: 290, 353) suggests that everyday adverbs are used when there are no corresponding adjectives, hence explaining the frequency of *then* and rarity of *now* (since *present* exists).

Dictionaries seem to equivocate about the status and function of these forms, variously describing them as "adjectiv[al]", "quasi-adjectiv[al]", "attributive", or "passing into adjectiv[al]". They sometimes note explicitly that the forms derive from adverbs.

4.2 Historical data[14]

Most attributive uses of temporal adverbs appear for the first time in Early Modern English, including *after, before, ever/never, evermore, hereafter, hitherto, late, now, oft, often, once, quondam, seldom, since, sometime, soon, then, thrice, twice, whilom* and *yesterday*. *After* is found commonly beginning in the seventeenth century with nouns denoting time (1a), verbal action (1b) and personal role or title (1c). There are also a number of fully lexicalized forms with *after*, such as *afternoon, afterbirth, afterlife, aftertaste, aftereffects* or *after-dinner*.[15]

(1)   AFTER (*OED* s.v. *after* a., I.3)

    a.   surely when *the after Age*/Shall hither come in Pilgrimage / These sacred Places to adore. (1681 Marvell, *Miscellaneous Poems* 77; U of V)

       dine with thee at noon, / Daunce all *the after day*, bring thee at night/Into the wedding chamber (1609 Armin, *The Two Maids of More-clacke*, 1634–36; CHVD)

    b.   or jump *the after inquiry* on your own peril. (1609–10 Shakespeare, *Cymbeline* V.iv.151–52; U of V)

       He's passing cunning to deceive himself, / But all the better for *the after sport*. (1662 Haughton, *Grim the Collier of Croyden* I.iv.311–12; CHVD)

    c.   *Any other **after** Tenant* of the land (1641 *Termes de la Ley* 138; *OED*)

       *The **after** Lawyers* whose hands it passed thorough (1710 Prideaux, *Orig. Tithes* v. 268; *OED*)

Before is a rare form with the meaning 'previous' and occurs with nouns denoting actions/events (2). *Ever*, in the sense 'everlasting, constant, perpetual', appears in an adjectival function beginning in the sixteenth century; the *OED* points out that it occurs "chiefly with agent-nouns or sbs. of action" (3). *Evermore* is a rare form, not recorded in the *OED* as an adjective (4). *Hereafter*, in the sense of 'future', occurs in the sixteenth century with nouns of time (5). *Hitherto*, with the exception of one eighteenth-century example, seems to be of modern vintage. It has the meaning 'thus far, to this point' (6).

(2)   BEFORE (*OED* s.v. *before* adv., prep. and conj., D.1)

    Men are punisht for *before breach* of the Kings Lawes (1599 Shakespeare, *Henry V* IV.i.179; *OED*)

    Before tea, it was rather a dull affair, but then *the before tea* did not last long (1796–1817 Jane Austen, *Jane Austen's Letters to her Sister Cassandra and Others* 127; U of V)

(3)   EVER/NEVER (*OED* s.v. *ever* adv., I.6)

    *A **neuer** writer*, to *an **euer** reader* (1609 *Epist. Shaks. Tr. & Cr;* (Qq. 1,2) 179; *OED*)

    But the time of *my **euer** farewell* approacheth. (1580 Sidney, *Arcadia* (1622) 481; *OED*)

(4)   EVERMORE

    And frantic-mad with *evermore unrest* (1593–1600 Shakespeare, Sonnet 147; cited in Jespersen 1948:355)

(5) HEREAFTER (*OED* s.v. *hereafter* adv. (a., n.), B)
And that ***hereafter** Ages* may behold/What ruin happen'd in revenge of
him (1591 Shakespeare, *1 Henry VI* II.ii.10; U of V)
For I myself have many tears to wash/***Hereafter** time* (1592–93 Shake-
speare, *Richard III* IV.iv.389–90; cited in Jespersen 1948: 354)

(6) HITHERTO (*OED* s.v. *hitherto* adv. (a.), B)
All *his **hitherto** offences* (1787 Mad. D'Arblay, *Diary* (1842) III.303; *OED*)
most precious bequest to American civilization from all *the **hitherto** ages*
(1891–92 Whitman, *Leaves of Grass* 663; U of V)
that all *the **hitherto** experience* of the States (1891–92 Whitman, *Leaves of
Grass* 1008; U of V)
Hugh, *the "**hitherto** baby"*, if that is a possible term, sat in one corner.
(1886 Kate Douglas Wiggin, *The Birds' Christmas Carol* 10; U of V)

The frequent form *late* has three central senses. Applied to persons, it means
'deceased', as shown in (7a) or, when attached to a role, 'that was recently but
is not now, former', as shown in (7b).[16] Note that there can be ambiguity as to
whether *late* applies to the life or the term of office.[17] Applied to events, it
normally means 'recent' (7c). All of these uses arise in the sixteenth century.[18]
A common form in the Helsinki Corpus is *a late* (?< *on late*).

(7) LATE (*OED* s.v. *late* a.[1], A.5–6)
a. Graunts made by your noble progenitors, confirmed also by *the **late**
King* of famous memory, your noble father (1500–1570 Thomas
Wolsey, *Original Letters* II.19; HC)
Lay in the same bed & appartment where *the **late** Queene* lay
(1620–1706 Evelyn, *The Diary of John Evelyn* 902; HC)
b. It apperith in the booke of the antiquitees of *the **late** monasterie* of
Bath (Leland, *The Itinerary of John Leland in or about the Years
1535–1543* 1, 143; HC)
Here comes the Lady Widow, *the **late** wife* /To the deceas'd Sir Ava-
rice Golden-fleece (1657 Middleton, *No Wit/Help Like a Womans*
I.i.176–77; CHVD)
When didst thou see Timentes, *the **late** Generall*? (1631 Wilson*, The
Swisser* II.i.218; CHVD)
c. noblemen, and chief men in countreys, of *the **late** conspiracy*
(1537–53 Edward VI, *The Diary of Edward VI* 359; HC)
My Lord, I abhorred both the Principles and Practices of *the **late**
Rebellion* (1685 *The Trial of Lady Alice Lisle* IV, 122C2; HC)

> He undergoes my challenge, and contemnes it, / And threatens me
> with *the **late** Edict* made /'Gainst duellists (1632 Massinger, *The
> Maid of Honour* III.ii.1–3; CHVD)

Now is of frequent use in the seventeenth century with the meaning 'present,
existing'; it can be found with nouns denoting roles or titles (8a), actions or
events (8b) and occasionally with other nouns (8c).[19]

(8)   NOW (*OED* s.v. *now* adv., conj., n.[1], and a., IV.16a)
    a.   and *the **now** King*/The quondam Mounsieur shall not desire me this.
        (1653 Heminges, *The Fatal Contract* V.ii.525–36; CHVD)
        thinkeing *the **now** wearer* of the Helmett, asmuch his Enemy (1655
        Boyle, *Parthenissa, Part 3* 2.1.7; CHP)
    b.   On the Death of Mr. William Cartvvright, and *the **now** publishing* of
        his Poems (1651 Cartwright, *The Lady-Errant*; CHVD)
    c.   he might prevent all her designs and rambles, *the **now** Joy* of her
        Heart. (1687 Behn, *The Amours of Philander and Silvia* 387; CHP)
        if *the **now** cause* of my Death could but extinguish the just provoca-
        tions (1655 Boyle, *Parthenissa, Part 4* 2.8.356; CHP)
        six hundred ninety nine shall be drawne distilled or made in *his **now***
        Distillary from any Malt Corne or Graine. (1640–1710 *The Statutes
        of the Realm (VII)* 460; HC)

Though *oft* is now normally prefixed to and lexicalized with a following
participial adjective (e.g. *oft-occurring, oft-repeated, oft-quoted*), in the EModE
period it could modify a noun of action (9). The form *often* was common in the
sixteenth and seventeenth centuries with deverbal nouns denoting action (10a),
less frequently with nouns denoting roles (10b).

(9)   OFT (*OED* s.v. *oft* adv., a., B)
    I ascribe my safety to myne *oft fastynges* (1548 Udall, etc. *Erasm. Par.
    Mark* 746; *OED*)
    I was moued by *the **oft** reading and perusing* of them, with a restles and
    loft desire. (1585 Jas. I, *Ess. Poesie* (Arb.) 20; *OED* s.v. *perusing* vbl.n., 3)
(10) OFTEN (*OED* s.v. *often* adv. and a., B)
    a.   *the **often** remembrance* of his late receiued ioyes (1573 Gascoigne,
        The Adventures of Master F. I. 53; CHP)
        yet *the **often** pronounciation* of his letters, will be a means to help his
        speech. (1660 Hoole, *A new Discovery of the old Art of Teaching
        Schoole* 2; HC)

> b. Any favours, that may worthily make you *an **often** courtier* (1601 B. Jonson, *Poetaster* iv.ii; *OED*)

Once in the sense of 'former' occurs frequently with nouns of action (11a) and role (11b), later with other nouns (11c). The *OED* distinguishes the first use from the others, claiming that *once* in this use "can be explained as still an adv. qualifying the vb."

(11) ONCE (*OED* s.v. *once* adv., (conj., a., n.), D.1)
   a. Then is *y^e **once** sacrifice* of Christ utterly to be abandoned and dis-authorized (1548 Gest *Pr. Masse* in H. G. Dugdale *Life* (1840) App. 90; *OED*)
   b. Slue *the **once** owner* of this vn-ioyn'd scull (1613 Stephens, *Cinthia's Revenge* I.xi.33; CHVD)
   c. We had a view of the dons of *the **once** Capitol* of the U. S. (1862 James E. Beard: Augusta County: *Diary of James E. Beard* 1861–08–08; 1862–08–28; U of V)

Quondam 'former' is common in the seventeenth century with nouns of role/ function (12a) and nouns of action (12b).

(12) QUONDAM (*OED* s.v. *quondam* adv., n. and a., C)
   a. This is *the **quondam** King*; Let's seize vpon him. (1623 Shakespeare, *Henry VI, Part III* I.i.; CHVD)
       resolves to revenge her of this Wrong, and to reward *her **quondam** Lover* (1683 Anon., *The Dutch Rogue* "The Life, Rise, and Fall of the Decayed Merchant" 102; CHP)
   b. The heighth of *their **quondam** pride and cruelty* (1642 Vicars, *God in Mount* (1644) 44; *OED*)
       not forgetting *my Mistresses **quondam** kindnesses* (1665 Richard Head, *The English Rogue, Part 1* XII.142; CHP)

Seldom 'rare, infrequent' is found rarely in the seventeenth century in an attributive function (13). *Since* is a rare adjectival form with the meaning 'that has been since' (14).

(13) SELDOM (*OED* s.v. *seldom* adv. and a., B)
       For blunting the fine point of *seldome pleasure* (1593–1600 Shakespeare, Sonnet 52; cited in Jespersen 1948: 354)
       We stand amased now confounded by *our **seldome** aspects.* (1584 Rich, *Don Simonides, Tome 2* 99; CHP)

(14)   SINCE (*OED* s.v. *since* adv., prep. and conj. (also a. and n.), A.3b)
Eldest sonne of *the **since** Earle* of Norwich (1620–1706 Evelyn, *The Diary of John Evelyn* 28 July 1641; *OED*)
Who … might very possibly give me an account of *the **since** carriage and deportment* of Bess Bridges (1662 Dauncer, *The English Lovers, Part 1* 70; CHP)

Sometime is used in the sense of 'former' from the sixteenth to nineteenth centuries, as exemplified in (15). The meaning 'occasional' is modern.

(15)   SOMETIME (*OED* s.v. *sometime* adv. (and a.), 1d and 2f)
I wonder now of *my **sometime** boldness* to chide and quarrel Christ. (1637 Rutherford, *Lett.* (1862) I.254; *OED*)
none appeared more odious to him then *his **sometime** bosom-friend* faithful *Lamachus*. (1659 Brathwait, *Panthalia, or the Royall Romance* 275; CHP)

Soon is used adjectivally in the sense of 'early, speedy' (16); the meaning 'former' is archaic.

(16)   SOON (*OED* s.v. *soon* a.)
comforts himself with *the **soon** coming* to the end (1639 J. S., *Clidamus* 3; CHP)
Mr. Boyd to be spoken to about *the **soon** scaling* of the Barony Kirk on Sunday afternoon (1651 in Z. Boyd *Zion's Flowers* (1855) Introd. 53; *OED* s.v. *skailing* vbl. n.)

Then is a common attributive form dating back to the seventeenth century, occurring with roles (17a) and actions/events (17b). It means 'that existed or was so at that time'.[20]

(17)   THEN (*OED* s.v. *then* adv. (conj., a., n.), B.IV.9b)
a.   susanna martin *the **then** wif* of Georg martin being brought to Court for a wich (1692 *The Salem Witchcraft Papers, Vol. 2* 572; U of V)
I. S. was really and truly a Prisoner in the Custody of E. F. *the **then** Sheriff* Goaler or Keeper of the said prison. (1640–1710 *The Statutes of the Realm VII* 75; HC)
b.   Predicting … the happy, future State of our Country; and that *the **then** Fermentation* would be perfective to it (1682 Early Anglesey, *State Govt.* in Somers *Tracts* II.196; *OED* s.v. *fermentation*)
In this privacy I lived till *the **then** War* expired. (1662 Anon., *The Life and Death of Mary Frith* 156; CHP)

>It may be well to let you know *the **then** state* of my mind. (Benjamin Franklin, *The Autobiography of Benjamin Franklin*; U of V)
>
>Scotland, *the **then** Refuge* of Traiterous transfugers (1611 Speed, *Hist. Gt. Brit.* Ix.xxiv (1623) 1170; *OED* s.v. *transfuge*)

Thrice and *twice* are rare forms; note that both occur with nouns denoting verbal actions (18). *Whilom*, like *late*, can have either the meaning 'former', especially when modifying a role or rank, or 'deceased' (19) (see also Brinton 1999: 186–188). *While* may also occur in this sense. *Yesterday* means 'immediate past, very recent' in its attributive use (20).

(18)   THRICE, TWICE (*OED* s.vv. *thrice* adv., 4; *twice* adv. (n., a.), 4)
S. Peter … after his relapse with ***thrise** denial and forswearing* of him (1600 Watson, *Decacordon* (1602) 44; *OED*)
We heard of *the **twice** returne* of the Paragon (1624 Capt. Smith, *Virginia* 239; *OED*)

(19)   WHILOM (*OED* s.vv. *whilom* adv. (a.), conj., A.2b; *while* adv. (a.), conj. (prep.), A.2b)
But it against *my **whilome** Lord* did fight / With thee sweet Boy I came (1613 E. Carew, *Mariam* II.iii.40–41; CHVD)
The master of the mint *our **whilome** refresher and consolation*, now tooke part against vs. (1594 Nashe, *The Vnfortvnate Traveller* 50; CHP)

(20)   YESTERDAY (*OED* s.v. *yesterday* adv., n. and a., C)
His Judgment dictated, that ***Yesterday** Writers* are most proper for matters of Antiquity (1665 J. Webb, *Stong-Heng* (1725) 41; *OED*)

Of this set of adverbial forms, the only ones found with adjectival use in contemporary English — if one may judge from their occurrence in the British National Corpus — are *late* and *then* (still common), *after*, *before*, *now*, *sometime* and *soonest* (infrequent) and *quondam* (rare).

In the modern period, a number of adverbial forms, including *aforetime*, *erstwhile*, *long-ago*, *long-time*, *one-time*, *short-time*, *today* and *two-time*, have acquired an adjectival use. However, these are different in kind from the forms under discussion. They are all derivationally complex, with a noun or noun-like form (*time*, *while*, *day* and *ago*) as their second element. With the exception of *sometime* and *yesterday*, the older forms are short, derivationally simple forms going back to Old English (e.g. *now*) or are combined forms derived from an adverb plus a non-nominal element, such as a particle (e.g. *hitherto*), another adverb (e.g. *hereafter*), or an inflectional suffix (e.g. *once*).[21]

4.3 Features of the change

A few generalizations can be made about this historical change. First, by far the largest number of temporal adverbs seem to have come to be used as attributive adjectives at roughly the same time, in the Early Modern English period. However, for many of the forms, this use was transient and they are found only adverbially in Modern English.

Second, there seems to have been a common discourse environment for the change; it occurred in the context of nouns denoting actions or events (de-verbalized nouns), agent nouns, or nouns of rank, role, or relation. It should also be noted that the adverbs appear frequently as attributive modifiers with gerunds (see examples 8b, 9, 16, 18).[22] Nouns from other semantic classes were not impossible in this context, but they were quite rare.

Third, the shift from adverb to adjective is limited to temporal adverbs and a few spatial adverbs,[23] but manner adverbs and other types of adverbs are not allowed.

Fourth, the semantic change is also remarkably consistent. In addition to a high degree of specialization in terms of past time, the majority of forms acquire the meaning of 'former, previous' when used attributively, including both adverbs denoting anterior time (*aforetime*, *before*, *erstwhile*, *late*, *long-ago*, *quondam*, *since*, *then*, *whilom*, *yesterday*) and those which are originally frequentative (*once*, *one-time*, *sometime*). Semantic change in the other forms is not as regular, though adverbs denoting posterior time tend to acquire the meaning 'subsequent, later' (*after*, *hereafter*).

Fifth, the forms continue to function primarily as temporal adverbs and their use as adjectives is limited morphosyntactically. They may occur only in attributive, not in predicative position:

(21) **My friend is sometime.*   [?]*His wife is now.*
        **My husband is late (= 'former').*   **The effects are after.*
        **The kingdom is then.*   **The picture is before.*

In this function, the forms are not susceptible to inflection for degree, modification by intensifiers, or the usual derivational processes expected of adjectives (e.g. *-ly*, *-ness*, *un-*):

(22) **my later husband/*the oftener response*
        **my rather late husband/*the very then kingdom/*the quite after effects*
        **the thenness of the ruler/*the unthen ruler/*he ruled thenly*

The occurrence of comparative/superlative forms of *oft*, *often*, *seldom* and *soon* (23) might suggest the morphological status of these forms as adjectives, but it must be remembered that adverbs too inflect for degree.

(23) to breede occasion of ***ofter*** *meeting* of him and her (1568 Ascham, *Scholem.* (Arb.) 85; *OED* s.v. *oft* adv., a., B)
to have *the **oftner*** *accesse* vnto Laurana (1598 Forde, *Parismus, Part 1* 32; CHP)
Liable to *an **oftner*** *anger* (1640 Bp. Reynolds *Passions* xii; *OED* s.v. *often* adv. and a., B)
Yet amongst my manie volumes, I hope Gods booke hath not beene *my **sildomest** lectures.* (Q. Eliz. In *Holinshed's Chron.* (1587) III.1396/2; *OED* s.v. *seldom* adv. and a., B)
that which is the most desirable and *the **seldomest*** *found* in Aristocracies (1655 Boyle, *Parthenissa, Part 3* 2.3.248; CHP)
He that hath (…) his gold ready shall have *a **sooner** dispatch*, then the best Scholar upon ticket. (1656 Heylin, *Surv. France* 147; *OED* s.v. *ticket* n.[1], 7)
make *your **soonest** haste*; So your desires are yours. (1606 Shakespeare, *Antony and Cleopatra* III.iv.27–28; U of V)
for the greatest flowe hath *the **soonest*** *ebbe* (1583 Greene, *Mamillia* 22; CHP)

The most common of the adverbs are also found conjoined syndetically (24) or asyndetically (25) with other adjectives. While such conjunction might likewise suggest their full status as adjectives, it is not uncommon in earlier English to find cases of asymmetric coordination.[24]

(24) The ***oft and frequent*** *welcomes* giuen my sonne (1633 Heywood, *The English Traveller* III.i.7; CHVD)
*the **often** and **free** chaunging* of persons (1595 Sidney, *Defence of Poesie*; U of V)
*The **often** and **much** vse* of lettuce … hindreth procreation, …and maketh the body lumpish. (1620 Venner, *Via Recta* vii.141; *OED* s.v. *lumpish* a.)
Long, impertinent, and often *Epithets* (1679 Hobbes, *Rhet.* iii.iii (1681) 105; *OED* s.v. *often* adv. and a., B)
there are no signs amongst them of ***sooner** or **later*** *production* (1677 Plot *Oxfordsh.* 110; *OED* s.v. *soon* a., 2)
*The **greatest** and **oftenest** laugher* (1831 Carlyle, *Sart. Res.* i.v; *OED* s.v. *often* adv. and a., B)

>A **suppressed** and **seldom** anger (1650 Jer. Taylor, *Holy Living* ii.§29
>(1727) 59; *OED* s.v. *seldom* adv. and a., B)
>the **then** and **still** owners of that happy periodical (1879 Trollope,
>*Thackeray* 22; *OED* s.v. *still* adv., 4a)

(25)   *a **late** most learned Writer* (1675–76 Boyle, *Electricity and Magnetism* 35;
HC)
the **late** most dreadfull storm (1640–1710 *Letters of Sir Richard Haddock*
45; HC)
the **quondam** laborious antiquary (1840 *Penny Cycl.* XVIII.167/1 [*Pinkerton*]; *OED* s.v. *petit-maitre*)

4.4 Accounting for the change

There would seem to be a number of possible ways to explain this phenomenon:

a.   as a matter of word formation, i.e. conversion or functional shift,
b.   as a process of lexicalization,
c.   as a process of grammaticalization,
d.   as a counterexample to grammaticalization, viz. degrammaticalization, or
e.   as a matter of 'recategorialization'.

4.4.1   *Conversion or functional shift*

While Bauer (1983: 226) considers conversion a "totally free process", devoid of constraints, in which "any lexeme can undergo conversion into any of the open form classes as the need arises", he does not discuss the conversion of adverbs to adjectives, nor do other standard treatments of word formation (such as Marchand 1969: 359ff.). Bauer notes — in regard to examples of N > A conversions such as *head teacher*, *model airplane* — that the conversion *to* adjectives is often problematic: "when the form is used attributively, criteria for concluding that conversion has taken place must be spelled out with great care" (1983: 228). Quirk et al. (1985: 1562) require that for such a conversion to have occurred, it must be possible for the form to be used predicatively and there must be inflectional (and derivational) evidence of the word's status as an adjective. If a suspected conversion fails these tests — as ours do — it should be accounted for in syntactic terms.[25]

By "syntactic terms" they are suggesting the account favored by traditional grammarians, namely, "X acting like a Y", or "an adverb acting like an adjective". Apart from the problems inherent in such an explanation — in what sense is X really an X or really not an X, or a Y or really not a Y? (see

Huddleston 1984:93ff.) — this sort of description provides no diachronic explanation of the shift from adverb to adjective.

Alternative accounts might be in terms of "intersective gradience"[26] — a theory currently being explored by Bas Aarts and David Denison (see Denison 2001), which argues that there may well be "gradience" or soft boundaries between word classes such as N and A — or in terms of the hybridity of lexical categories, or in terms of a supercategory such as Modifier, which would encompass both adjectives and adverbs. Likewise, the fact that the adjectival and adverbial classes were less well defined in Early Modern English than in Modern English might explain the phenomenon.[27] While these suggestions can account for the varying degree of membership in the category Adjective of the forms under discussion and the gradualness of the change, I do not think that they address questions about the mechanism or directionality of the change.

4.4.2 *Lexicalization*

Perhaps the most obvious conclusion to reach is that the changes here are an example of lexicalization, describable by the fourth definition of lexicalization given in Section 3.1. That is, they show the functional shift from grammatical word > lexical word, in the sense that adverb is more grammatical (member of a more closed set) than adjective, adjective more lexical (member of a more open set) than adverb. They could be treated as an instance of what above (see Section 3.1) was termed 'secondary lexicalization', representing a change toward greater lexical function, or categoriality.

However, it is not intuitively clear to me that there is an absolute, or even a relative, difference in degree of lexicality between adjectives and adverbs. In general, the distinction between grammatical and lexical is rather fuzzy; it is clearly language dependent, with the same concept often being expressed lexically in one language and grammatically in another (Lass 2000; Traugott forthcoming b). Moreover, there would seem to be an even more serious problem with viewing this change as an instance of lexicalization. Typically, the process of lexicalization is idiosyncratic. It consists of unexpected changes, one-off occurrences, following no general pattern and affecting individual forms. Both the forms chosen for lexicalization and the type of lexicalization they undergo are unpredictable. However, in the case of temporal adverbs used as adjectives, the change is widespread; it affects an entire class of forms. More-over, it is to a large extent regular, since temporal (and sometimes spatial) adverbs, but not manner adverbs, for example, can undergo the change.

The semantic changes involved in this change are also atypical of lexicalization. The semantic changes in lexicalization are thought to be "unrecoverable" (Quirk et al. 1985) or "unpredictable" (Hagège 1993) and to involve the addition of semantic content (Wischer 2000:364–365). However, the semantics of the forms discussed here involve either the widening of semantic scope (from 'before', 'one-time', 'late', etc. to 'former') or are recoverable from the temporal meaning of the corresponding adverb.

4.4.3   *Grammaticalization*

A third possibility, given the apparent regularity and systematicity of the change, is to view the change from freely occurring temporal adverb to highly restricted attributive modifier as an instance of grammaticalization. Considered in respect to the features of grammaticalization set out in Lehmann (1985, 1995: Chapter 4), these forms exhibit the following:

a.   semantic "attrition", or desemanticization, undergoing restriction of semantic content, with broadening or loss of meaning;
b.   "condensation" in scope; changing from modifiers of the entire VP or S to modifiers of the N within the NP; and
c.   "fixation", coming to occupy a fixed slot, pre-nominally.

While some of the features of grammaticalization noted by Lehmann, including most importantly phonological "attrition", or erosion of phonetic substance, and morphological "coalescence", or bonding, do not occur in this instance, these developments are absent in standardly-accepted examples of grammaticalization, such as the development of auxiliaries.[28]

Considered in respect to the principles of grammaticalization set out by Hopper (1991), this change is characterized by:

a.   "divergence", with the forms remaining as fully lexical temporal adverbs;
b.   "persistence", with the forms retaining traces of their original meaning in their grammaticalized form and possibly
c.   "decategorialization", with the forms "los[ing] or neutraliz[ing] the morphological markers and syntactic privileges" of their category (1991:22).

Although as a class adverbs have few morphological markers, they are characterized by syntactic mobility and wide (predicate or sentence) scope. The forms under discussion here become fixed syntactically and reduced in scope. Furthermore, they do not acquire the morphological and syntactic characteristics of adjectives. Thus, they can be seen as "decategorialized".

The semantics involved in the use of temporal adverbs as adjectives are also more characteristic of grammaticalization than of lexicalization: first, the lexical sources — rather non-specific anterior time adverbials — are sufficiently general in sense and second, the meaning shifts move in the direction more referential to less referential, or more concrete (position in time) to more abstract (temporal quality). Both very general lexical sources and abstraction of meaning are considered central to grammaticalization (see Traugott forthcoming b). Finally, the fact that the change occurs in a highly constrained discourse context — namely in the context of nouns of action, role, or rank — agrees with current thinking about grammaticalization, as discussed, for example, in Traugott (forthcoming a). Also, one could argue that the locus for the reanalysis (which is central to grammaticalization) of the adverb as an adjective is the position before the 'hybrid' gerund form, which would seem to permit either adverbial or adjectival modification.

4.4.4   *Degrammaticalization*

There is, however, an important respect in which the forms discussed here do not undergo Hopper's central process of decategorialization. Decategorialization is typically understood as involving a unidirectional cline from more major to more minor category or from more open to more closed form class. Our forms do not exhibit the expected downgrading of categorial status; rather, as suggested before, they seem to move from a more minor to a more major word class (being upgraded from adverb to adjective). The shift from more to less grammatical might in fact be viewed as an example of "categorialization", or degrammaticalization.

However, there would seem to be two reasons to question whether the shift examined here is indeed degrammaticalization. If it were, it would be quite rare. For example, while Newmeyer (1998:272–274) cites numerous examples of "upgrading" from functional category to lexical category, including the shifts from Preposition > Verb, Pronoun > Verb, Preposition/Conjunction > Adjective, Preposition/Conjunction > Noun and Pronoun > Noun, he gives no examples of the upgrading from Adverb > Adjective, nor have I found any cited in the literature. Furthermore, it is unclear to me from the definitions given in 3.2 whether degrammaticalization necessitates that there be some prior grammaticalization process that is undergoing reversal. In some of the cases that I have examined, there is a preceding grammaticalization process: the old inflected forms such as *once, seldom, whilom* have undergone "phonogenesis", which can be viewed as the end stage of grammaticalization (see Section 3.2

above). The compounds *sometime* and *yesterday*, with a noun as second element, or the compounds *evermore*, *hereafter*, *hitherto* (and older *before*, *since*), with a particle as second element, all involve univerbation, which is often a feature of grammaticalization (though here it may represent lexicalization). However, in most instances the shift from adverb to adjective does not undo or reverse in any direct way a prior grammaticalization process. In a number of the cases (e.g. *after*, *ever*, *oft/often*, *then*, *now*, *late*, *soon*), there is no evidence that the forms began as anything other than adverbs.[29]

4.4.5 *Recategorialization/refunctionalization*

There are two less obvious ways to account for the development of temporal adjectives from adverbs. The first is "recategorialization". According to Heine, Claudi & Hünnemeyer (1991:213, 233–238), the losses brought about by decategorialization may be compensated for by gains, in the form of "recategorialization": "a process whereby language tends to restore iconicity between form and meaning. It has the effect that the 'hybrid forms' (…) resulting from decategorialization develop into new, function-specific morphemes" (1991:213). Recategorialization involves a form acquiring a new categorial status (1991:238) or the acquisition of new grammatical structures, syntactic modes, or morphological patterns. For example, when *I think* is grammaticalized as an epistemic parenthetical, it loses status as a matrix clause but gains status as an adverb; it also acquires greater syntactic freedom. However, recategorialization would seem explicitly to require a prior grammaticalization process, which, as I noted before, is not always the case here.

A second way to account for our shift is as "exaptation" (Lass 1990) or "refunctionalization under conditions of discontinuity", which, as Giacalone Ramat (1998) explains it, involves an item sliding to an adjacent (and more central) area of grammar (in contrast to lexicalization, where the item slides into the area of the lexicon). The difficulty in explaining our process in this way is that we do not begin — as Lass so colorfully describes it — with "junk", or linguistic material which has lost its grammatical function, but rather with fully functional material.

5.   Conclusion

In conclusion, in regard to the use of temporal adverbs as attributive modifiers, most especially in the Early Modern English period, we would seem to be

dealing with a shift which challenges the conventionally recognized processes of change. We are clearly not witnessing the process of conversion and despite the temptation to see it as lexicalization, the systematic nature of the change would rule out lexicalization. The lack of a prior process of grammaticalization excludes regrammaticalization and possibly degrammaticalization. If the change is analyzable as grammaticalization it calls into question the clines proposed for decategorialization or at least shows that, outside of the core categories of noun and verb, atypical movements are possible.[30] However, it might be the case that degrammaticalization shares many of the features of grammaticalization but simply with a different directionality. Such an insight might lead to a somewhat better understanding of the degrammaticalization process.

This paper may have contributed to an understanding of grammaticalization, lexicalization and degrammaticalization — or simply muddied the water. But it has shown, I think, that an extended example such as this calls into question all three processes and begs for a clearer definition of each.

Notes

1. As Newmeyer (1998:253) observes, "functional categories have a characteristic semantic value *regardless* of whether they represent downgradings from lexical categories".

2. For the purposes of this paper, I am assuming — most likely incorrectly — that the meaning of 'grammaticalization' is generally agreed upon.

3. Some scholars use the term 'relexicalization' in the sense of lexicalization (Hagège 1993:209), though for Ramat (1992:554) relexicalization denotes movement back to the lexicon in a spiral.

4. Van der Auwera's (2002) definition of lexicalization ("the making of a lexical item out of something other than a lexical item") would seem to belong to this category, but his example of *songwriter* suggests the third definition.

5. This change might also be seen as 'demorphologization' (see below).

6. See also Traugott (forthcoming b), though she describes this change as "demorphologization" (a species of lexicalization for her; see below).

7. According to Traugott (forthcoming b), there is no change from less to more lexical in lexicalization comparable to the change from less to more grammatical in grammaticalization.

8. Definitions 1 and 2 are overly general and will not be considered further. Moreover, I wish to distinguish lexicalization from general processes of word formation (definition 3), which involve the shift from lexical > lexical (not grammatical > lexical). The process of semanticization (definition 9) seems rather different in kind and will also not be considered further in this paper.

9. The number of such examples is growing. See especially Newmeyer (1998: 263ff.) for examples of "upgradings", which he feels are "rampant". However, Newmeyer makes no distinction among the different kinds of upgradings he discusses.

10. A somewhat more specialized sense of degrammaticalization is proposed by Páez Urdaneta (1982), who argues that when a grammatical word loses function at the propositional or textual level and acquires new functions at the conversational level, that is, "performative" or sociostylistic functions, then it can be said to be degrammaticalized. Such a change would correspond to the development of pragmatic markers, which I have treated as an instance of grammaticalization (Brinton 1996).

11. This sequence is cited for illustrative purposes only and probably does not correspond to the actual development of these forms (see Allen 1997).

12. For Joseph & Janda (1988) demorphologization also involves the movement of morphology into syntax.

13. Lehmann (1995: 14) points out that Givón refers to demorphologization as lexicalization.

14. Data for this paper were gathered from the *Oxford English Dictionary* (2nd edition on CD-ROM; *OED*), from the Early English Prose and Verse Drama sections of Chadwyck Healey (CHP, CHVD, respectively), from the University of Virginia Modern English Collection (U of V), from the Helsinki Corpus (HC; see Kytö 1996) and from the British National Corpus (BNC).

15. *After* seems to have been confused with *aft* 'behind' in expressions such as *the after part, the after deck, the after locker.*

16. In a discussion of the semantics of what he calls "separative adjectives", such as *former* or *late* in *Susie's former husband lives in Senegal* or *Eddy's old school keeps asking him for money*, Ferris (1991: 577–579) points out that the adjectives do not qualify the properties, or descriptive content, of the nouns (*husband, school*), but rather "the RELATION between the entity which is seen as a participant in the structure of the sentence communicated, and the description which characterizes and identifies that entity" (578). Thus, by analogy, we could say that in the case of *late* (which has the same meaning as *former* and *old* in Ferris's examples), as in *the late wife (of Sir Avarice)*, it is the relation between the woman and the description *(wife of Sir Avarice)* that is 'former'.

17. Because of this possible ambiguity, Fowler (1983: s.vv. *late* et al.) suggests that *late* should be reserved for the meaning 'dead'. Webster's (1989: s.v. *late*) reports that much ink has been spilled in usage guides about how long one may use *late* after a person has died; it concludes that the time span is unlimited since *late* means 'the now dead' and furthermore functions as a sign of respect.

18. The attributive use of the adverb differs from the 'true' adjective *late*, which is of ancient provenance (see *OED* s.v. *late* a.[1], A). According to Jespersen (1948: 355), the 'deceased' meaning of *late* must originate in the adverbial use; likewise, the *OED* considers the 'recent' meaning apparently to have developed from the adverb *late* meaning 'not long since, recently' (*OED* s.v. *late* adv., 4b).

19. In the 1960s attributive *now* acquired a second meaning, namely, 'fashionable, current, up-to-date' (*OED* s.v. *now* adv., conj., n.[1] and a., IV.16b), but this use seems to have been

rather transient. Webster's (1989: s.v. *now*) notes that while the older usage generated no animosity, there was considerable objection to the newer use.

20. According to Webster's (1989: s.v. *then*), some objection was raised to this usage in the nineteenth century and again in the twentieth century, but "the controversy never got off the ground".

21. Examples of the modern forms are the following:

   a.   AFORETIME (*OED* s.v. *aforetime* adv.)
        Believing not *the **aforetime** unity* Of the Divine and human. (1846 Grote, *Greece* (1862) i.i.37; *OED*)
   b.   ERSTWHILE (*OED* s.v. *erstwhile* adv. and a., B)
        this incident leading to a further quarrel, *the **erstwhile** friends* parted. (1922, Stanley H. Redgrove, *Alchemy: Ancient and Modern* 69; U of V)
   c.   LONG-AGO (*OED* s.v. *long-ago*).
        A book, *the **long-ago** gift* of his dead mother (1889 *Chicago Advance* 24 Jan.; *OED*)
   d.   LONG-TIME (*OED* s.v. *long* a.[1], A.III.18)
        Big Tim, "*the **long-time** leader* of the Sullivans" (1915 Anne Conway, *Acres of Diamonds and His Life and Achievements*; U of V)
   e.   OFT-TIME (*OED* s.v. *oft-time* adv. (a.))
        *The **oft-time** Premier* of the Colony (1896 *Daily News* 12 Sept. 5/1; *OED*)
   f.   ONE-TIME (*OED* s.v. *one* numeral a., pron., etc., B.IX.35)
        Old Lodge, we salute thee for thy venerable antiquity; but we owe thee no respect as *the **one-time** resort* of the boasted virgin queen! (1850 W. Howitt *Year-bk. Country* vi.179; *OED* s.v. *one*)
   g.   SHORT-TIME (*OED* s.vv. *short* a., n. and adv., A.V.23; *short time*)
        In the army they have *****short-time** soldiers* and long-time soldiers (1877 Spurgeon, *Serm.* XXIII. 130; *OED* s.v. *short*)
   h.   TODAY (*OED* s.v. *today* adv., n. and a., C)
        I'm *a **today** writer*. (1969 *Harper's Mag.* Oct. 65/2; *OED*)
   i.   TWO-TIME (*OED* s.v. *two-time* a., 1)
        i.   Is a widder, even *a **two-time** widder*, got nothin' else to do but … go about grievin' for them that's gone? (1897 R.M. Johnston, *Middle Georgia* 113; *OED*)
        ii. The loss of *the **two-time** former Scottish champion* is a severe blow (*KSH* 4275; BNC)
        iii. ***two-time** pieces* or *sea-watches (1767 *Ann. Reg.* X.I 141/1; *OED* s.v. *sea* n.)

Like *quondam* and *whilom*, *erstwhile* (b) has an archaic or pedantic quality (see Webster's 1989: s.vv. *erstwhile*, *quondam*, *whilom*; Fowler 1983: s.vv. *late* et al.), so it is interesting to note that it is a modern development. *Oft-time* (e) and *one-time* (f) occur with the sense of 'former'. *Today* (h) is similar to the second meaning of *now* (see footnote 19), namely 'modern', rather than 'present'. *Two-time*, according to the *OED*, is a non-standard usage, presumably of American origin (i-i), but it is found currently in collocation with 'winning' and 'losing' in sportswriting, discussions of election results, etc. (i-ii), and it may be of even earlier origin, judging from one example in the *OED* (i-iii).

Teresa Fanego (p.c.) has pointed out that these forms may have a different derivation from the forms discussed in this paper. She suggests that they may simply be attributive uses of the corresponding NPs: e.g. *a long-ago gift* < *a gift of long ago.* This suggested derivation works for some of the forms but is awkward with others (e.g. *a one-time resort* < *?a resort of one time*); nor could the semantic change in the latter (from 'one-time' to 'former') be adequately accounted for by this derivation.

A different explanation of the origin of these forms is proposed by Poutsma (1926:701), who suggests that *sometime* and *onetime* derive from the phrases *at sometime* and *at onetime.*

22. Teresa Fanego has argued (see, e.g. Fanego 1998) that the gerund in Early Modern English was a hybrid form, showing increasingly verbal qualities, yet not having lost the abstract nominal qualities of its origin. She suggests that it might therefore be possible to consider the forms that I am discussing, when they precede gerunds, as adverbs rather than as adjectives. From gerunds their use would have spread to other deverbal nouns.

23. Jespersen cites examples such as *my **hence** departure, his **downward** progress, the **hither** side of thirty, the **above** letter, the **off** side* (1948:355–358). The referees of the paper have noted that other types of adverbs may undergo this shift, citing *only* and *well.* However, such a use of *only* (e.g. *the **only** refusal, his **only** dethe*) would seem to be very rare (see Nevalainen 1991:131) and according to the *OED* (s.v. *well* adv., VII.30a–b), *well* occurs attributively only with gerunds.

24. I am indebted to Teresa Fanego for this observation.

25. Note that conversion is included in the regular processes of word formation labeled as 'lexicalization' in the third definition above. As such, it is subject to the same questions which I will discuss below in respect to that process.

26. As a formalist, Newmeyer (1998:247, 290) argues strongly against the possibility of categorial gradience on the synchronic level. Though he admits that diachronically certain aspects of categorial change may be gradual, he points out that not every step has "categorial significance", i.e. results in a change in categorial status.

27. The suggestions were made by Elizabeth Traugott and Ans van Kemenade during discussion which followed this paper at 11 ICEHL and by Teresa Fanego, who bases her hypothesis on the less consistent use of *-ly* in deriving adverbs from adjectives in Early Modern English. However, while this might explain why derived adverbs (e.g. *easy*) are identical to adjectives, it does not explain why derived adjectives are identical to adverbs.

28. There is also neither "paradigmaticization" nor "obligatorification".

29. I agree here with Lass (2000) in rejecting what he terms "strong UD [unidirectionality]", the view that all grammatical items must originate in lexical items, that there are no originally grammatical forms.

30. The atypicality might account for the transience of the grammaticalizations we see here.

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The derivation of ornative, locative, ablative, privative and reversative verbs in English

A historical sketch*

Dieter Kastovsky
University of Vienna

1. Introduction

Ornative, locative, ablative, privative and reversative verbs represent the most productive domain of Modern English verb-formation, i.e. the derivation of verbs by word-formation processes from nouns, adjectives and verbs. Modern English examples illustrating these semantic categories are:

> (1) ornative: *to bedew, encrown, chlorinate, alcoholize, salt*; locative: *to encage, bottle*; ablative: *to deplane, disbar, unsaddle*; privative: *to behead, defrost, stone*; reversative: *to demilitarize, disengage, unlock, unbutton*

The meanings of these verbs can all be related to a common underlying semantic structure (cf. also Kastovsky 1973), viz.:

> (2) [[AGENT]] CAUSE THEME (T) BECOME [NOT] BE IN LOCATION (L)[1]

i.e. some Theme (= Object) is caused to be located in some Location (= Place) or is removed from this Location (= Place). More generally, all these verbs belong to the major semantic category of causative-inchoative verbs, which need not necessarily be morphologically complex, cf. *give* 'Agent causes something to be in someone's possession' vs. *take* 'Agent causes something to be no longer in someone's possession'; similarly *lend* vs. *borrow*, *put/add* vs. *remove/deprive* and many others. It is not unlikely that this basic semantic structure has a universal cognitive-conceptual foundation (cf. Kastovsky 1996a: 205f.) reflecting the basic human activity of moving objects around in space. Thus, the Theme can be regarded as a Trajector, and the Location can be

interpreted as a Landmark, to use Langacker's terms, which by now have become current in cognitive linguistics (cf. Langacker 1987). This spatial relationship has undergone a metaphorical extension into more abstract domains, where the Location represents a Status or State (S), into which the Theme is transferred (= changed) or from which it is removed (= changed back to its original Status or State), e.g.

(3) a. *to enslave the population* 'convert the population into the status of slaves', *to dramatize a novel* 'convert a novel into the status of a drama'
     b. *to demilitarize an area* 'to undo the militarized state of the area', *to unbarbarize a person* 'to undo the barbar(ian) state of a person', *to untie a shoe* 'to undo the tied status of the shoe'

Group (3a) is parallel to the locative type in (1), while group (3b) matches the ablative and reversative verbs in (1), where a given state is changed into its opposite, i.e. is undone. It should be noted, however, that it is not always clear whether the state in question implies a pre-action by which it has been brought about (as necessarily in *to untie, unfasten, disjoin, unbutton*), or not (as probably in *unbarbarize*). It would seem that this is at least partly a pragmatic question, i.e. has to do with our perception of extralinguistic reality and our general extralinguistic knowledge. Therefore the borderline between reversative verbs implying a pre-action and ablative or privative verbs not implying a pre-action is somewhat fuzzy. Thus, it is not quite clear whether e.g. *to disarm* should be treated as a privative or a reversative verb. Having arms normally presupposes the pre-action of providing someone with arms, since one is not born with them, and this would make the verb *to disarm* reversative. But *to disarm* could also simply be interpreted as 'remove arms' with any presupposed pre-action being backgrounded or obliterated, which would make it a privative verb, although this alternative strikes me as less plausible than the first interpretation. Inversely, *to behead* is clearly privative and not reversative; one hardly ever first puts a head on and then removes it, since people and animals are normally born with heads. But in linguistics it is of course conceivable that one first provides a structure with a head (i.e. makes it *headed*) and then *beheads* it again, in which case the verb has to be interpreted as reversative. It would seem that the distinction between alienable and inalienable possession plays a role in the decision as to whether a specific verb is interpreted as privative/ablative or as reversative.

The difference between locative, ablative and reversative verbs on the one hand, and ornative and privative verbs on the other is a matter of focus, of point

of view (or topicalization, cf. Kastovsky 1973). With the first group, L/S is focused on and becomes the basis of the derivation, while T is expressed as the external (syntactic) Object of the derived verb; with the latter group, T is focused on and functions as the basis of the derivation, while L is expressed as external (syntactic) Object of the derived verb, cf. the following examples, where the focused element is italicized:

(4) locative ('cause T to come to be in *L/S*' = 'put T into *L/S*'): *encage* 'to put someone/something *into a cage*', *emplane*; *enslave, entangle*; *enfeeble, embolden*; *prettify, legalize, clean*; *dramatize, gasify, bottle, bundle, cripple*

(5) ablative ('cause T to come to be not in L' = 'remove T from L'): *deplane* 'to remove oneself/someone *from a plane*', *disbar, unearth*

(6) reversative ('cause T to come to be not in *L/S*' = 'undo the result *S* of a pre-action'): *desegregate* 'to cause something to be not *segregated*', *decentralize, demilitarize, denazify*; *disjoin, disentangle*; *untie, unbutton*

(7) ornative ('cause *T* to come to be in L' = 'cause L to have *T*', 'provide L with *T*'): *encrown* 'to cause *a crown* to come to be with someone = to cause someone to have *a crown*', *chlorinate, alcoholize, butter, salt*

(8) privative ('cause *T* to come to be not in L' = 'cause L not to have *T*', 'deprive L of *T*'): *behead* 'to cause *the head* to come to not be with someone = cause someone not to have *a head*', *defrost, desulphurate, deoxygenate*; *disarm, unbalance, unnerve*; *bone, shell*

Clearly the fact that this basic locative structure and its negation as well as its metaphorical extensions underlie all these verbs is the reason for them to use the same derivational means.

Let me now first review the situation in Modern English in somewhat greater detail. I will then turn to a description of the morphological realization of these semantic patterns in Old English, and in a third part point out the major changes that have taken place between Old English and Modern English during the Middle and Early Modern English periods, primarily as a result of the influence of French and Latin (cf. also Kastovsky 1996b: 112–113 for some more general remarks).

2. Modern English

As the examples have already demonstrated, all semantic types that theoretically can be derived from the basic semantic-cognitive structure postulated in (2)

exist and are productive. They are realized partly by prefixal formations, with or without a suffix, and partly by suffixations alone, or by zero-derivation, with zero-derivation being the most frequent option in many instances (or zero-derivation combined with prefixation).[2]

(9)   ornative:
be-: *bewall, besnow, begrime, bejewel, begirdle* (often only as participles)
en-: *encrown, encloud, encolour* (weak)
-ate: *hyphenate, chlorinate*
-ize: *alcoholize, carbonize, ionize, oxygenize*
-Ø: *arm, flavour, butter, salt, pepper*

(10)   locative:
be-: *bemonster, beslave* (EModE only)
en-: *encage, encapsule, emplane, endanger, enrapture, enslave, entangle; enable, enlarge, enrich, embitter; embolden*
-ify: *prettify, humidify, intensify* (State only)
-ize: *dramatize, legalize, neutralize* (State only)
-en: *blacken, sweeten, whiten* (State only)
-Ø: *bottle, can, bag, catalogue, blacklist; bundle, cash, cripple; calm, clean, dirty, empty*

(11)   ablative:
de-: *dethrone* (or privative?), *debus, deplane, detruck, delist*
dis-: *dislodge, displace, disbar, dischurch* (rather rare)
un-: *unsaddle, unbale, uncage, unearth, unhook, unseat*

(12)   privative:
de-: *debark, defat, delouse, defrost, deworm; decapsulate, dehydrate, de-sulphurate; deodorize, deoxidize*
dis-: *disarm, discourage* (unproductive)
un-: *unburden, unfrock, unmask, unnerve*
-Ø: *bone, bark, fin, gut, scale, stone, shell, skin, weed, worm*

(13)   reversative:
de-: *demilitarize, decentralize, depolarize, dehumanize; desegregate*
dis-: *disconnect, disarrange, disengage, disinfect*
un-: *untie, undo, unroll, unfasten; unbutton, unclasp, unlatch, unlock*

As the examples illustrate, there is a mixture of native and non-native formations: the prefixes *de-*, *dis-* and *en-* as well as the suffixes *-ate*, *-ify* and *-ize* are non-native, whereas the prefixes *be-* and *un-* as well as zero-derivation represent native formations.

3.   Old English

In Old English, most of these semantic categories are also present, with one exception, however. Thus, I could not find any ablative verbs. The only derivational source for this semantic category would be formations with the prefixes *on-/un-*, but they did not provide any ablative examples. This may be due, of course, to the restricted material available in the existing texts. But it might also represent a genuine gap in the OE word-formation patterns.[3] As in Modern English, we find prefixation, suffixation and zero-derivation or a combination of these processes, but the number of affixes used is smaller than in Modern English, and, with the exception of reversative verbs, the productivity of these patterns also seems relatively restricted compared to Modern English:

(14)   ornative: *be-*: *beclæman* (extension of *clæman*) 'to plaster', *begyrdan* (extension of *gyrdan*) 'to girdle', *betynan* (extension of *tynan*) 'to enclose', *bebyrdan* (extension of *(ge)byrdan*) 'to fringe, border', *besmirian* (extension of *smirian*) 'to smear, anoint', *bewæpnian* (extension of *wæpnian*) 'to provide with weapons'; *bedician* 'surround with a dike', *behriman* 'cover with hoarfrost', *besmocian* 'to smoke, envelop with incense', *besniwan* 'cover with snow'
on-: *ongierwan* (extension of *gierwan*) 'to clothe', *onscrydan* (extension of *scrydan*) 'to clothe', *geunmihtan* 'deprive of strength = provide with weakness (*unmiht*)'
-s-(ian): *geegsian* 'to terrify, inspire with fear', *metsian* 'to feed'
-Ø: *byrman* 'to ferment, provide with *bearm*', *scrydan* 'to clothe', *arian* 'to provide with honour', *beagian* 'to provide with a ring', *cynehelmian* 'to crown', *pician* 'to provide with pitch', *piporian* 'to pepper', *beddian* 'to provide with a bed', *gryndan* 'to found (of a house), i.e. to provide with a foundation'

(15)   locative: *-s-(ian)*: *bliþsian* 'to make glad', *clænsian* 'to clean', *hlænsian* 'to make lean, soft', *unclænsian* 'to soil = to make unclean', *untreowsian* 'to defraud'
-Ø: *cistian* 'put into a coffin', *gryndan* 'to set, sink (of the sun) = to come to be at the ground', *husian* 'to house'; *heapian* 'to make into a heap', *clynian* 'to make into a ball', *munucian* 'to make into a monk'; *byldan* 'to make bold', *drygan* 'to make dry', *fyllan* 'to fill = to make full', *heardian* 'to make hard, bold', *blodigian* 'to make bloody'; *unretan* 'to make sad', *geunsoþian* 'to falsify, disprove', *unyþgian* 'to trouble', *unsyngian* 'to exculpate = to make innocent (*unsynnig*)'

(16)   privative: *be-*: *beheafdian* 'to behead', *bewæpnian* 'to deprive of weapons' (or reversative, cf. ornative *wæpnian* above?), *befotian* 'to cut off one's feet', *behorsian* 'to deprive of horses', *belandian* 'to deprive of land'
-Ø: *heafdian* 'to behead'

(17)   reversative: *on-*: *onbindan* 'to untie', *onlucan* 'to unlock', *ongierwan* 'to unclothe', *ongyrdan* 'to unbuckle', *onreafian* 'to strip off garments', *onsælan* 'to unseal', *onscogan* 'to unshoe', *ontynan* 'to open'
un-: *unfealdan* 'to unfold', *unwindan* 'to unwind', *unwyrcan* 'to undo, destroy', *unspannan* 'to unfasten', *uncnyttan* 'to unbind', *geunfæstnian* 'to unfasten', *geungewlitigian* 'to disfigure', *ungierwan* 'to unclothe', *unhadian* 'to divest of holy orders', *uninseglian* 'to unseal', *unscrydan* 'to take off clothes', *unscogian* 'to unshoe'

With ornative verbs, the prefix-formations often are just extensions of zero-derived denominal formations (both old class 1 and more recent class 2 weak verbs occur, sometimes side by side as doublets). But there are also formations such as *bedician*, *besniwan*, which seem to be direct denominal formations without a zero-derived non-prefixed verb as an intermediary (unless the unprefixed verbs also existed but are not recorded, which is also possible, of course). Note that the prefix *be-* has preserved its productivity until Modern English (despite the rivalling opposite meaning of 'privativity' as in *to behead*), whereas the prefix *on-* has been lost (or has merged with the prefix *un-*; either interpretation is possible). Incidentally, *on-*, like *be-*, also had two opposite functions, i.e. besides ornativity it also denoted privativity. As in Modern English, the most productive morphological pattern seems to have been zero-derivation. This pattern is relatively old, cf. the occurrence of the numerous class 1 weak verbs exhibiting *i*-umlaut (cf. *scrud* 'dress' : *scrydan* 'to dress', *frofor* 'comfort' : *frefran* 'to comfort'), a morphophonemic process which was hardly productive in the later OE period (cf. Kastovsky 1996b).

The locative type is not yet well developed, which seems to correlate with the total absence of the ablative type, its mirror image. Zero-derivation clearly dominates, and there do not seem to exist any prefixal formations. While the concrete locative pattern is rather weak, the metaphorical deadjectival and denominal 'change of state' pattern seems to have been reasonably productive. A striking feature is the derivation of verbs from negative *un*-adjectives like *unretan* 'make sad' < *unrot* 'sad' (cf. *rot* 'glad'), a pattern which does no longer exist in Modern English.

Privative verbs also constitute a relatively weak pattern. Again we find competition between prefixal *be-* and simple zero formations with occasional doublets, cf. *beheafdian*: *heafdian.*

Thus, besides the ornative group, the reversative pattern was the most productive. Looking at the examples, it would seem that the two prefixes *on-* (which partly also occurred in ornative use) and *un-* were merging, probably on account of their relatively weak phonetic distinctiveness, but also due to their semantic similarity. Thus Marchand (1969: 205) argues that

> Probably starting from second participle forms, the prefix *on-* had come to be felt connected with the negative prefix *un-*. The idea of negativity is common to both (…) What distinguishes *unbound* 'not bound' from *unbound* 'loosened' is only the additional idea of an action preceding the state of being loosened, but the state itself is the same.

Moreover, many of the reversative verbs based on a denominal ornative verb, e.g. *ungeocian, unhadian, unhlidian, unscogian*, might also be interpreted as privative, i.e. with the implicit pre-action put into the background. This would imply that the originally purely reversative meaning had developed a privative variant (or an alternative privative interpretation). This eventually resulted in the Modern English situation, where *un-* is the most productive reversative, privative and ablative prefix (apart from other functions like the purely negative one, cf. *unkind, unbelievable*).

Thus, with the exception of the ablative pattern, all the relevant semantic groups are already well established in Old English. However, there are certain problems as to the correlation between meaning and form, since both prefix formations and zero-derivations can be ambiguous. Thus, the prefixes *be-* and *on-* both occur in ornative and privative formations, i.e. in formations constituting a complementary opposition; and pure zero-derivation occurs with ornative, locative and privative verbs. The prefix *un-* derives reversatives, some of which might also be interpreted as privatives, apart from its function as a negative prefix creating antonyms like *brad* 'wide': *unbrad* 'narrow', or complementaries like *acenned* 'begotten': *unacenned* 'unbegotten', i.e. it has not yet developed an ablative function.

4.   Historical development

The further development is characterized by the introduction of the Romance/ Latin prefixes *de-, dis-* and *en-/em-* in Middle and Early Modern English, which increase the morphological possibilities considerably, although these prefixes are predominantly restricted to combinations with Romance bases.[4] The starting point were usually analysable loans, i.e. instances where both the verbal base and the prefixation were borrowed so that a derivational connection could be established between the two (cf. Marchand 1969: 153, 158). Thus, loans such as *defy, declare, denote, despair, disdain* could not act as models for English formations, since *-fy, -clare, -note, -pair* (in the required sense), *-dain* did not exist, whereas loans such as *deplume, decipher, decanonize, demoralize, disallow, disobey, disarm* could, because the derivational base had also been borrowed. The emergence of an ablative pattern with the prefix *un-* in Late Middle English as in *unsaddle* 'remove from the saddle' (besides earlier privative 'remove the saddle from the horse'), or *unearth, unhouse, unship* may well be related to this development, since it may have arisen under the influence of ablative *dis-*formations borrowed from French such as *dislodge* (1450), *displace* (1551), *disbar* (1631).

The French prefix *en-/em-* (going back to Latin *in-*) has both a locative and an ornative meaning and both may be concrete or metaphorical. The former is dominant. The first instances are loans such as *enamour, enchain, encircle, endamage, enfeeble, enrich*, which came into the language before the fifteenth century. From c. 1400 onwards we find the first English formations, e.g. locative *embow* 'bend into a bow' (1400), *embliss* 'make happy' (c. 1450), *endanger* 'put in danger' (1477), and ornative *encrown* 'provide with a crown'. The most productive period was the sixteenth century. The locative-metaphorical deadjectival type *enfeeble, enable, ennoble, embitter* also has a French model and becomes productive in the fifteenth century, while the denominal pattern *enslave, enthrall, encaptive* does not have a French equivalent and is an independent English extension of restricted productivity, going back to the sixteenth century. Besides suffixless derivatives we also find forms with additional suffixation, e.g. *embolden, enharden, enliven, enhearten* coined between 1500 and 1650. Many of these formations have become obsolete, however.

The prefix *dis-* is a combination of French *des-/dé-* and Latin *dis-*. The earliest loans have either a purely negative (='not') meaning as in *disallow* 'not allow' (1377), *disavow* (1393), *disobey* (1393) or a reversative meaning as in *dishonour* 'deprive of honour' (1300), *disarm* (1314), *disclose* (1393). Some of the latter, however, might also be interpreted as privative, if the presupposed pre-action is backgrounded. The pattern becomes productive at the end of the fifteenth century, and receives a boost by the pattern *disentangle, disembowel,*

disenthrone at the end of the sixteenth century. A number of denominal French loans were also analysable as privative, cf. some of the above examples like *dishonour*, and later loans such as *dismember, disfigure, discharm*. This pattern becomes productive outside the domain of loans in the second half of the fifteenth century, although many of the coinages never really gained general currency. Finally, some French loans were based on an ablative relation, e.g. *dislodge* (1450), *displace* (1551), *disparish* (1593), *disbar* (1631), and it seems that these were the first verbs of this kind, triggering the extension of the prefix *un-* to this semantic domain.

The prefix *de-* seems to be the youngest of the three borrowed prefixes. ME denominal privative loans such as *deplume* 'deprive of plumes = feathers' (1420) < Anglo-French *déplumer, decipher* (1528) < F *déchiffrer* were imitated by formations such as *depasture* 'deprive of pasture' (1586) anglicizing Latin *depascere, dethrone* (1609), but it was only in the nineteenth century as a result of the popularity of the suffixal reversative type *demilitarize* (1883) that this privative and eventually also ablative type became really productive. There are some Late Middle English/Early Modern English loans such as *depopulate* (1545), *depilate* (1560), *deglutinate* (1609) going back to corresponding Latin or Neo-Latin formations, which were imitated especially in scientific parlance, cf. *desulphurate* (1757), *deoxygenate* (1799), *deoxidate* (1799), *denitrate* (1863). But it was only during the late eighteenth and the nineteenth century that *de*-verbs really caught on thanks to the dramatically increased productivity of this pattern in French, cf. loans such as *demoralize* (1793), cf. F. *démoraliser*, *decatholicize* (1794), *deoxidize* (1794), *dechristianize* (1834). Apparently, this prefix + suffix pattern also started out with the privative meaning, as was the case with the pattern *deplume*, but since in some instances privativity and reversativity were not always quite distinct, as we had already noticed with some other patterns, originally privative formations could be reinterpreted as reversative by adding the presupposition of a pre-action; as a consequence, *de*-developed an independent reversative pattern, which is now also very strong outside the scientific-technical domain, whereas privative and ablative formations kept their more scientific-technical character.

5. Conclusion

The derivational patterns investigated here share a common cognitive-semantic basis, which accounts for the fact that they use the same formal derivational

means. They are already very well established in Old English, with the exception of ablative verbs, and a relatively weak representation of the locative type. This gap is closed by the introduction of the French/Latin prefixes *en-/em-*, *de-* and *dis-*, which generally strengthened this whole derivational set and made it one of the most productive areas in verbal word-formation.

Notes

* I would like to thank the referee for the many helpful suggestions.

1. [[AGENT]] is not part of the semantic structure involved in the derivation of the verb itself, but part of the semantic structure into which it is embedded by virtue of the element CAUSE, which implies a CAUSER (= AGENT, INSTRUMENT).

2. For a more detailed description and some problems related to the morphological analysis of prefixal verbs, cf. Marchand (1969, 1971, 1973) and Kastovsky (1986).

3. The material of this survey is based on an exhaustive search in Bosworth & Toller (1898/ 1921) and Clark Hall (1962). It is of course possible that with the help of the *Microfiche Concordance to Old English* (Toronto, 1985) some ablative examples could be discovered by a detailed semantic study of the examples. Moreover, the lists given are not fully exhaustive, but only include the most typical examples.

4. It should be noted that, although the actual source of these prefixes were French loans, they were strengthened also by loans from Latin, especially in the EModE period, cf. also Nevalainen (1999, esp. 358ff.).

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From *gold-gifa* to *chimney sweep*?

Morphological (un)markedness of Modern English agent nouns in a diachronic perspective[*]

Lucia Kornexl
University of Greifswald

1. An outline of the problem

In Modern English, Agent is primarily a derivational category, the majority of formations being marked by the ubiquitous *-er* suffix.[1] However, this category is also said to include a number of formally unmarked nouns derived from a verbal base such as *cheat, flirt, sneak, spy, coach, cook, guide, chimney sweep* and *shoeblack.* The corresponding Old English type is allegedly represented by formations such as *andetta* 'confessor', *bora* 'bearer, supporter', *gefēra* 'companion', *spreca* 'speaker', *winna* 'opponent', *gold-gifa* 'gold-giver, lord' and *mere-fara* 'seafarer'. Following Marchand's line of reasoning (1969: 76f., 359f., 376),[2] Kastovsky (1985: 225, 246f.; 1992: 392f.) classifies these nouns as 'zero derivatives', arguing that the assumed agentive zero-morpheme parallels overt agentive marking in derivatives such as OE *bæcere* > ModE *baker* and OE *folgere* > ModE *follower*.

On the basis of this 'overt analogue criterion'[3] more or less clear claims have been made as regards the diachronic continuity of a suffixless agentive pattern from Old English times onwards (cf. below, Sections 2 and 5). Yet a closer look at the Modern English examples that serve to illustrate this pattern reveals that only one of the items — namely *cook* — can actually be traced back to Old English. This word, though, entered the language as a loan (cf. *OED* s.v. *cook* n.) and can thus neither be used to prove the existence nor the persistence of a word-formation pattern.[4] The apparent lack of old formations need, however, not *per se* be notable if we take into account that during its long history the English lexicon has been subject to quite extensive loss and restructuring and that the available diachronic records exhibit all sorts of limitations. Besides,

what writers usually claim is the continuity of a word-formational type, not the survival of specific formations. Still, the apparent difficulty in producing examples of zero-derived agentive nouns which were already current in Old English and continue to be in use beyond the Early Middle English period may well be indicative of problems that go beyond the retrieval of a sufficient number of long-lived attestations.

It is the aim of this paper to try and test scholarly assumptions about the diachronic continuity of a morphologically unmarked agentive pattern in English on the basis of the lexical evidence presented in the literature. Taking up the chief arguments on which the notion of 'zero-derivation' rests, we shall have to examine the relevant historical and modern data both with regard to their structural and semantic properties: is there a formal continuity between the suffixless agentive pattern claimed for Old English and the unsuffixed agentive type that has been postulated for Modern English, and do the respective forms also meet the content criterion by being equivalent in meaning to the overtly marked instantiations of the AGENT category? In pursuing these questions special attention will be devoted to the situation in the Medieval English period, as the Early Modern and Modern English material cited in the handbooks has already been analysed in some detail for the purposes of a previous article that took a cognitive approach to the matter (Kornexl 1998). Trying to adduce additional proof for the line of argumentation developed there, the present paper issues a challenge to claims that English has ever possessed a morphologically unmarked agentive pattern with a sufficient degree of productivity and semantic homogeneity to justify the establishment of a word-formation type parallel to and competing with suffixed agentives.

2.   A summary of previous research

A large part of the relevant Old English material has been collected and analysed in detail by Dieter Kastovsky in his dissertation on *Old English Deverbal Substantives Derived by Means of a Zero Morpheme* (1968). In a further investigation (1985) Kastovsky examined the whole spectrum of deverbal nominalizations in Old and Modern English with regard to the structural properties and the semantic functions of each derivational pattern. He arrives at the conclusion that "[d]erivation without an explicit suffix is already extremely common in Old English and is thus by no means a characteristic feature only of Modern English, as some handbooks claim" (1985:246). Semantically, it is action and

agentive nouns that dominate among the Old English affixless derivations under scrutiny (1985: 253), with zero showing "a somewhat greater affinity to Action than to Agentive nouns" (1985: 255).[5] This tendency seems to have subsequently increased, for in Kastovsky's table charting the overall system of deverbal nouns in Modern English (1985: 226), agentive is no longer marked as a dominant semantic type within zero-derivatives.

Most of the pertinent agent nouns in Old English belong to the weak *n*-declension and carry the masculine ending *-a*, e.g. *dēma* 'judge', *hunta* 'hunter' and *wiga* 'fighter'. Within this declensional class there are also a few feminines in *-e* such as *hore* 'whore', *widuwe* 'widow' and *cild-fōstre* 'nurse', which due to their scarcity, restricted analysability and apparent lack of productivity are only of minor relevance in our context.[6] They will not, therefore, be separately discussed in this article.

The exact morphological status of the final exponent in Old English and its functional range are a matter of dispute. Nevertheless, there has scarcely been any scholarly debate on this question. In older publications, the indiscriminate terminology as regards the inflexional or derivational nature of the *-a* suffix, in combination with pronounced statements about its agentive meaning, tends to suggest word-formational properties.[7] This interpretation still has its proponents. Dennis Baron, for example, informs the readers of his study on *Grammar and Gender* that "Old English employed the *agentive suffix -a* to indicate a person performing a particular act, function, or profession" (1986: 116; my italics).

This view on the typological structure of the Old English *n*-stems has repeatedly been refuted by Dieter Kastovsky. In his opinion a classification that regards *-a* as an agentive suffix not only blends synchronic and diachronic paradigms but in interpreting grammatical endings as derivational suffixes also fails to observe the distinction between inflexion and word-formation. Kastovsky's line of argumentation (1968: 13, 81–83; 1985: 246f.; 1992: 392f.; 1997: 72) may be summarized as follows:

The patterns underlying the Old English *n*-stems originated in the addition of nominal stem formatives (mostly Germ. *-an-*, *-ōn-* and — with a *j*-extension causing *i*-mutation in the root syllable — *-jan-*, *-jōn-*) to roots, in the case of agent nouns predominantly verbal ones. Due to their merger with the inflexional endings already in Germanic, these derivational affixes can no longer be isolated in the Old English attestations of this type.[8] The fact that the *-a* of the Nominative Singular is not represented throughout the whole declensional paradigm[9] clearly marks it as an inflexion.[10] Thus lacking an overt derivational morpheme, the pertinent Old English formations have to be classed as affixless.

Kastovsky therefore postulates the following analysis: *wig/Ø-a* 'fighter', *man-slag/Ø-a* 'man-slayer'.

3.   The 'meaning' of the Nominative Singular marker of the Old English personal *n*-stems

From a form-oriented and strictly synchronic point of view Kastovsky's analysis of the Old English agentive *n*-stems seems fully justifiable. As we are dealing with a pattern that as a consequence of phonological processes in pre-Old English times underwent a significant change in morphological structure, it may, however, be worth asking to what extent this modified pattern in its Old English shape still fits discrete linguistic categories or — viewed from the opposite angle — how adequate these categories are to capture the change in morphological make-up. There are in fact indications that on their way to Old English the personal *n*-stems did not fully cross the 'boundary' between derivation and inflexion, thus in a way reflecting the categorial indeterminacy inherent in the term 'morphology' itself.[11]

With regard to pre-Old English conditions it is commonly assumed that the various stem-formatives of *n*-declensional nouns in Germanic apart from their grammatical role also served a semantic function. According to Wolfgang Meid's *Wortbildungslehre* these *n*-suffixes carried primarily an individualizing force, deriving personal designations, above all agentives, as well as names for other living beings and anthropomorphized objects (Krahe-Meid 1969: 91, §91; cf. also Kluge 1926: 7, §12). In Old English, the deverbal *n*-stems cover a variety of semantic categories[12] and — as has been outlined in the previous section — they no longer contain a formal element that can be assigned a clear derivative-semantic function. As the agentive nouns within this declensional class still reflect what was apparently the original meaning of the derivational pattern in Germanic, it seems, however, likely that their Nominative Singular marker, which "probably started life as a deverbal suffix", after having been reanalysed as an inflexion retained "something of the semantics of its original" (Lass 1994: 134 fn.16). This seems the more plausible as in Old English the *n*-stem agents formed part of a semantic category that was otherwise characterized by explicit derivational marking. Thus their inflexional *-a* or *-e* may at least to some extent have been regarded as a functional equivalent to word-formation suffixes such as OE *-end* and *-ere*[13] not only for semantic reasons. Exhibiting a basic analysability and being attested in highly frequent agentive formations

(see next section), the *n*-stem nouns under consideration presumably exhibited a sufficient amount of relevant categorial traits and were notionally salient enough to be categorized with suffixal agents by speakers of Old English. With their final marker being a prime candidate for phonetic attrition and loss, these typological crossbreeds could, however, not really stand a chance of successfully competing with 'real', i.e. formally marked derivatives.

4.   The question of productivity in Old English

The claim that on their way from Germanic to Old English the agentive *n*-stems (together with a number of other word-formation patterns) changed their morphological status from suffixation to zero-derivation (Kastovsky 1992: 382f., 392f.) appears to be problematic for yet another reason. Whether this process is seen as a clear-cut typological shift or — as has been suggested in the previous section — as a structural change of a more indeterminate nature, it no doubt led to a redefinition of the place of already existing formations within the overall system of Old English derivatives. Yet Kastovsky's claim extends to the derivational pattern *per se* and thus carries further implications: it suggests that we are dealing with a productive word-formation pattern. The peculiarities of the Old English material are, however, of such a kind that this notion definitely needs qualification.

At this point, a practical problem concerning the acquisition of relevant data may briefly be addressed. Technically speaking, the formations discussed here represent a particularly evasive type of vocabulary. Words ending in highly frequent inflexions or carrying no marker at all are rather unsuitable candidates for automated searches in electronic dictionaries and corpora. This applies not only to the earlier stages of the English language but is of course equally true for Present-day English material. Thus exact frequency counts for unmarked forms tend to be conspicuously absent from word-formation studies and other relevant literature, even where the existence of affixless derivations is explicitly acknowledged.[14] The general line of development may, however, be quite confidently reconstructed on the basis of existing collections.

That the Old English personal *n*-stems represent an established pattern of long standing is evidenced by the fact that there are quite a number of obvious linguistic relics among them. Nouns such as *guma* 'man, lord, hero' from a synchronic point of view completely lack morphosemantic analysability. Derivatives like *scytta* 'shooter, archer' and *hlytta* 'soothsayer' betray their

advanced age by the presence of *i*-mutation in the root. It is also commonly assumed that derivation from strong verbs based on non-infinitival stems marks a formation as pre-Old English.[15] Yet the productive potential of a pattern is usually not inhibited by the presence of some fossilized forms among existing formations that on the whole exhibit a sufficient degree of analysability and transparency.[16]

Though definite proof is impossible, it seems nevertheless reasonable to assume a certain amount of productivity for the agentive *n*-stems in Old English. This is above all suggested by a specific pattern, i.e. combinations of a substantive plus a zero-derived deverbal substantive such as *man-slaga* 'man-slayer, murderer' and *bēag-gifa* 'ring-giver, lord, king'. Basically, these so-called 'synthetic compounds' or 'verbal nexus combinations' (cf. Marchand 1969:15ff., 31ff.; Kastovsky 1992:364f.) represent a very old compositional type that was highly productive in North and West Germanic (Kluge 1926:9, §15; Krahe-Meid 1969:26, §31.1a). Judged by the large number of attestations that Kastovsky lists in his dissertation (1968), the type must have been quite prolific in Old English, too. Their frequent presence in poetic texts, where lexical variation was a major stylistic device, makes at least part of these formations likely candidates for linguistic innovation in Anglo-Saxon times.

The mere size of the Old English material seems to contradict the notion of a residual paradigm.[17] At first sight, these compounds suggest themselves as first-rate evidence for the productivity of a zero-derived agentive type. It is, however, a peculiar kind of productivity which these compounds exhibit. As the classified word lists in Kastovsky's dissertation (1968) show, there are a number of personal *n*-stems such as *gifa* 'giver' and *boda* 'messenger' which frequently serve as the determinatum in combinations with varying first elements. In many cases the determinatum does not even occur as an independent lexeme outside the compound: cf. e.g. *-breca* as in *ǣw-breca* 'adulterer' or *lah-breca* 'lawbreaker.'[18] Because these compositional elements are possible verbal derivatives with full lexical meanings, no convincing case can be made for treating them as suffixes.[19] But since compounds of the *gold-gifa* or *ǣw-breca* type use prefabricated formations for their determinatum, they can neither be regarded as first-rate evidence for the productivity of agentive zero-derivation in Old English. What is likely to be new in an Old English coinage of this kind is the particular combination of two compositional elements both of which belonged to the common word stock and were presumably stored as lexical units in the mental lexicon of their Anglo-Saxon creators.

The concentration of the Old English evidence on compounded formations in -*boda*, -*bora*, -*gifa*, etc. was probably not only of numerical significance. Frequency of attestation and use must have given such agentives a notional saliency that also encompassed the -*a* exponent as a morphosemantic marker. Yet viewed against the -*end* and -*ere* suffixations, the formal inadequacy of the Old English *n*-stems in their phonetically reduced and structurally diluted shape must have become even more obvious.[20] The 'suffixal extension' of many agentive *n*-stem formations in Old and Middle English[21] and — in many cases — their eventual replacement by derivations in -*er(e)* (Marchand 1969:76, 79; Sauer 1992:201) may be described as a systematic process of structural repair or 're-iconization'.[22]

5.   The post-Conquest development and status of affixless agentives: A critical reassessment

5.1   Compounded formations

Thanks to Hans Sauer's extensive study on nominal compounds in Early Middle English (1992) we get a fairly clear picture of the development of affixless agents used as compositional elements subsequent to the Old English period. Within his corpus, unsuffixed formations of this type are still relatively well-represented, but a substantial proportion of the evidence comes from Old English and is no longer semantically transparent. By contrast, his agent compounds in -*ere*, though smaller in number, originate almost exclusively in Middle English and thus exhibit a much higher productive potential (Sauer 1992:198ff., 212ff.).

Sauer's material proves instructive in yet another respect. His lists of Early Middle English compounds contain several instances of an apparent homonymic clash or of scribal confusion between cognate agent and action nouns such as *eu-bruche* 'fornicator', 'fornication' (OE *ǣw-breca*, *ǣw-bryce*) and *mon-slage* 'murderer', *man-slege* 'murder' (OE *man-slaga*, *man-slege*) (Sauer 1992:203–206, 209). Polyfunctionality though, as Kastovsky (1985:227, 253) reminds us, has been a general characteristic of deverbal noun-forming suffixes including zero throughout the history of English and can thus scarcely by itself account for the weakening of the agentive type diagnosed above. Apparently the restrictions on the productivity of *n*-stem agentives were not only a matter of insufficiently explicit marking.[23] There seems to have been a trend towards regular derivation

by word-formational elements for the category Agent that was probably reinforced by a tendency to maintain a formal difference between agent and action nouns. This question no doubt merits further investigation.

Assertions that — despite a significant reduction in productivity — the old *n*-stem type of zero-derived agents lived on through Middle to Modern English usually make use of compounded examples.[24] Marchand's line of argumentation concerning the biography of this pattern is rather inconsistent though. He states that "[w]ith the exception of *grasshop* (…) the OE combinations appear to have died out by the ME period" and that "most PE combinations have been coined during the MoE period" (1969: 76), but subsequently seems to suggest a continued productivity for the Old English agentive *n*-stems:

> Morphologically speaking, *watchmaker* is a suffixal extension of an older type that may be typified by PE *chimney sweep*. The second component is a zero derived deverbal agent substantive which in Old English had the ending *-e*, as in *gærs-hoppe* 'grasshopper' or *-a* as in *gold-gifa* 'gold-giver', *man-slaga* 'man-killer'. (Marchand 1969: 79)

However, *chimney sweep* — the standard example in the field — is first attested in 1611 in the wake of an older *chimney-sweeper* (dating from around 1500). If we are to believe the *OED*, *chimney sweep* owes its existence not to a word-formation process but to a semantic one — i.e. a metonymic shift by which the cry of "chimney sweep!" was turned into an occupational designation.[25] Both on account of its origin and its comparatively young age *chimney sweep* appears to be a rather poor candidate for 'typifying' an affixless pattern of allegedly Old English descent for which only a few examples — none of them dating earlier than the second half of the seventeenth century — can be adduced. According to Marchand (1969: 78) "*barkeep*, *bellhop*, *bootblack*, *cardsharp*, *carhop*, *lifeguard*, *shoeblack*, and *soda jerk* are the only more or less common words to denote individuals" (cf. also Marchand 1965: 64).

An analysis of the information provided by the *OED* reveals that with the exception of *carhop* and *bootblack*, which were probably coined on the model of *bellhop* and *shoeblack*,[26] all these derivationally unmarked compounds have an *-er* suffixation beside them. This is scarcely remarkable as occupational terms are natural candidates for agentive *-er* formations. However, the fact that in each case the *-er* form is the one which is attested earlier seems significant in two ways: viewed against the already existent suffixed combinations that served to denote the same referent, the deverbal nature of the corresponding affixless designations and therefore their formal status as instances of zero-derivation

(or, viewed from a different theoretical angle, of conversion) is open to question. In the light of the interpretation offered in Section 5.3 below, another observation is probably still more important, namely that Marchand's collection mainly consists of terms for unqualified jobs that have low prestige (cf. Sauer 1992:201).[27] A closer look at the uncompounded attestations of the alleged zero-derived type strongly suggests that the key to an adequate theoretical description of these formations lies on the semantic side.

5.2 Simplex forms

Marchand does not postulate the existence of a continuous productive pattern for the derivationally unmarked simplexes of his so-called "*cheat* group" (1963b:178f.), because, as he says in a different context, "if we check their history, we see that this type is not older than the 16th century" (1969:383). This "Subject group"

> is illustrated by *bore, flirt, flunk* AE, *gossip, grind, pry, scold, shirk, sneak, snoop, soak, sponge, spy, tease, tramp* (all derogatory), *coach, cook, guide, judge* (the few non-derogatory words of the group of substantives denoting persons). (Marchand 1969:376)

Diachronic continuity is, however, assumed for such uncompounded forms by Kastovsky (1985:225). In his illustrative section on Modern English zero-derivatives including agentives (*cheat, flirt, sneak, spy, coach, cook, guide*) he declares the type to be "of Old English origin", but does not account for its conspicuous lack of vitality throughout the Middle English period and its alleged resurgence in Early Modern English. Matters are further complicated by the fact that genetically the items classified as zero-derived deverbal nouns do by no means form a homogeneous word-formational 'type' or 'group'.[28] Strictly speaking, loans such as *cook, guide* and *judge*, and instances of metaphorization or metonymic shift such as *sponge* and *bore* do not belong to the field of word-formation at all. Marchand though would have sharply refuted this argument, for in determining the derivational status of lexical items and the derivative relations between them "[s]ynchronic linguistics will not regard historical evidence as a solution. History is one thing, grammar is another" (1963b:179).[29] It seems, however, clearly counterproductive if diachronic information is deliberately overlooked where, as in our case, it is apt to reveal the heterogeneity of an assumed word-formation type.

5.3   A recategorization of the '*cheat* group'

Even if we follow Marchand's demand for a strictly synchronic approach, we are bound to run into difficulties, for the material he presents in one respect definitely beats his own theoretical assumptions. As has already been pointed out, the concept of a zero-morpheme presupposes a semantic parallelism with an explicitly derivative pattern (cf. above, Section 1). This is usually claimed with reference to agentives such as *cook* vs. *baker* and *spy* vs. *observer*. A closer look at the semantics of the '*cheat* group' items reveals, however, that most of them cannot be categorized as prototypical agents equal in meaning to agentive derivatives in *-er*. Marchand's comment following the bulk of his examples (1969:376) — "(all derogatory)" — is in fact far more important than the bracketing suggests. Significantly, the four prototypical agentives among his sample — *coach*, *cook*, *guide* and *judge* — are conversely qualified as "(the few non-derogatory words of the group of substantives denoting persons)". What according to Marchand's classification scheme appears to be an additional semantic feature of most of his agentive zero-derivations seems more likely to constitute a categorial boundary. On closer inspection the members of Marchand's '*cheat* group', which he presented as a single word-formational type, may be allotted to two types that differ significantly in meaning:

1. A handful of agent nouns such as *cook*, *guide*, *judge* and *spy* — all of them acquired by way of borrowing from Latin or French. As purely semantic agents without any overt marking they indeed have an exceptional status within this morphologically marked category. But to treat them as instances of agentive zero-derivation or — adopting a different theoretical stance — of conversion assumes the existence of a regular and productive word-formational pattern with a sufficient number of attestations for which no convincing evidence can be adduced.[30]

2. The second type, which consists of Marchand's "derogatory" items, usually also contains an agential component, but in terms of notional saliency other features clearly prevail — features of a primarily evaluative nature that attest to a distinct speaker-relatedness and a pronounced pragmatic function. This may be demonstrated by a simple test. If, for example, we look up *cheat* in the *LDCE* (1995), we find the following definition: "someone who is dishonest and cheats". *Sneak* is explained as "a child who is disliked because they tell adults about bad things that other children have done wrong", and *bore* as "someone who is boring, especially because they talk too much about themselves". Likewise, the *Comprehensive Grammar of the English Language* in its section on

"Conversion to noun" paraphrases the "Subject of V[erb]"-type *bore* by "someone who or that which bores/is boring" (Quirk et al. 1985: 1560). The fact that in all these cases in addition to or instead of the typical agent definition 'a person who V-s' a characterizing description is provided indicates that these lexical items have a peculiar semantic profile and — as their frequent labelling as 'slang' or 'colloquial' suggests — exhibit also a specific stylistic and functional range. Focussing primarily on semantic or pragmatic aspects, such nouns may be variously classed as 'attributive', denoting a "person/object that is A/has the property N" (Szymanek 1988: 179) or as 'attitudinal', reflecting "the speakers' attitudes towards certain people or things" (Schmid 1999: 219).

As Szymanek uses the term 'attributive' to describe an exclusively derivational category (including zero-derivation), it needs to be stressed that the adoption of this term in our context carries no specific claim with regard to the origin and structural make-up of the lexemes in question. The formal characteristics of this expressive category definitely demand further study. According to Dalton-Puffer (1996: 144f., 146, 157–159) there is only scant evidence for expressive word-formation in Middle English, and the same applies to Modern English. Let me tentatively suggest that this may at least to some extent be due to the fact that — in marked contrast to agents — attributives in English represent a predominantly non-derivational category.

By virtue of their mixed origin the members of Marchand's '*cheat* group' can hardly be said to constitute a word-formational type. This is, however, not to say that structure is of no relevance for these items. On the contrary, their simplex, monosyllabic shape seems as essential as a categorial marker as are the expressive, predominantly pejorative meaning, a colloquial, often slangy tinge, and occasional features of phonetic symbolism (compare e.g. *flirt*, *flunk*, *sneak* and *snoop*).

That this expressive type draws on a variety of productive sources is confirmed by an analysis of John Ayto's recently published *Twentieth-Century Words* (1999). Looking specifically for unmarked formations based on verbs — i.e. those items which according to the traditional view most likely exhibit an agentive meaning — I could find only five whose deverbal origin is, however, not always fully clear: *addict* (1909) 'someone who is addicted to a drug', *swank* (1913) 'someone who swanks [i.e. behaves pretentiously, puts on airs]' (British slang), *twit* (1934) 'a fool; a stupid or ineffectual person' (slang, originally British) stemming perhaps from *to twit* (< OE *ætwītan*) 'to reproach', *git* (1946) 'a worthless person' (British slang), a southern variant of northern and Scottish

get 'illegitimate child, brat' which is ultimately derived from *to get* in its archaic sense 'to beget', and *freak* (1967) 'someone who freaks out, a drug addict' (slang, originally US). All these terms are attributive or attitudinal in character rather than agentive, and what seems decisive in our context: there is not a single one among the whole range of Ayto's derivationally unmarked neologisms denoting persons that due to a complete lack of evaluative components clearly falls into the agent category.

6. Conclusion

Contrary to assumptions that — like other semantic categories — agentive zero-derivation can boast a continuous history, the material analysed here strongly suggests that English has never developed a productive type of zero-derived agentives. The prime candidates in the field, the Old English personal *n*-stem nouns with an agentive meaning exhibit too many traits of structural ambiguity and functional restriction to have been able to compete successfully with derivationally marked agent nouns. Even in their much more frequently attested compounded forms they do not seem to have survived beyond the Early Middle English period, whereas the Modern English examples for agentive derivatives — Marchand's '*cheat* group' — according to his own statement belong to a type that cannot be traced back further than the sixteenth century. Besides, the '*cheat* group' items are semantically and genetically inhomogeneous, i.e. only a few of them (being all loans) can pass as prototypical agents and the group does not constitute a uniform word-formation pattern productive as such.

The richness in pragmatic components exhibited by those lexemes which Marchand classed as a "derogatory" subgroup of his zero-derived agents seems to merit the establishment of a special category of formally unmarked personal 'attributives' (from a semantic point of view) or 'attitudinal nouns' (in pragmatic terms) in contradistinction to the prototypically derivational agentive formations. To try and follow Marchand's line by regarding these attributives as a subtype of unsuffixed agents seems no convincing solution, because the postulated main pattern itself — i.e. prototypical agents produced by way of zero-derivation — is not sufficiently attested, and though the two types share a number of semantic traits, native speaker intuition tends to make a clear distinction between agentive *-er* derivatives and 'attitudinal' nouns. The latter category deserves further study as to its development and composition. Among

other things such an investigation will have to account for the apparently antidiagrammatic structure of the items in question in contrast to derived agent nouns, which lend themselves to a straightforward analysis in terms of diagrammatic iconicity.[31]

If for the reasons given above an immediate historical connection of the attributive type with Old English affixless agentive formations is denied, we must necessarily look for other possible affiliations. Venturing a hypothesis, let me surmise that rather than with the deverbal *n*-stems as more distant cousins this affiliation lies with the Old English representatives of a word class that is by nature characterizing, i.e. adjectives. In their substantivized form they also belonged to the *n*-stem pattern, and with words such as OE *witega* 'wise man, prophet' (OHG *wizag* 'knowing, foreseeing') and *wædla* 'poor man, beggar' (OHG *wadal* 'poor') such nominalized adjectives counted among their numbers some lexicalized formations which as quality concepts seem to fit well into our category.

Notes

1. For the almost unlimited productivity of ModE *-er*, which serves as a kind of default option for forming agentives, cf. Bauer (1983: 285–291).

2. "By derivation by a zero-morpheme I understand the use of a word as a determinant in a syntagma whose determinatum is not expressed in phonic form but understood to be present in content, thanks to an association with other syntagmas where the element of content has its counterpart on the plane of phonic expression" (Marchand 1969: 359).

3. This term is used by Sanders (1988), who provides a critical analysis of the assumptions underlying the theory of zero-derivation. For an overview of this approach and the major alternative concept of 'conversion' see Don, Trommelen & Zonneveld (2000); for a survey of earlier research cf. Pennanen (1971). As Valera (2000: 145) points out in his review article on Štekauer's *A Theory of Conversion in English* (1996), this process "remains a challenge to descriptive linguistics". Major contributions in the field during the second half of the twentieth century are also documented in Štekauer (2000; cf. Subject Index s.vv. 'Conversion', 'Zero-derivation', 'Zero-morpheme', 'Zero-suffixation').

4. For a brief critical discussion of Marchand's decision to classify loanwords such as OE *cōc* (< late Lat. *cocus*) from a strictly synchronic, i.e. Modern English point of view, as instances of zero derivation, see below, Section 5.2.

5. Zero-derived action nouns that have survived into Modern English may be exemplified by OE *drinc* 'drink', *stenc* 'stench', *hopa* 'hope', *lufu* 'love', *feoht(e)* 'fight' and *weorc* 'work' (cf. Kastovsky 1985: 247f.). For Old and Modern English unsuffixed agentive nouns as cited by Kastovsky (1985: 225, 246f., 248f.) cf. above, Section 1.

6. For the Old English declensional paradigms cf. Campbell (1959: 248–251, §§615–619) and Sievers-Brunner (1965: 221–225, §§276–279). The Germanic *n*-stems are dealt with in some detail in Kluge (1926: 7–10, §§12–17), Krahe-Meid (1969: 90–100, §§91–92) and Bammesberger (1990: 163–187). For a short discussion of the feminine pattern within the spectrum of female formatives in Old English see von Lindheim (1958: 490–494).

7. See for example Knutson (1905: 15), who starts the relevant chapter entitled "German endings (suffixes)" as follows: "In OE. there were a great many words ending in -*a* which denoted a person or agent (nomina agentis). Such are e.g. *cuma* (a person who comes), *wilcuma* (a welcome person) (…)".

8. Bammesberger (1990: 165) offers the following tentative reconstruction of the *n*-stem paradigm for 'animate' nouns ("die 'belebten' Substantiva") in Proto-Germanic (cf. OE *hana* 'cock' = ModGerm *Hahn*): Sg. Nom. $*han\bar{o}$, Gen. $*han\text{-}(e)n\text{-}az$, Dat. $*han\text{-}en\text{-}i$, Acc. $*han\text{-}an\text{-}u^n$; Pl. Nom. $*han\text{-}an\text{-}ez$, Gen. $*han\text{-}(a)n\text{-}\bar{o}^n$, Dat. $*han\text{-}(u)n\text{-}miz$, Acc. $*han\text{-}an\text{-}unz$.

9. Cf. *hunt-a* (Nom. Sg.), *hunt-an* (Gen./Dat./Acc. Sg., Nom./Acc. Pl.), *hunt-ena* (Gen. Pl.), *hunt-um* (Dat. Pl.).

10. As Kastovsky (1997: 72) points out, the reductive processes operating on the Old English *n*-stems were comparatively less radical than the ones that affected other declensional classes. He argues, however, that due to a reinterpretation of the old stem-formatives that had been preserved throughout much of the paradigm as case/number endings the result is very much the same.

11. Hermann Paul (1920: 349, §242) doubts the validity of this distinction for the pre-Old English period: "Auf die gleiche Weise wie die Ableitungssuffixe entstehen Flexionssuffixe. Zwischen beiden gibt es ja überhaupt keine scharfe Grenze". Questions concerning basic discreteness and functional autonomy are also raised in modern linguistic theory. Thus Wolfgang Dressler (1990: 86) emphasizes that Natural Morphology (as developed by Dressler et al. 1987; see also Dressler 2000) "assumes neither a discrete universal boundary between compounding and derivation nor between derivation and inflection (…), but rather proto-typical properties of prototypical inflection, derivation, and compounding respectively".

12. A few examples taken from Kastovsky (1985: 247ff.) may suffice here: *plega* 'play, fight' (ACTION), *hweorfa* 'spindle' (OBJECTIVE), *bita* 'bit, morsel' (FACTITIVE), *āga* 'owner' (BENEFACTIVE), *sceafa* 'plane' (INSTRUMENTAL), *stīga* 'path' (LOCATIVE).

13. These two highly productive agent suffixes have been studied in detail by Kärre (1915) and Kastovsky (1971). For Old English personal noun suffixes in general cf. the section on "Nominal suffixes" in Kastovsky (1992: 384–389).

14. See for example the new *Longman Grammar of Spoken and Written English*, which in its chapter on noun formations provides a list of zero-derived substantives but does not include this type in the frequency counts and productivity ratings for common noun derivations (Biber et al. 1999: 319, 323).

15. But cf. the questioning remarks by Kastovsky (1985: 260 fn.17).

16. For some fundamental considerations about the synthetic (i.e. productive) and analytic (i.e. descriptive) aspects of word-formation cf. Kastovsky (1985: 229). An overview of the various aspects of morphological productivity is provided by Koefoed & van Marle (2000).

17. For an explication of this concept cf. Pilch (1985: 423).

18. Weinreich (1971), who observes a similar impairment of productive potential for the corresponding Old High German pattern, takes this as a sure sign of imminent death: "Ein Suffix, das zunehmend nur noch in der Komposition fruchtbar ist (…), muss dem Untergang geweiht sein" (1971: 103f.). He rather inappropriately calls the final exponent *-(e)o* of the second constituent — which just like in Old English quite frequently represents a formation that is only attested in compounds — a "compositional suffix" ('*Kompositions-suffix*') (1971: 102).

19. Cf. Kastovsky's refutation of such arguments (1992: 365). For a discussion of the status of these 'potential words' and for Old and Early Middle English attestations see also Sauer (1992: 18, 200, 211f. and fn.134).

20. The subsequent fate of the *-end* suffix proves though that phonological substance alone is no guarantee of survival.

21. The process may briefly be exemplified by the frequently attested OE *dēma* 'judge, ruler', which survives the Norman Conquest but dies out around the middle of the thirteenth century (cf. *MED* s.v. *dēme* n.1). Already in Old English times *dēma* has two suffixed formations beside it — i.e. *dēmend* and *dēmere* (cf. *DOE* s.vv.; *MED* s.vv. *dēmere*, *dēmend*; *OED* s.v. *deemer*). In Middle English (before 1300) a further derivative in *-estre* is formed that occurs in a number of variants (cf. *MED* s.v. *dēmester(e*; *OED* s.vv. *deemster*, *dempster*). All these formations have ultimately been replaced by the French loan *judge*, which according to the *OED* entered the English language at the beginning of the fourteenth century.

22. On diagrammatic iconicity see Haiman (2000) and the literature cited there. For an attempt to describe the formal and conceptual structure of prototypical agent nouns in terms of Peircean iconicity cf. Kornexl (1998: 64ff.).

23. In Sauer's material, which covers the twelfth and thirteenth centuries (1992: 4f.), the Old English final exponents, which originally represented different vowel qualities, have merged, the resulting *schwa* being usually represented by ⟨-e⟩. Its morphological status remains unclear: "Die ae. Endungen *-a, -e, -u* sind me. unter *-e* zusammengefallen, das aber wohl nicht mehr als Nom.Sg.-Endung zu beschreiben ist" (Sauer 1992: 202). For recent discussions of this question cf. Kastovsky (1997: 72; 2000a: 720f.), who claims that "these endings lost their inflectional function and were reinterpreted as part of the word itself, which therefore changed its status from a stem to a free form (word) without any inflectional ending" (2000a: 721).

24. Cf. Sauer (1992: 201). Pilch (1985: 422f.) seems undecided as regards the Modern English output: "The tatpuruṣa with zero-suffix such as *chimney sweep*, presumably, belong to a residual paradigm which was productive in Old English, forming both masculine and feminine *n*-stems".

25. Cf. *OED* s.v. *chimney-sweep* senses 1 and 2. For a detailed analysis of the evidence cf. Kornexl (1998: 56f.).

26. By referring to *bell-hop* the *OED* explicitly suggests such a connection for *car-hop* (s.v. *car* n.).

27. *Lifeguard* may be considered an exception, but with *guard* having been borrowed from French, the formation is not a natural member of the family anyway.

28. As pointed out in Section 1, Marchand's material has been analysed in detail in Kornexl (1998) so that a few examples may suffice here.

29. Marchand (1963a; 1963b; 1964) advocates a content-based and strictly synchronic method of establishing the derivational relationship between pair members in cases of zero-derivation, whose results may run counter to the historical evidence. For a brief discussion of Marchand's "principle of semantic-pragmatic dependency" (Sanders 1988: 173) from the perspective of historical lexicography see Kastovsky (2000b: 121f.).

30. It has to be stressed that — were it not for certain systemic forces such as the above-mentioned opposing tendencies with regard to the productivity of unsuffixed action and agent nouns — agentive simplexes of the *cook*-type irrespective of their origin could indeed have 'caught on' and established a productive pattern. After all, the English lexicon contains also a number of inherited agents without formal marking such as *smith* (OE *smiþ*) and *thief* (OE *þēof*).

31. In general, nouns "involving fewer complexities in the cognitive system are also likely to be morphologically less complex than sophisticated ones" (Schmid 1999: 224). Compared with prototypical agent derivatives, attributives no doubt exhibit a much more complex conceptual structure. According to the above hypothesis this should actually result in a greater degree of formal complexity which these monemes, however, completely lack. For a first approach to this problem cf. Kornexl (1998: 64–70).

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A path to volitional modality[*]

Manfred Krug
University of Freiburg

1. Aims, methodology, previous research

This paper investigates from a construction grammar perspective the semantic and syntactic development of an English verb that has become more grammatical in the history of English. Construction grammar (cf. Fillmore 1985; Croft 2001; Traugott forthcoming) takes every construction to possess both form and (at least one) meaning. WANT, the verb under investigation, has undergone radical changes. I shall show, however, that the different stages it has gone through do not represent an arbitrary succession but that all of them can be motivated syntactically, semantically or pragmatically. I shall further show how constructional alternatives and changes bear on the text frequency of WANT. The present paper focuses in particular on the transitional period from Early Modern to Late Modern English, i.e. on the eighteenth century, which has been neglected in previous research, even though it is during this period that modal semantics (necessity, volition) and modal syntax (WANT + *to* infinitives) emerge.

A few definitional remarks seem necessary before embarking on the analysis proper. Bolinger (1980b: 297) once famously observed that "the moment a verb is given an infinitive complement, that verb starts down the road of auxiliariness". This statement encapsulates the crucial fact that 'auxiliarihood' and 'modalhood' are graded concepts — a view which was embraced already by Visser (1969: §1727) and which has become commonplace in more recent work (e.g. Bolinger 1980a; Quirk et al. 1985: 135–148; Palmer 1989: 4f.; Biber et al. 1999: 483; Krug 2000: *passim*). Depending on their terminological preferences, some researchers might thus prefer to call in particular certain early WANT constructions 'incipient' or 'emerging auxiliaries' (or 'modals'), 'auxiliary-like catenatives', 'quasi-modals' or 'semi-auxiliaries'. For simplicity and clarity, I shall call an occurrence of WANT a 'modal auxiliary use' in the remainder of this paper if it meets the following five criteria:

(1)   a.   WANT is a verb;
       b.   WANT governs a *to* infinitive;
       c.   WANT has modal semantics;
       d.   the grammatical Subjects of the WANT clause and the infinitival clause are coreferential;
       e.   the *to* infinitive is not the verb in a purposive clause.

Most of this definition is uncontroversial. Criteria (d) and (e) exclude structures like *Who do you want to win?* and *I want my glasses to read the paper*, respectively. As far as the third criterion is concerned, relevant in the present study are the domains of necessity, volition and obligation (see Palmer 1986: Chs. 2f.; 1989: *passim* for detailed discussion). The one potentially controversial criterion is perhaps the second. After all, on standard assumptions (e.g. Quirk et al. 1985: 137) it is precisely the absence of infinitival *to* that distinguishes the nine central modals (*can*, *may*, *must*, etc.) from more peripheral members of the modal category in English. While this is true synchronically, it impedes our understanding of the diachronic development of WANT. As is shown in Krug (2000: Ch. 5), verbs taking bare infinitives in English form a closed class. Unless there is early variation between *to* and bare infinitives (as for *help* or *dare*), the modern path to modal status is for verbs to take *to* infinitives. The infinitival marker may be obscured as in *wanna* or *gonna*, but typically at least traces of it are retained.

     This is not the first study to sketch the historical development of WANT. Bertschinger (1941) offers a detailed semantic study of the verbal uses; Krug (2000: Ch. 4) is a quantitative study of the entire lexeme and thus includes, for instance, nominal uses. The present investigation complements these studies in a number of ways. Its primary goal is to identify the focal senses of the verb in the history of English. It is thus akin, but not identical to Bertschinger's approach, who carves up the semantic space for WANT in ways that are not always easy to apply to actual data. I shall not, for instance, follow Bertschinger in distinguishing between 'desire' and 'will' readings (his use 'desire' is meant to refer to unattainable objects, whereas 'will' presupposes their attainability). The distinction I make is syntactic in nature and has no implications concerning the attainability of an object or action: 'desire' will be used for WANT + NP, while 'volition(al)' refers only to constructions with a following *to* infinitive. By the same token, 'need' refers to NP complements, whereas 'necessity' is reserved for infinitival complements alone.

     The historical data for the present investigation are drawn from two diachronic corpora (see the Appendix for further detail): the historical part of

the Helsinki Corpus (HC, Old English to Early Modern English texts) and the drama and fiction components of A Representative Corpus of Historical English Registers (ARCHER, 1650–1990). Furthermore, I checked the fictional components of the Lancaster-Oslo-Bergen Corpus (LOB, texts from 1961) and its modern Freiburg analogue, FLOB (texts from 1991). In addition, I consulted standard reference works on historical syntax (Visser 1963–1973; Mustanoja 1960), the *OED* (1989 edition on CD-ROM)[1] and a number of literary works (drama and prose). Why, one might ask, the focus on drama and fiction? If one wants to establish, as this paper does, the focal senses of a given construction, one has to determine 'focal in what variety', since language change proceeds at differential speeds in different registers (Biber 1998; Hundt & Mair 1999). Ideally, of course, we would like to know when a given change occurred in spoken English, of which we have unfortunately no historical records. It is desirable therefore to approximate as closely as possible the spoken facts. As Biber (1998) has shown, the historical registers that resemble spoken English most are drama and fiction.[2]

More specifically, my approach was as follows. For the Middle English period I analysed the historical component of the Helsinki Corpus, which yielded a clear picture as far as the dominant senses and construction types are concerned (there was essentially only one sense, *viz.* 'lack'). For the time since Early Modern English, my approach was two-fold. First, I compared the corpus examples in the fiction and drama components of ARCHER (c. 700,000 words) to the Helsinki Corpus (c. 550,000 words). Since, however, contextual information is less readily accessible in such balanced corpora consisting of relatively short text samples, I then analysed in more detail the following literary works (e-texts from Project Gutenberg):

a. William Shakespeare: *Complete Works* (c. 1600; c. 880,000 words);
b. Daniel Defoe: *The Life and Strange Surprising Adventures of Robinson Crusoe* and *The Farther Adventures of Robinson Crusoe* (1719; totalling c. 220,000 words; henceforth: *Robinson Crusoe I+II*);
c. Charles Dickens: *Oliver Twist* (1837/1838; c. 160,000 words);
d. Jerome K. Jerome: *Three Men in a Boat — To Say Nothing of the Dog!* (1889; c. 70,000 words).

For Present-day English, finally, I analysed the fictional components of LOB and FLOB (1961 and 1991; each containing approximately 250,000 words). Even though the use of individual literary works entails the disadvantage of not being representative, it was deemed necessary for the present study because

analysing decontextualized corpus examples from a historical period can prove difficult. Present-day intuitions may easily lead a researcher to read meanings into WANT examples that are not identical to those of the speaker/writer's mental lexicon. Once, however, we look at individual works in some detail, a host of examples enables the analyst better to identify with the historical conceptualizer, thus creating a certain awareness of the intuitions prevalent at the time of composition. Needless to say, the literary works must be known to the analyst. To give but one example, in Defoe's (1719) *Robinson Crusoe*, we find the following passage:

(2) ROBINSON MEETS NATIVES
I then made signs to them for some water, and held out one of my jars to them, turning it bottom upward, to show that it was empty, and that I wanted to have it filled.

On the face of it, this sentence presents no syntactic or semantic difficulty for the present-day reader. This might induce the analyst to interpret this instance of WANT against the backdrop of present-day intuitions as a straightforward case of volitional semantics, since this is today's default reading (Burchfield 1996:832). On second thoughts, however, this seems to be a less than ideal analysis for ROBINSON MEETS NATIVES. If we compare the bulk of verbal WANT examples in Defoe's two novels entitled *Robinson Crusoe*, we immediately realize that most examples are better paraphrased by 'need' and that this is probably also the foregrounded meaning in (2). And of course it is true that the protagonist not only wished to have water but that he actually needed water to survive.

2.   The history of WANT

As a reference point for the remainder of this paper, Figure 1 encapsulates the major results of the following discussion of the semantic and syntactic stages of WANT constructions. It goes without saying that such a chart is a simplification of the actual facts. First of all, more constructions have been recorded. For the verb alone, the *OED* (s.v. *want*) lists five main senses with as many as 28 subsenses and constructions, some of which were short-lived. I have focused on those that help us understand the overall development of verbal WANT, paying particular attention to modal constructions. This requires concentrating on constructions that became dominant at some point in time. In addition, I include constructions that reflect necessary intermediate steps, cognitively as

	Construction (sense)	Example(s)
I	impersonal (lack)	hym (obj) Experiencer (dat/obj)	wanted WANT	audience stimulus (subj)
II	transitive + NP (lack)	And alle-þogh þai (3PL sub)) in helle want light, Yhit sal þai of alle payns haf sight...
III	transitive + NP (need)	I wante monaye, *argent me fault* This room wants cleaning. You're exactly the one we wanted!
IV	AUX + to infinitive (necessity)	I then made signs to them for some water, and held out one of my jars to them, turning it bottom upward, to show that it was empty, and that I wanted to have it filled.
V	transitive + NP (desire)	She wants a red four-door convertible.
VI	AUX + to infinitive (volition)	I want to/wanna go to the cinema.
VII	AUX + to infinitive (obligation)	You want to turn left at the next corner. You want to/wanna be careful.

Timeline axis: 1200   1300   1400   1500   1600   1700   1800   1900   2000

Figure 1. The syntactic and semantic development of verbal WANT [*bold lines indicate dominant verbal usage at a given time].

well as diachronically, on the path to a new dominant construction.

Another potential issue with Figure 1 is — as with all such charts — that starting points and endpoints of the arrows representing the existence of certain constructions are notoriously debatable. It is clear, for instance, that as a new sense or construction enters the language, its use will be sporadic. Likewise it is trivially true that before a construction becomes obsolete, it necessarily becomes rarer and obsolescent, and may continue to be used in special registers or regional dialects (cf. fnn. 3 and 5).

Finally, when *exactly* a new sense becomes dominant in a given variety can sometimes not be pinpointed, in particular when constructions coexist whose senses are related or indeed overlapping. An allowance of 50 years should therefore always be made. An additional problem (what register to concentrate on) has been discussed in the introductory section of this paper.

2.1 Middle English and Early Modern English (1100–1700)

As is standard practice, Middle English is taken to end in 1500. With Barber (1997: 1) I take Early Modern English to be the period from 1500 to 1700. The somewhat disputed beginning of the Middle English period (figures vary from 1066 to 1150) is irrelevant in the present study since WANT entered the English language only at the turn of the twelfth century. It is most probably a loan from Old Norse, which had a verb *vanta* 'lack' that took two accusative arguments. Like its Scandinavian cognate, English WANT had 'lack' semantics.[3] The details for the early period are given in Bertschinger (1941: 6–20) and Krug (2000: 118–127). I shall therefore confine myself to a very brief sketch of the Middle English period. Below, two early attestations of WANT are given, both dating from about 1200. They are the oldest examples of verbal WANT in English that I have been able to trace (glosses and translations are my own).

(3)   HAPPY LIFE I
       (Middle English component of the Helsinki Corpus, SAWLES 174:6;
       c.1225, ?c.1200)
       ne   schal ham (DAT PL) *neauer wontin.*
       NEG shall them   never   lack
       "They shall never lack (anything)"

(4)   HAPPY LIFE II
       (Middle English component of the Helsinki Corpus, HALI 131:4M;
       c.1225, ?c.1200)
       for as seinte pawel seið. alle þing turneð þen gode. to gode.

> *ne   mei na þing* (SUBJ) *wonti þe* (OBL).
> NEG may no thing   want thee
> "You shall lack nothing"

Both constructions are impersonal and have a dative Experiencer (i.e. the one who lacks). Notice that (3) wants a Subject (also called Cause or Stimulus in impersonal constructions; here: the argument lacked). It is only such subjectless constructions that are covered by narrow definitions of 'impersonal verb' such as that given by Denison (1993), which encapsulates Fischer & van der Leek's (1983) position:

> An impersonal construction is a subjectless construction in which the verb has 3SG form and there is no nominative NP controlling verb concord; an impersonal verb is a verb which can, but need not always, occur in an impersonal construction (1993:62).

Others (such as Jespersen 1927 or Allen 1986) have adopted a wider definition to include all non-personal uses (see also López-Couso & Méndez-Naya 1997 on terminological issues):

(5) KINGLY TASTE
     þam   kynge (DAT) *licodon* (PL) *peran* (NOM)
     to the king   liked   pears
     "The king liked pears"

Unlike (3) — but like (5) — the sentence in (4) has a Subject even though it is only a (grammaticalizing) pronoun 'nothing', rather than a full NP.[4] Impersonal constructions of both types (3) and (4) represent the first dominant use of the verb. They decrease in frequency in the second half of the Middle English period and become obsolete round about 1500. Personal, transitive WANT (still meaning 'lack') followed by an NP, is historically the next dominant use (see Krug 2000:Ch. 4 for the details of the development). According to Mustanoja (1960:435, quoting van der Gaaf 1904), it is first attested in c.1350. It must have spread rapidly because by about 1400, transitive WANT is the most common use. An early example is given below.

(6) (Middle English component of the Helsinki Corpus, PRICK 253:15, 1425; a.1400)
     And alle-þogh *þai* (3PL, SUBJ) in helle *want light*, / Yhit sal þai of alle payns haf sight,
     "And although they lack light in hell, yet they shall see all pains,"

The meaning 'lack' fell into disuse by roughly 1900 (the last *OED* citation is from 1876; later ones are from highly specialized registers, e.g. palaeography).[5] Nevertheless, the *syntactic* construction itself has arguably continued to be the most frequent one to the present day, that is, if one considers noun phrase complements and infinitival complements as functionally equivalent, as is indicated by the following bracketing:

(7)   I want [light]

(8)   I want [to go]

One can, however, consider the later extension from nominal NP Objects to infinitival complements a radical syntactic step, which I do (see next section). If one did not, one would subscribe to the position that subsequent changes are solely pragmatic or semantic in nature.

Towards the end of the Middle English period, a meaning extension from 'lack' to 'need' is observable. The new sense, however, comes to be the dominant one only 200 years later, i.e. in the middle of the seventeenth century. An early example is:

(9)   MONEY WANTED
I wante monaye, *argent me fault.* (1530, Palsgr. 771/1, quoted from *OED* s.v. *want* v. 4.a)

As is strongly suggested by the French gloss, example (9) is a case of 'need' semantics. This sense has survived to the present day, even though as the sole meaning it is rare now. Consider two Present-day English examples, which have both a 'desire' and a 'need' reading:

(10)   JOB INTERVIEW
She's exactly the one we wanted!

(11)   OUTPERFORMING ONE'S OPPONENT
This was exactly what Angel One wanted. For his plan to succeed, he needed to create over-confidence in his opponent. (BNC HJD 2598)

As is stated in Burchfield (1996: 832) and as is borne out by the present investigation, too, the focal sense in the late twentieth century is volitional. By contrast, (exclusive) 'need' readings are now largely confined to constructions in which WANT takes a gerundial Object:

(12)   DIRTY CARPET
The mess on that carpet wants cleaning. Go and get some water, go and get the cloth quickly. (BNC KR0 2388)

Let us summarize the situation in Early Modern English. Almost until the end of the period, the dominant use of verbal WANT is still 'lack' as in (13). Throughout the period, however, one can in many cases argue for at least a backgrounded 'need' reading, as in (14). As was mentioned earlier on, WANT in Early Modern English occurs exclusively in personal constructions, typically taking a nominal Object. Infinitives are not yet among the complements of WANT. There are, however, some instances that can be argued to be precursors of the modal construction. These are transitive verbs that are followed by purposive *to* clauses, e.g.:

(13)   SPEECHLESS
but Sir William, thinking *the foole wanted wit to tell his griefe* (though not wit to play the thiefe) had the barber depart, asking Jacke what he would eate? he sayd, nothing. What he would drinke? he sayd, nothing; which made Sir William doubt much of his health, (HC, FICT2A 13:16; 1608)

(14)   POVERTY
So everything stands still for money, while *we want money to pay for some of the most necessary things* that we promised ready money for in the heighth of our wants — (HC, DIAR3A VIII, 315:7; 1666)

While the 'lack' example (13) is still a far cry from the modal construction, (14) reveals a possible path to modalhood. On the semantic side, the modal notion of 'need' is an equally plausible analysis as nonmodal 'lack'. One can even argue that in (14) faint traces of 'desire' are foreshadowed (which comes to be the dominant meaning more than a century later): the Subject argument — the one who needs the money — probably also wishes to pay for his debts. Syntactically, too, this is a highly interesting construction. The underlying agent of the infinitival *to* clause is also the speaker (and his wife), irrespective of whether the meaning is 'lack', 'need' or 'desire'. This entails that, in addition to the following *to* infinitive, another criterion of modalhood mentioned above is met, *viz.* subject identity of main and *to* clause.

To summarize, in Early Modern English the typical meaning is still either the original (Old Norse) 'lack' or the newly developed 'need' (first attested according to the *OED* in 1470). In the second half of the seventeenth century, the two meanings enjoy similar frequencies. The analysis of ARCHER data from 1650–1699 splits the uses into three equal parts: one third has 'lack' semantics,

another third 'need' semantics and the last third is ambiguous between the two senses. Thus, at the very end of the period, in 1700, the two meanings of the verb are still competing, with 'need' just having taken over the dominant position from 'lack'. Obviously these two senses are very closely related. The extension from the older to the newer sense, therefore, is not entirely arbitrary (see Section 3 below on the motivations). They are contiguous, indeed overlapping senses. It is not surprising, then, that a full third of the verbal uses in ARCHER drama and fiction from the period 1650–1699 are ambiguous. Witness, for instance:

> (15) PROPOSAL: WIFE AND HUSBAND WANTED
>   Thus 'tis (Sir) in short: your Daughter (do ye conceive me) *wants* a Husband; and I *want* a Wife (do ye conceive me;) Now what are we born for in this world, but to supply one another's wants? (1671, ARCHER Caryll.D1)

> (16) PRAISE OF A YOUNG LADY
>   She is one, who has received no improvement from Education; Nor does she *want* it: For, Nature has left her so well finished, that Art has little to do. (1671, ARCHER Caryll.D1)

While the semantics of WANT in WIFE AND HUSBAND WANTED leans perhaps more towards 'need', it certainly possesses traces of 'lack' and 'desire'. In PRAISE OF A YOUNG LADY, however, no decision in favour of 'lack' or 'need' is possible, one reason being that the latter sense entails the former. Grice has noted that "it may not be impossible for what starts life, so to speak, as a conversational implicature to become conventionalized" (1989:39). Given the observed semantic contiguity, it is highly plausible to assume that the change from 'lack' to 'need' is motivated by the conventionalization of the following implicature:

> (17) +> If somebody lacks something, he or she will usually also need it (otherwise stating the lack would be unnecessary or odd).[6]

2.2 From Late Modern English to Present-day English (1700–2000)

2.2.1   *The rise of the modal auxiliary construction WANT + VP*

The end of the Early Modern English period marks a convenient section boundary for the present study since it is roughly in 1700 that as many as three new syntactic constructions (and one new meaning) enter the language and that the 'need' sense properly takes over the pole position. More important still for the rise of volitional modality, two of these new constructions are auxiliary uses

in which WANT is followed by a *to* infinitive. In other words, the crucial period for the emergence of modal WANT constructions is the transition from the Early Modern to the Late Modern period, both from a syntactic point of view and also semantically, because with the dominance of 'need' semantics, WANT is now firmly situated within notional modality. In order to work out the details of the change, we need to consider some textual evidence from the transitional period.

Previous accounts have left the intricacies of the extension from nominal to verbal complements largely unexplained. In order to understand better the mechanisms that have led to the development of the modal construction, we will look at some constructions which are akin to modalhood, be it from a syntactic or semantic point of view. A text which proved instructive in spotting the types of changes that have affected WANT + *to* infinitive is Defoe's *Robinson Crusoe* from 1719, i.e. the beginning of the Late Modern period (the examples in the remainder of this section are all taken from the e-texts of the two volumes).[7] The most frequent meaning of verbal WANT in this work is 'need', but many times it is the older 'lack', and rather often a backgrounded 'desire' reading is possible. With so many relatively frequent coexisting senses, it comes as no surprise that sometimes the meaning of WANT is indeterminate, in particular between the two senses 'lack' and 'need', which are doubly motivated by entailment and, conversely, by invited inferences (see the discussion of (16) above). Compare:

(18) TOOLS WANTED I
      When it [the corn] was growing, and grown, I have observed already
      how many things I *wanted* to fence it, secure it, mow or reap it, cure and
      carry it home, thrash, part it from the chaff, and save it.

The text goes on as follows:

(19) TOOLS WANTED II
      Then I *wanted a mill to grind it, sieves to dress it*, yeast and salt to make it
      into bread, and *an oven to bake it; but all these things I did without*, as
      shall be observed; and yet the corn was an inestimable comfort and
      advantage to me too.

These examples have an interesting syntactic structure which may provide important clues for identifying the extension of WANT to infinitival comple-ments. As in (13) and (14), we have to do with purposive ('in order to') constructions following WANT + NP. In (18), WANT and TO are even contigu-ous, which is the typical word order in modal constructions. And, as in (14), the

Subjects in the main and the subordinate clause are coreferential. It seems very likely, then, that such structures have facilitated the extension from nominal to infinitival complements, that is, proper auxiliary constructions that meet all criteria laid out in (1). In fact, subject identity is also in evidence for (19), even though some analysts might consider it to be a case of [WANT sth./sb. to do sth.], since it is the mill which grinds the corn, etc. However, an underlying human agent is present, too, namely the operator of the devices (*mill*, *sieves*, *oven*). In addition, there is an interesting *semantic* facet to be found in (18) and (19), which points to the semantic development of volitional modality: when the speaker/writer says: "I wanted many things", he 'lacked and needed' them, as the highlighted passage *but all these things I did without* proves. Crucially, however, an inference to 'volition' is possible. Robinson Crusoe, the Subject, also actually desired to fence the crop, etc. Given the currency of such constructions in the early eighteenth century, transitive verbs that are followed by purposive *to* clauses whose Subjects are identical to that of the superordinate clause are a likely factor in the development and propagation of modal WANT constructions.

Purposive clauses apart, there is an alternative or, rather, additional path to the extension from nominal to infinitival complements: by co-ordination of NP and VP. Example (20) is a case in point:

(20) CONVERSATION BETWEEN CRUSOE AND PRIEST ABOUT ATKINS
      "Oh", said the priest, "tell him there is one thing will make him the best minister in the world to his wife, and that is repentance; for none teach repentance like true penitents. *He wants nothing but to repent*, and then he will be so much the better qualified to instruct his wife;"

In this example, the meaning of WANT is 'need'. Syntactically, we observe the co-ordination of a noun phrase complement (pronoun *nothing*), representing the older construction, with a *to* infinitive. This might reflect the actual historical path of development: extension through co-ordinating, thus equating syntactically the infinitive with a noun phrase. On this analysis, the noun phrase and the action expressed by the infinitive are both perceived as needed or desired entities. There is, however, an interesting alternative syntactic analysis of (20). Obviously the pronoun *nothing* is not a prototypical NP. It has less nominal force, in particular when immediately followed by *but*. If one analyses the sequence *nothing but* as a complex adverb (it can be paraphrased by 'only' or 'exclusively'), then this would seem to pave the way smoothly for infinitival complements.

Early examples of auxiliary-like uses of a verb are often debated. The following example is instructive in this respect because it has been classified in different ways in the literature:

(21) EDUCATION WANTED
Madam: Inteed Matam, to say de trute, he wanted leetel good breeding.
Lady Fan: Good breeding! He *wants to* be caned, Madamoiselle. An insolent fellow! (1697 Vanbrugh *Provoked Wife* II, ii, quoted from *OED* s.v. *want* v. 4.b and Visser 1969:§1727)

The *OED* interprets the highlighted *wants* as 'needs'. Visser, by contrast, paraphrases it as 'ought to', classifying it along with his type *You want to mind your step*:

> Since in expressions like 'you want to be careful', 'you want to watch your step' *want to* semantically and structurally approximates *ought to*, **it has the status of an auxiliary. It frequently occurs in colloquial English.** Although in modern grammars it is treated as a rather recent innovation, the 1697 quotation (…) [(21) above] shows that it was not unknown in the beginning of the seventeenth century. (It was apparently banned from the written language until the twentieth century.) Whether the 1690 quotation from Dryden [*viz.* "they were pedants; and for a just reward of their pedantic pains, all their translations *want to be translated* into English."] belongs here is rather doubtful.
> (Visser 1969:§1727, emphasis added)

While I agree with Visser that such constructions enjoy auxiliary status — and even though Visser's 'ought to' is a perfectly acceptable gloss — I believe that the *OED* paraphrase 'need' for (21) is superior to classifying it with the type *You want to mind your step*, which is attested with a second person Subject for the first time as late as 1913 (see (23) below).[8] What Visser fails to realize is that all the examples he quotes as belonging to this type can be classified as commands or, according to more recent taxonomies (e.g. Huddleston 1984:351 and Quirk et al. 1985:804, who follow essentially Searle 1976) as directives — except for the rejected Dryden example from 1690 and example (21) from 1697. These two are therefore likely to belong to a different type. Furthermore, of the remaining 22 relevant examples quoted by Visser, 21 have second person Subjects, giving: *You (don't) want to* + VP. The one exception is a third person directive:

(22) APPOINTMENT
How does he know he'll see me in the morning? He doesn't want to be so jolly sure about it. (1930, Priestley *Angel Pavement*, 383)

This shows that, except for the Dryden quotation, all examples invoked by Visser have animate, human Subjects. There are, then, both structural, pragmatic and semantic reasons to assume that, *pace* Visser (1969:§1727), the obligation sense (or more narrowly, the use in directives, i.e. his type *You want to mind your step*) was probably indeed an innovation from the early twentieth century and not "banned from the written language" for two centuries. Witness the earliest obligation example quoted in Visser (1969:§1727):

(23) "You want to bring an old coat and leave it here." (…)"now look here. You want to copy these letters in here." (1913, D. H. Lawrence *Sons & Lovers*, 130)

It makes therefore sense to distinguish the older necessity reading (stage IV in Figure 1, which arises around 1700) from the later use of WANT in directives. The fact that directives are first recorded in dialectal usage (see *English Dialect Dictionary* 1961 [1905] or references in Kirchner 1940) and in Visser's time are considered "frequent in colloquial English" (*ibid.*) — a statement which is less true at the turn of the millennium, though (see the quotations in Krug 2000:147f.) — strongly suggests that it is a change from below, in Labovian terms (e.g. Labov 1994:78; 2001:76f., 196f., 517f.). And even today this usage is not fully established in the written mode. Nor has it become the dominant usage of verbal WANT.[9]

The only way to save Visser's analysis would be to assume one super-category of 'necessity' (see Palmer 1989:31f. on the different types of this concept) which has a subcategory for all obligation readings (including the debated example (21)), which in its turn contains the subset of all directives.[10] This can be depicted schematically as follows:

(24)   NECESSITY ⊃ OBLIGATION ⊃ DIRECTIVES

        2nd person
        (largest group)

        other persons
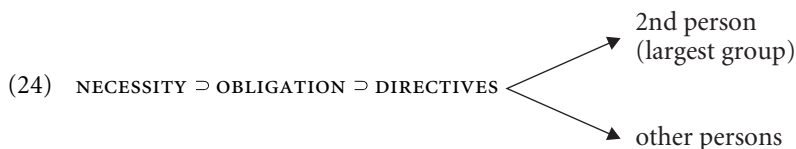
Let us now turn to the rise of 'desire' and 'volition' at the beginning of Early Modern English.[11] It will be remembered that this study distinguishes between the two notions on syntactic grounds as follows: 'desire' is used for WANT taking nominal complements, whereas 'volition' is reserved for the modal construction, i.e. desiderative WANT with infinitival *to* complements. The earliest relevant attestation in the *OED* is a modal construction from 1706:

(25) HURRY
      All such as *want to* ride in Post-haste from one World to the other.
      (1706, E. Ward *Wooden World Diss.*)

Another clear example of early volitional modality can be found in ARCHER:

(26) DANGEROUS LOVER
      He caused the Words to be set to Notes, and then sung them himself in
      all Companies where he came: His flatterers, who were numerous, and
      did not now *want to* learn his weak Side, gave him the Title of the dan-
      gerous Swain, which he prided himself in; till his Mistress grew down
      right uneasy, and would have him visit Rivella no longer. (1714, AR-
      CHER MANL.FC2)

While (26) is a clear case of volitional modality, examples (27) and (28) from
Robinson Crusoe demonstrate the possibility of semantic overlap between
'necessity' and 'volition'. They show how difficult it can be to disambiguate
between these senses.

(27) BIGGER BARNS WANTED
      And now, indeed, my stock of corn increasing, I really *wanted to* build
      my barns bigger; I wanted a place to lay it up in, for the increase of the
      corn now yielded me so much, that I had of the barley about twenty
      bushels, and of the rice as much or more;

(28) OVEN WANTED
      But for an oven I was indeed in great pain. At length I found out an
      experiment for that also, which was this: I made some earthen-vessels
      very broad but not deep, that is to say, about two feet diameter, and not
      above nine inches deep. These I burned in the fire, as I had done the
      other, and laid them by; and when I *wanted to bake*, I made a great fire
      upon my hearth, which I had paved with some square tiles of my own
      baking and burning also; but I should not call them square.

In (27), the protagonist both needs and wishes to build his barns bigger. The
meaning is therefore indeterminate. Example (28) is even more interesting
because here the hero does not only need and wish to bake; the context betrays
that he actually will bake later on. In other words, we can even see shades of
'intention' in that example.

   If one focuses on infinitival complements, it transpires that WANT TO has
typically expressed 'volition' since the nineteenth century, even though in
Dickens' *Oliver Twist* (from 1837) the verb is still often ambiguous between

'volition' and 'necessity'. More generally, it is in the late nineteenth century (e.g. Jerome's *Three Men in a Boat* from 1889) that the wishing branch becomes clearly the dominant use. This situation has not changed to the present day. But while in the nineteenth and early twentieth century NP complements (i.e. 'desire' readings) constitute the dominant WANT construction, in the second half of the twentieth century it is volitional modality (i.e. infinitival *to* complements) which accounts for the majority of verbal uses at large. This is evidenced by the figures from LOB and FLOB and the British National Corpus (cf. also Figure 3 below).[12]

Table 1. Text frequency of WANT (TO) in journalistic and fictional British writing (LOB, FLOB) and the British National Corpus

	LOB press 1961	FLOB press 1991	LOB fiction 1961	FLOB fiction 1991	Spoken BNC	Written BNC
All forms of WANT	95	129	365	389	26,289	68,622
[incidence per 10,000w]	[5.4]	[7.3]	[14.4]	[15.4]	[26.3]	[7.6]
Modal WANT TO	49	68	192	207	13,182	38,420
[incidence per 10,000w]	[2.8]	[3.9]	[7.6]	[8.2]	[13.2]	[4.3]
Modal WANT TO as % of all WANT	51.6%	52.7%	52.6%	53.2%	50.1%	56.0%

3.   Motivations

In order to consider potential motivations for the observed changes, let us summarize the history of verbal WANT. The progression of the dominant meanings is as follows:

(29)   (i) LACK (1200) > (ii) NEED (1700) > (iii) DESIRE (1800) > (iv) VOLITION (1950)

The motivations for the semantic changes from one stage to the next are not difficult to identify. All dominant meanings that are diachronically adjacent are highly related and can be motivated in the following fashion by the gradual conventionalization of inferences:[13]

a.   What is lacked by somebody will often be needed by him or her (otherwise stating the 'lack' would not be noteworthy).

b.   When somebody needs something, he or she will also desire it.

c. If nominal Objects (typically physical objects) can be desired, so too can actions and states of affairs.

The progression of dominant meanings in (29) is interesting on a more global level, since it ties in neatly with grammaticalization theory. Intriguingly but not unexpectedly, the dominant meanings become increasingly abstract in the history of the language. Much of this path can be subsumed under a specific type of pragmatic inference, 'subjectification' (as conceptualized by Traugott), which tends to be strengthened as grammaticalization proceeds. Witness Traugott's Subjectification Tendency III (1989:35):

Meanings tend to become increasingly based in the speaker's subjective belief /state/attitude toward the proposition.

For illustration, imagine the following scenario in which an ethnologist observer takes the following notes (cf. Quine 1960: Chs. 1–3):

(30) ANTHROPOLOGIST MEETS UNSOCKED NATIVES
    (i)   The natives lack socks.
    (ii)   The natives need socks.
    (iii)   The natives desire socks.
    (iv)   The natives desire to put on socks.

Other things being equal, i.e. without differing utterances or gestures from the subjects, the ethnologist has to draw ever more inferences for noting (ii) to (iv).[14] Only (i) is the statement of a relatively uncontroversial fact since LACK is typically an objectively testable concept: the object lacked (if physical) is absent from the subject. NEED, by contrast, is already grounded in the ethnologist's cognition since it is her who draws the inference from LACK to NEED, perhaps on the basis of outer circumstances such as cold temperature. In (iii) the ethnologist would need to have access to the subjects' cognition since it is only they themselves who can positively assert whether or not they desire something. Volition, that is the desire for an unfulfilled action as in (iv), finally, is next to impossible to observe since it is even more abstract than the desire for physical objects. In other words, historically the dominant meanings of WANT have become increasingly inferential and abstract, and thus more grammatical.[15]

4.   Verbal and auxiliary WANT: Senses and increase in discourse frequency

This section gives a frequency sketch of the rise of WANT and its modal auxiliary uses. Figure 2 depicts the text frequencies for the entire lexeme and the modal construction, where the former includes all word forms of WANT, i.e. *want, wants, wanted* and *wanting*, while the latter includes *want to, wants to, wanted to,* verbal *wanting to* and *wanna.*

The graphs for both the lexeme and modal WANT TO have roughly the shape of S-curves. Both reach their saturation stage at the turn of the nineteenth century. It is worth noting that the graph for the modal uses is a more perfect S-curve than that for the entire lexeme. In fact, the latter approximates the S-curve pattern only because it includes the modal uses. As is obvious from the graph for the nonmodal uses, the incidence of lexical uses is more erratic, as it
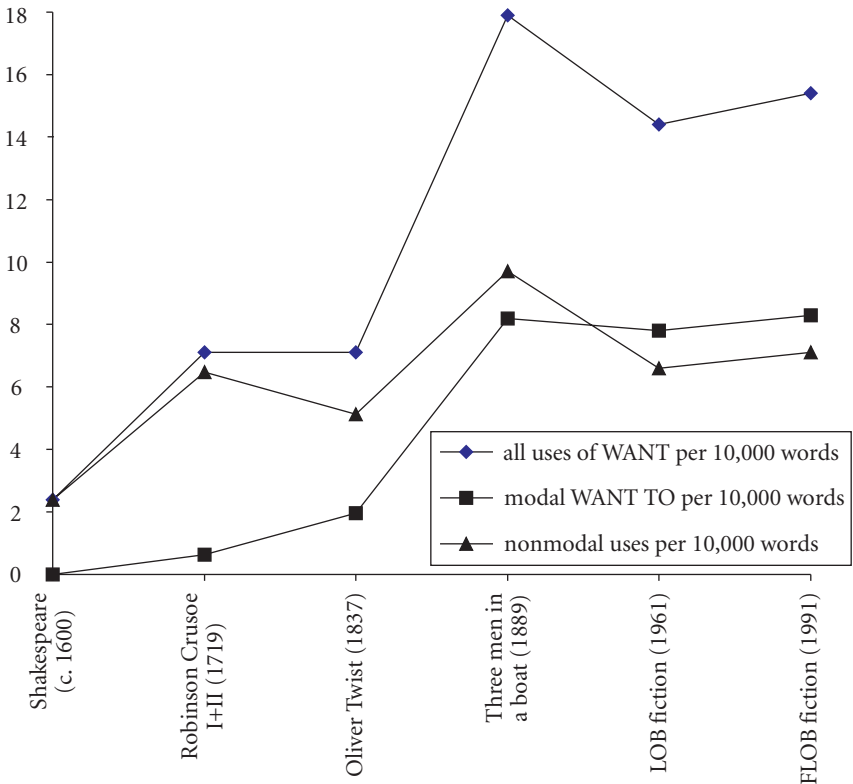
Figure 2. The rise of WANT and WANT TO.

were, than the incidence of the auxiliary, i.e. grammatical, construction. It is an important finding of recent work in cognitive linguistics that regularity can often be observed when grammatical items undergo semantic change.[16] If we can generalize from the present findings, then grammatical change is also more regular in terms of frequency gains. Thus, grammatical change would seem to be easier to model quantitatively than lexical change. If this is correct, then linguists can formulate more confidently and more accurately likely scenarios of a quantitative development in the middle of an ongoing grammatical change. This would represent a modest step towards predicting linguistic change, which has generally been considered an unattainable task.

Let us, however, return to the level of linguistic description. The steepest increase in the use of the lexeme and the modal construction occurs in the nineteenth century, as the wishing branch becomes dominant. This is true both in absolute terms (see Figure 2) and in relative terms (Figure 3). For the modal construction, this is the time when two auxiliary constructions (necessity and volition) exist side by side, with volition on the increase. Measured proportionately against the entire lexeme, necessity never reached as high a share as volition (cf. Figures 1 and 3), perhaps due to the competing lexeme NEED (TO). Even the lexical 'need' sense (+ NP) of WANT was relatively short-lived as the sole dominant use. The modal necessity construction in fact never came to occupy the position of the dominant verbal meaning.[17]

A look at Figures 2 and 3 further reveals that the rise in discourse frequency goes hand in hand with functional streamlining. The more frequent the lexeme WANT becomes, the higher becomes the share of the modal construction: from 0% in 1600 to nearly two-thirds in Present-day English, with the steepest increase in the nineteenth century. The increase in the nineteenth century is in fact even more drastic than the graph in Figure 3 suggests, because the two works listed for that century are only separated by a time span of some fifty years as against 70 to 120 years between the remaining points adjacent on the abscissa. In relative terms (Figure 3), the saturation stage seems to have been reached only in the middle of the twentieth century, i.e. 50 years later than in absolute terms (Figure 2).

It turns out, therefore, that the beginning of the Late Modern period (i.e. the early eighteenth century) is the most interesting period on syntactic and semantic grounds since it saw the rise of three new constructions, two of which were modal. It is the second half of this period, however, that is most interesting on frequency grounds, since it is during the nineteenth century that the rapid spread of the modal constructions occurred.
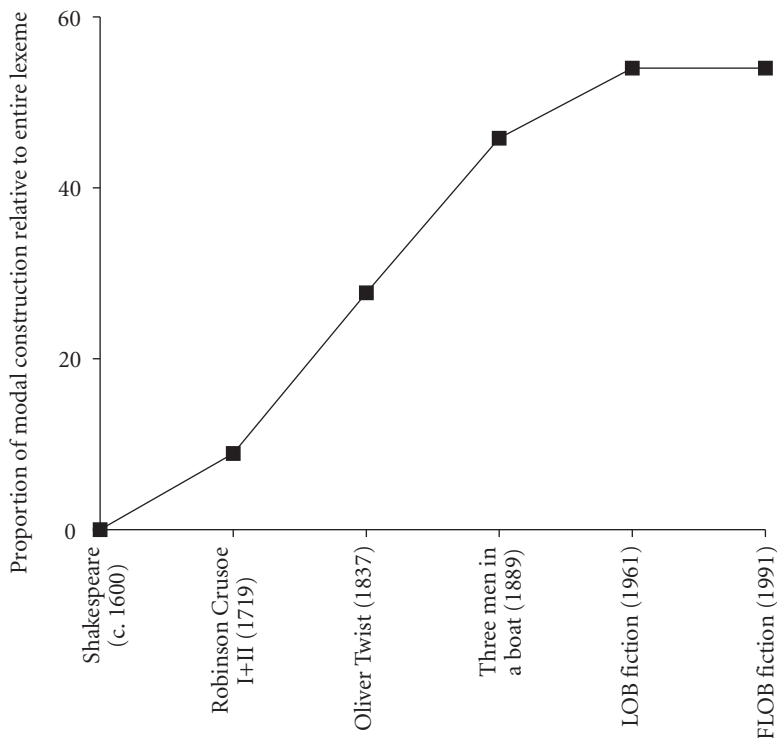
Figure 3. Modal uses of WANT (TO) as proportions of all uses of the lexeme WANT.

5.   Concluding remarks

It was seen that syntactic and semantic ambiguity are two prime factors in the developments of verbal WANT. It was in particular pragmatic inferencing that triggered such ambiguity and thus propagated the changes from one dominant construction to another. The present study, then, lends full support to the hypothesis that change typically arises in environments where structures can be interpreted in novel ways, as has been stated by, for instance, Aitchison (2001:Ch. 7) or Harris & Campbell (1995:Ch. 4). But while these works refer to syntactic change, I hope to have shown that syntax and semantics are closely intertwined in the development of the verbal constructions of WANT.

In the early twentieth century, Jespersen remarked that much language change seems to be "nothing but a purposeless fluttering hither and thither" (1941:9). At the beginning of the twenty-first century, we need no longer be that pessimistic, at least not as far as grammatical and grammaticalizing items

are concerned. Sweetser therefore rightly assumes regularity for sense developments in modal constructions:

> Words do not randomly acquire new senses, then. And since new senses are acquired by cognitive structuring, the multiple synchronic senses of a given word will normally be related to each other in a motivated fashion. (1990: 9)

The present investigation strongly supports the existence of such motivated links between synchronic polysemy and historical change. More specifically, it suggests that it is chiefly pragmatic inferences, i.e. context-driven metonymic processes, that have led to the observed changes of WANT.

Appendix: Literary works and corpora consulted

A Representative Corpus of Historical English Registers (ARCHER, texts from 1650–1990, totalling 1.7m words; see Biber et al. 1994 for details).

The British National Corpus (BNC, current British English, totalling some 100m words; see Aston & Burnard 1998 for details).

Diachronic Part of the Helsinki Corpus of English Texts (HC, Old English to Early Modern English texts, totalling 1.6m words; see Kytö 1991 for details).

Freiburg Version of the Lancaster-Oslo-Bergen Corpus (FLOB, texts from 1991, totalling 1m words; see Hundt et al. 1998 for details).

Lancaster-Oslo-Bergen Corpus (LOB, texts from 1961, totalling 1m words; see Johansson et al. 1978 for details).

E-texts from Project Gutenberg (available at http://promo.net/pg):

Defoe, Daniel. *The Life and Strange Surprising Adventures of Robinson Crusoe* and *The Farther Adventures of Robinson Crusoe* (1719; totalling c. 220,000 words).

Dickens, Charles. *Oliver Twist* (1837/1838; c. 160,000 words).

Jerome, Jerome K. *Three Men in a Boat — To Say Nothing of the Dog!* (1889; c. 70,000 words).

Shakespeare, William. *Complete Works* (c. 1600; c. 880,000 words).

Notes

1. While work on the third edition (partly available on-line) is in progress, the entry for WANT is not yet revised.

2. Due to the scarcity of examples, especially for Middle English, the entire Helsinki Corpus was chosen without genre discrimination.

3. This sense has survived to the present day, even though it is now rare and largely confined to nominal and adjectival uses (e.g. in the complex preposition *for want of* and *be wanting*; cf. also fn. 5).

4. See Kahlas-Tarkka (1997) on the pronominalization of *thing*.

5. As always, exact datings for the obsolescence of a meaning must be taken with a grain of salt, since meanings — and syntactic constructions too — can linger on in non-mainstream varieties (e.g. jargon, dialects, etc.). It seems uncontroversial, for instance, that a sentence like *This construction wants* ('lacks') *a Subject* represents rather marked present-day usage.

6. For instance, if the grammatical Object were something undesirable, the speaker would not normally comment on the lack. Hence the anomaly of a statement like [??]*Our village lacks cholera.*

7. Most readers will be familiar with the book. For those who are not: for the most part, the setting is a lonely island and there are hardly any interlocutors. This facilitates discussing meanings on the basis of relatively short text excerpts. Negotiation of meaning between hearer and speaker is largely irrelevant for this book.

8. Leaving aside the early date and the different person of the Subject, one might add that Söderlind (1951, 1958) shares the present view. He too (1951:192; 1958:19, 23) notes that the verb WANT in Dryden always means either 'lack' or 'need', that is, never 'desire' or 'ought to'.

9. Notice, however, that directives are far less common in written language than in face-to-face interaction.

10. Palmer's (1989:123) classification of 'necessity' is akin to the one presented here.

11. It was seen in the previous section (cf. the discussion of (14)) that occasionally backgrounded 'desire' readings can be found in the seventeenth century, too.

12. The criteria laid down in (1) are applied to the searches for Table 1. In addition, the search was restricted to contiguous WANT TO. This is to say that only immediately adjacent forms of WANT and TO were included in the count. This covers the overwhelming majority of modal uses (notice that *I want him to leave* is not modal) even though, theoretically at least, such a search excludes examples like *He wants really to read*. But since, first, adverb interpolation between the verb and *to* is highly dispreferred (Krug 2000:139) and, second, the same procedure is applied to all corpora, the figures are reliable for the comparison at hand.

13. On the gradual vs. leap (i.e. inference or metonymy vs. metaphor) issue in semantic change see Sweetser (1990); Heine et al. (1991:Ch.3); Heine (1993:2f.); Hopper & Traugott (1993:Ch.4); Bybee et al. (1994); Traugott (1996). More recent work such as Bybee et al. (1994:Chs. 1, 8) or Traugott (1996) tends to acknowledge that both processes are fundamental mechanisms in semantic change and grammaticalization, but favours more strongly inference-driven accounts, which would be consistent with the present findings.

14. In fact, statements (ii) to (iv) are increasingly ethnomethodologically unsound.

15. In addition, it is patent that the final dominant construction, which involves the concatenation of two verb phrases as in *want to see*, is more grammaticalized from a syntactic point of view than a transitive verb.

16. Relevant examples include the change from deontic to epistemic meanings, which is a recurrent development found with — though by no means restricted to — modal verbs (see e.g. Sweetser 1990; Heine et al. 1991; Bybee et al. 1994; Traugott 1996).

17. It is worth noting that for those periods that are investigated in the present study and in Krug (2000: Ch. 4, which is based on ARCHER material), the results are remarkably congruent. The observable differences are probably largely due to the fact that the individual works looked at here are synchronic slices of the language, while ARCHER periods cover works from 50-year periods.

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Is it, stylewise or otherwise, wise to use -*wise*?

Domain adverbials and the history of English -*wise*[*]

Ursula Lenker
University of Munich

1. Introduction

Considering that very few languages of the world exhibit a special morphological device for sentence adverbials (Ramat & Ricca 1998: 203), it is remarkable that English has recently developed a suffix for that matter, namely the suffix -*wise* with the meaning 'as regards, in respect of' or 'as far as [the base] is concerned'.[1]

(1) "We are both saving some money", she says, "though there is no hope at the moment of being able to rent or buy. Nothing is certain. *Jobwise*, I don't know where I will be in a year's time."
(*The Independent*, May 9, 1993)

(2) They begin (…) by disputing the idea that their fans are bashful under-achievers who spend their lives on the net (…). "It's too easy to put a label on us. We get all sorts, *agewise* and *professionwise*. I see quite good-looking people who've got girlfriends", maintains Colburn. "I don't look out and see a bunch of geeky, speccy shy people."
(*The Guardian*, July 16, 1999)

According to Houghton (1968) and, independently, the *OED*, these denominal adverbs in -*wise* first appear in "colloquial American English" in the 1940s (*OED* s.v. *wise* n.[1], 3.ii; see below (33)). As early as the 1950s and 1960s, however, sentence adverbials in -*wise* gain a much wider currency and even become fashionable.

> The evidence presented here suggests that the new sense of -*wise* has in a short time made considerable progress toward establishing itself as a generally accepted part of the language. (…) No one knows, of course, whether it will become more widely used and accepted in the future or whether it is, as some believe, a fad that will soon run its course and pass away. (Houghton 1968: 213)

At that time, not only some linguists and style critics considered sentence adverbials in -*wise* a "gimmick" or "fad" and, accordingly, users of -*wise* were often harshly criticized for being "trendy" speakers who are "insensitive to language" (cf. Houghton 1968: 214). Some style critics even wanted to "outlaw it from decent American usage" (Follett 1966: 361).

Yet in spite of the criticism and stylistic warnings of prescriptivists, sentence adverbials in -*wise* have become an increasingly accepted part of the English language. In 1985, Quirk et al. (p. 568) establish them as markers of "viewpoint subjuncts", though they still regard them as "more freely productive in AmE than in BrE" and assert that their use is considered "informal" and that "many people object to these formations" (1985: 568, 1557).

British *Good Style Guides* of the 1990s do not recommend the use of -*wise* for more formal styles, but they do not really object to it either.

> The habit began in America and continues to be commoner in AmE than in other forms of English. Fastidious speakers treat it with mild disdain, or with a shrug of the shoulders as if to say that its use in this way is inevitable, painful or too clever by half though it is. (Burchfield 1996: 852)

> Admittedly, -*wise* is overused trendy jargon, but that doesn't mean it is not useful sometimes: *careerwise* is much quicker than 'in relation to my career', *moneywise* more direct than 'as far as money is concerned' (…) If you use -*wise* carelessly it becomes a trendy linguistic gimmick, but occasionally -*wise* added to a word can say something quickly and effectively, as long as you remember it will make some people wince. New -*wise* words are probably not acceptable yet in serious writing. (Howard 1993: 411)

By stressing that the adverbials in -*wise* are "inevitable" (Burchfield), "useful", "quicker" or "effective" (Howard), these authors now emphasize the functional values of -*wise* as a morphological marker of sentence adverbials.

This paper also adopts a basically functional approach: after an examination of the distribution and productivity of sentence adverbial -*wise* in today's Englishes (cf. 2), the paper concentrates on the syntactic and functional properties of these new coinages in Present-day English (cf. 3). It then traces the history of today's nominal and adverbial functions from *wise*'s original use as an

independent noun (cf. 4) and compares this development to the related German forms *Weise* and the suffix *-(er)weise* (cf. 6). Since these diachronic and contrastive analyses show that the new sentence adverbial function of English *-wise* has to be kept apart from its older meanings, its emergence and diffusion is compared to the fairly new sentence adverbials in German *-mäßig* (cf. 7) and to English adverbs in *-(c)ally*. In a last step, the emergence of *-wise* as a suffix marking sentence adverbials is connected to the history of viewpoint adverbials in German and English in the nineteenth and twentieth centuries (cf. 8, 9).

2.   Distribution and productivity of *-wise* in Present-day English

2.1   Data

The widespread use and productivity suggested in the statements quoted above can be tested on data from computer-readable corpora documenting Present-day English (PDE). The following data set of all tokens and types of *wise*-coinages in the different corpora collected on the ICAME CD-ROM[2] corroborates the impression that the use of *-wise* is no longer restricted to American English. A *broad variety* of *wise*-coinages is found in *comparable numbers* in all major varieties of English — African, American, Australian, British, Indian, and New Zealand English.[3]

> (3)   ICAME CD-ROM
>
> a.   *Written English:*
>
> | | |
> |---|---|
> | Australian English (ACE): | *elementwise* |
> | American English (Brown): | *balance-wise, marketwise, price-wise* |
> | American English (Frown): | *progresswise* |
> | East African English (ICE_ea): | *bookwise, biologicalwise* (2×), *contextwise, percent-wise, scopewise* |
> | Indian English (Kolhapur): | *commoditywise* (2×), *costwise, histrionics-wise, occupation-wise, state-wise, storywise, sex-wise, unit-wise* |
> | New Zealand English (WWC): | *security-wise, tenant-wise, workwise* |

b. *Spoken English:*
   British English (LLC):   *educationwise*
   East African English (ICE_ea):   *healthwise, literaturewise,*
                                     moneywise, population-wise,
                                     schoolwise, timewise
   New Zealand (WSC):   *incomewise, pressurewise, sizewise,*
                                     staffwise, trainingwise,
                                     unemploymentwise

Although the corpora comprising written British texts (LOB, FLOB) do not contain any instances, *wise*-coinages are amply recorded in more recent British newspapers of the 1990s, such as *The Guardian*, *The Independent* and *The Observer*.[4]

(4) *The Independent* 1993; *The Guardian* 1999, 2000; *The Observer* 1999, 2000
   The Independent 1993:   *jobwise* (2×), *matchwise, moneywise,*
                                  pricewise, textwise, timewise, workwise
   The Guardian 1999, 2000:   *agewise, bedwise, bookwise, brainwise,*
                                  brandwise, dietwise, foodwise (2×),
                                  footballwise, gloatwise, healthwise (3x),
                                  indoorwise, joywise, pain-wise, presswise,
                                  professionwise, teamwise, time-wise,
                                  weatherwise
   The Observer 1999, 2000:   *businesswise, healthwise* (2×), *moneywise,*
                                  plotwise (2×), *policywise*

2.2 Productivity

These data, which record the total number of instances found in the respective corpora, allow the conclusion that -*wise* is a productive element in Present-day English. Similar results are obtained from the British National Corpus (BNC), which contains altogether 205 instances (137 types) of sentence adverbials in -*wise* (Dalton-Puffer & Plag 2000: 236).

Even a quick look at the altogether 72 tokens of *wise*-formations listed above reveals the considerable share of single instances of a particular word. Out of the 56 types of *wise*-coinages in question, only 10 occur more than once, namely *biologicalwise* (2),[5] *bookwise* (2), *commoditywise* (2), *foodwise* (2), *healthwise* (6), *jobwise* (2), *moneywise* (3), *plotwise* (2), *timewise* (3) and *workwise* (2).

This distribution of types and tokens is — according to research done by Baayen (1993) and Baayen & Renouf (1996) — tremendously important for the question of the productivity of an element. Baayen & Renouf explain how the number of words that occur only once in a given corpus (i.e. 'hapax legomena' with respect to the given corpus) correlates with the number of neologisms and is therefore highly indicative of the productivity of a morphological element:[6]

> [If] a word-formation pattern is unproductive, no rule is available for the perception and production of novel forms. All existing forms will depend on storage in the mental lexicon. Thus, unproductive morphological categories will be characterized by a preponderance of high-frequency types, by low numbers of low-frequency types, and by very few, if any, hapax legomena, especially as the size of the corpus increases. Conversely, the availability of a productive word-formation rule for a given affix in the mental lexicon guarantees than even the lowest frequency complex words with that affix can be produced and understood. Thus large numbers of hapaxes are a sure sign that an affix is productive. (Baayen & Renouf 1996:74)

From the large number of hapaxes in both the 100 million-word BNC (111 or 81% of the 137 types; see Dalton-Puffer & Plag 2000) and also in my very large corpus (94% in the ICAME corpus of about 11 million words; 77% in the whole corpus),[7] we can therefore conclude that -*wise* is a productive suffix in Present-day English, an accepted morphological device for marking sentence adverbials. It certainly was not a "fad" that ran its course and "passed away" (cf. Houghton 1968:213).

2.3 Research

This use of -*wise* has, however, only very rarely received the attention of linguists. The three relevant studies on the topic were published in its early and trendy years 1968 and 1969 (cf. Houghton 1968; Pulgram 1968; Rahn 1969). At about the same time, Marchand (1969:358) observes its increasing use and comments on its functions and its possible future as a full-fledged suffix: "*wise* is being used less and less as an independent word and may, as a semi-suffix, one day come to reach the state of F[rench] -*ment*". Other studies on word-formation do not mention these *wise*-coinages meaning 'as regards, in respect of', except for Bauer (1983:225) who lists -*wise* among the adverbial suffixes without, however, discussing it.

More importantly, these studies mainly collect instances of *wise*-formations and consider their morphological and, in most cases marginally, their stylistic

properties. They completely disregard syntactic and functional considerations, which are in my view essential for understanding the origin and spread of this new function of *-wise* as a sentence adverbial.

3.   Functional properties of *-wise*

3.1 Sentence position

The scope of these new adverbials in *-wise* is not the verb phrase, but the whole clause or sentence, a fact which is reflected in the surface word order of the relevant sentences, in which *wise*-adverbials mostly occur sentence-initially or sentence-finally.

(5)   *Foodwise*, Stanley has authentic northern tastes — his favourite is tripe.
(*The Guardian*, February 26, 2000)

(6)   It was the only way I could keep alive, *foodwise*.
(*The Guardian*, February 4, 2000)

If sentence adverbials in *-wise* appear in the middle of the sentence, their parenthetical character is marked by dashes (see example (16)) or commas.

(7)   My (French) partner tells me she's always being asked by her astounded friends if, *bedwise*, I'm not a complete catastrophe. Fortunately, she's an accomplished liar. (*The Guardian*, June 13, 2000)

3.2 Sentence adverbials

More prototypical examples of sentence adverbials are the so-called 'disjuncts' — which in the terminology of Quirk et al. (1985:478–653) are distinguished from adjuncts (manner or time adverbs such as (*to walk*) *slowly*, (*to come*) *regularly*) and conjuncts (connecting adverbs such as *therefore*, *however*).[8]
    Disjuncts (Quirk et al. 1985:612–631) express an evaluation of the speaker, either with respect to the meaning of a sentence (content disjuncts) or with respect to the form of the communication (style disjuncts). For speakers' comments on or evaluations of the sentence (content disjuncts), cf.

(8)   She *wisely* didn't attempt to apologize.
(It was wise of her that she didn't attempt to apologize.)

(9)   The Yard's wonder boy, *appropriately*, descends from the clouds.

(It was appropriate that the Yard's wonder boy …)

Speakers' comments on the form of the communication can take the form of style disjuncts, such as

(10)   *Frankly*, I'm tired.
       (Frankly speaking, I'm tired; Put frankly, (…); I'm frank when I say (…);
       In all frankness, (…))

3.3   Domain or viewpoint adverbials

The new adverbial coinages in *-wise* investigated here are similar to style disjuncts such as *frankly* in that they concern the form, or rather, the *viewpoint* or *perspective* of communication. These *wise*-formations therefore belong to the adverbial category of 'viewpoint' adverbials, a hitherto neglected category in linguistic research (see Lenker in progress). In English, this subcategory of sentence adverbials is — on adverbs formed from (Neo-)Latin roots[9] — marked by the suffix *-(c)ally*:

(11)   *Linguistically*, this example is interesting.
       Textwise, the characters are flat as traffic signs (…)
       (*The Independent*, August 3, 1993)

Both style disjuncts and domain/viewpoint adverbials have a corresponding participle clause with *speaking*, such as *frankly speaking* or *linguistically speaking* (see also below, 8.3). They also share other syntactic properties: it is not possible, for instance, to negate them. Unlike when they are used as adjuncts, viewpoint adverbials are nongradable; hence they do not accept premodification or comparison, a feature which also style disjuncts accept only in certain restricted contexts (cf. Paraschkewoff 1976: 182–186; Quirk et al. 1985: 569).

DOMAIN/VIEWPOINT ADVERBS	STYLE DISJUNCTS
Linguistically speaking, ….	Frankly/confidentially speaking, …
*Not linguistically (speaking), …	*Not frankly/confidentially (speaking), …
*Very linguistically (speaking), …	*[?]Very frankly/confidentially (speaking), …

Speakers employ adverbs such as *linguistically* or *textwise* because they want to indicate that the proposition of the whole sentence or clause is only true in the perspective chosen by the speaker, the given domain. Bellert therefore refers to

these adverbs as "domain adverbs" (Bellert 1977: 347–348) and exemplifies the fact that speakers "do not commit themselves to the truth of the proposition in any other domain" via the help of sentences in which domain adverbials are used contrastively (Bellert 1977: 348):

(12)   *Linguistically*, this example is interesting, but *logically* it is not.
        Logically, John is right, but *morally* he is wrong.

This inherent restrictive dimension of domain adverbials is reflected in Bartsch's term *limitierende Adverbiale* 'limiting adverbials' (Bartsch 1972). Quirk et al. emphasize their semantics and refer to them as "viewpoint adjuncts" (1972) or, in 1985, as "viewpoint subjuncts"[10] (Quirk et al. 1985: 568) and give as typical examples:

(13)   *Architecturally*, it is a magnificent conception.

(14)   *Morally*, *politically* and *economically*, it is urgent that the government should act more effectively on aid to developing countries.

(15)   It could have been a serious defeat, not only *militarily* but *psychologically* and *politically*.

Instances from my corpus show that adverbs in *-(c)ally* and *-wise* are not only theoretically equivalent with respect to their semantics and syntax, but that they are indeed used together in one phrase if speakers want to indicate that the proposition of the sentence is only true in the given perspective.

(16)   Peter White, chief executive elect of the new Bank of Ireland & Leicester, therefore, must this weekend at once be an elated and troubled man. Elated, because he — *personally and businesswise* — is the winner from the planned £ 11bn marriage of Alliance & Leicester and Bank of Ireland. (*The Observer*, May 30, 1999)

(17)   Caroline Coyne (…) says the 12-month guarantee is critical. "What attracted me is that you could try work, and if it didn't work out you could return to your benefit. This takes the pressure off, *financially and healthwise*." (*The Guardian*, September 8, 1999)

It has to be emphasized that this domain function is the only adverbial function of *-wise* which is widely productive today. The next section on the etymology and history of the form *-wise* shows that its new use as a domain adverbial has to be kept apart from other meanings and productive patterns attested for its history in English. Nowadays, most of these are generally regarded as obsolete or archaic.[11]

4.   The history of PDE *-wise*

4.1   Homonym: Adjective compound in *-wise*

In a first step, our formations have to be kept apart from their homonyms, adjective compounds in *-wise* such as *streetwise* or *pennywise*. These go back to a different Germanic root, OE *wīs* 'prudent' (*OED* s.v. *wise* a.), and are quite productive in today's Englishes. Examples of adjective compounds occurring in my corpus are *all-wise, budget-wise, industry-wise, pennywise, poundwise, streetwise, weather-wise* and *worldly-wise*. *Weatherwise* is an interesting formation because it occurs in both uses, as a nominalized adjective compound and as a viewpoint adverbial:

(18)   The day of the party dawned with that odd summer haze which told the *weather-wise* it would grow bright and warm. (ICAME, Frown, p14_99)

(19)   Of course, the one time in 1987 we did have a bit of excitement, *weather-wise*, Michael Fish got it wrong. For which we love him all the more. (*The Guardian*, February 11, 2000)

This ambiguity is exploited in book titles such as *Weatherwise: The Techniques of Weather Study* or *Babywise* and *Drugswise* (guides for parents). They are probably deliberately ambiguous, i.e. 'wise about the weather/babies/drugs' (adjective-compound) or 'as regards the weather/babies/drugs' (viewpoint adverbial). The same is true for tradenames such as *Netwise* or *Webwise*.

4.2   OE *wīse* 'manner, fashion; cause'

The root OE *wīse* 'manner, fashion; cause' is attested in most North and West Germanic languages (cf. OHG *wîsa*, MHG *wîsa*; OFris *wîs*, OS *wîsa*, ON *vísa*; cf. OE *witan*) and has survived in several functions in German *Weise*, Dutch *-wijs* and Norwegian, Swedish and Danish *-vis* (*OED* s.v. *wise* n.[1] II; Paraschkewoff 1976:169–170). In today's Englishes, it occurs in four different forms (for the following account and the examples, see *OED* s.v. *wise* n.[1]; Marchand 1969:357–358).[12]

a.   *Lexical noun*: *wise* has retained its status as an originally independent lexical noun only in archaic prepositional phrases such as *in no wise, in like wise, on this wise* or *in gentle wise*.

b.   *Lexicalized items* (*likewise, otherwise*): originally transparent formations of the noun modified by an adjective only survive as lexicalized items, in

particular *likewise* and *otherwise*, and the nowadays less frequent *anywise*, *contrariwise*, *leastwise* and *nowise* (cf. *OED* 'survived as simple words').[13]

In the older stages of English, adverbial expressions meaning 'in such-and-such a manner or way' could be qualified by an adjective or by a noun, both either with or without a governing preposition, usually *on* or *of* (cf. below, *ealde wisan* / *on ald wise* 'in the old way, manner').

(20)   *Beowulf* 1865 Ic Þa leode wat (…) fæste geworhte, æghwæs untæle *ealde wisan*.

(21)   a1300 *Cursor M.* 10948 Als lagh was Þan *on ald wise*.

On ōðre wīsan therefore alternates with *ōðre wīsan* 'in another manner' in Old English. In the fourteenth century, the latter yields the later lexicalized *otherwise*.

(22)   c900 tr. *Bede's Hist.* i. xxvii. (1890) 72 Ne meaht þu *on oðre wisan* biscop halgian (…)

(23)   971 *Blickl. Hom.* 177 þe læs þe *oðre wisan* ænig man (…)

c1.   *Manner adjunct* 'manner, way': apart from these archaic or lexicalized usages, *wise* occurs in three distinct denominal functions (c1, c2, d). Formations on noun + *wise* meaning 'in the manner of' appear as manner adjuncts, such as *(go/walk) frogwise/crabwise, pilgrimwise*. These nominal patterns are attested in OE phrases such as *on scipwisan* 'in the manner of or like a ship'. The *OED* refers to them as 'non-syntactical' because they lack a morphological marker of the genitive.

(24)   a950 *Guthlac* ii. (Prose) 107 (…) seo yld com þæt hit sprecan mihte *æfter cnihtwisan*.

(25)   1377 Langl. *P. Pl.* B. xix. 138 Kulleden hym *on-crosse-wyse*.

From the fourteenth century onwards, they appear without a preposition.

(26)   1398 Trevisa *Barth. De P.R.* ix. xxxi. (1495) 368 On holy Saterdaye newe fyre is fette and thus [= incense] is putte therin *crossewyse*. (*OED* s.v. *crosswise* adv.)

(27)   1591 Savile *Tacitus, Hist.* i. lv. 32 No man presumed to make any solemne oration *assembly-wise* [L. in modum concionis].

Nowadays, these formations are, however, productive only to a limited extent. In Present-day English, they are rivalled by derivations in -*fashion*

(*arrow-fashion, baby-fashion*) and *-style* (*schoolboy-style*) (see Marchand 1969: 358; Quirk et al. 1985: 1557; Bauer 1993: 225; Dalton-Puffer & Plag, 2000: 236–241).

c2. *Manner adjunct* 'in direction of': alternatively, *wise*-adverbs used as manner adjuncts can refer to the concept of 'dimension', meaning 'in direction of'. They occur, often with the variant *-ways*, in particular in such highly frequent words as (*anti-/counter-*)*clockwise, edgewise/-ways, endwise/-ways, lengthwise/-ways, sidewise/-ways, slantwise, widthwise/-ways* (*OED* s.v. *wise* n.[1] 4; Marchand 1969: 357; Quirk et al. 1985: 1557; Burchfield 1996: 851).

While Marchand maintains that the manner-adjunct type "is strong" (1969: 358) in Modern English, Quirk et al. (1985: 438, 1557) refer to it as a "less common" suffix and assert that it is only "limitedly productive". Dalton-Puffer & Plag (2000: 239–240) corroborate the latter view of only limited productivity by an analysis of the tokens, types and hapaxes in the BNC (see above, 2.2). In the 100 million-word BNC 509 tokens are counted, but only 39 different types (21 hapaxes). This means that, in today's English, the formation of new manner adjuncts according to this pattern is possible, but not very frequent.

d. *Viewpoint adverbs*: as has been shown above (2.2), the noun + *wise* pattern is fairly productive with regard to our domain or viewpoint adverbs. Although the *OED* unfortunately still lists this pattern in the entry for the noun, it is obvious that we are dealing with genuinely new coinages here. The *OED* avoids the topic by stating: "(i) Used in the same way but with the sense: as regards, in respect of" (*OED* s.v. *wise* n.[1] II.3.ii).

Yet adverbs such as *jobwise* or *bedwise* are indeed only formally identical to those attested before the 1940s in that they are nominal combinations without a marker of the genitive and with ellipsis of the preposition. In its new function, *-wise* has definitely ceased to be an independent noun, since it can no longer be paraphrased by employment of the now archaic noun *wise* such as 'in the wise (way) of a clock = clockwise'. Paraphrases such as *'in the wise (way) of a job' or *'in the wise (way) of a bed' are impossible; *-wise* has — as was predicted by Marchand (1969: 358) — now reached the status of a lexicalized suffix.

There is thus no *direct* semantic path between the different meanings of *-wise* (cf. the meanings listed under a–c) and its employment as a viewpoint adverbial (d). Since the origin of sentence adverbial *-wise* is therefore more complicated than it may have seemed at first glance, the next sections will test different

suggestions for its rise (cf. 5, 6) and will, in conclusion, offer a new (functional) explanation for its emergence and diffusion (cf. 8, 9).

5.   The origin of -*wise* (Foster 1968)

As I have noted above, literature on the origin of -*wise* as a viewpoint adverbial is rather scarce. In one of the very few suggestions, Foster argues that

> we see here an astonishing reversal of fate whereby an 'archaism' suddenly becomes the latest fad. It may well be that the old usage had lingered in the United States to a greater extent than in the English of Britain, but it can scarcely be doubted that its blossoming forth in the twentieth century was due to a more or less conscious transference of a German habit, whether on the part of scholars or — more likely — of immigrants. (Foster 1968:95)

Foster's suggestion of the revival of an archaism is not convincing, however. The diachronic analysis has shown that the new formations are both semantically and functionally different from the manner adjuncts attested from Old English onwards. The new formations are so novel that the suggestion of a "reversal of fate" has to be discarded. Foster obviously senses the problems associated with his assumption and accordingly also — rather wordily — suggests German loan influence.

6.   German -*weise*

6.1 PDG *Weise, -weise*

This second suggestion will now be tested by a short account of the meanings and nominal and suffixal uses and functions of German *Weise* and -*weise*. In German, the noun *Weise* 'manner, fashion; way' has retained all the semantic and syntactic possibilities documented for the history of its English cognate (Paraschkewoff 1976; Kluge/Seebold 1995:883).

   Weise has survived as a common noun — *sie (macht es) auf ihre (diese) Weise* 'she does it her (this) way' (see above 4.2a) — and can be freely employed in all kinds of prepositional phrases with modifying adjectives — *auf angenehme/gemächliche Weise* 'in a pleasant/slow way' (see above 4.2b).

There are also denominal compound adverbs in *-weise* which function as manner adjuncts (see above 4.2c), such as *kreuzweise* ('crosswise') or *schrittweise* ('stepwise').

6.2 PDG adjective + *-erweise*

In contrast to English, however, a specific adjectival pattern — adjective + *-erweise* — is widely productive in today's German (cf. *glücklicherweise* 'luckily' or *interessanterweise* 'interestingly'). This formation is particularly interesting because German does commonly *not* mark adverbs morphologically but employs the unmarked form of the adjective for the adverbial function. Yet in the case of these content disjuncts (see above 3.2), the suffix *-erweise* is obligatory.

(28)   He answered me *cleverly*.
GER Er antwortete mir *klug*. (manner adjunct)

(29)   *Cleverly*, he answered me.
It was clever of him to answer me.
GER Er antwortete mir *klugerweise*. (content disjunct)

Cleverly, when used as a content disjunct (*It was clever of him to answer me…*), can only be rendered by *klugerweise*.[14] Etymologically cognate suffixes are also productive in other Germanic languages, for example Dutch *-erwijs*, Swedish and Danish *-vis* (Ramat & Ricca 1998: 203–206). These forms seem to constitute one of the extremely few morphological devices marking sentence adverbials (Ramat & Ricca 1998: 204) and are therefore related to English *-wise*. They do not mark domain adverbials, however, but content disjuncts.

In sum, if adjective + *-erweise* is the German pattern Foster is thinking of, it is definitely not a good choice. *-erweise* cannot be a model for the suggested loan *-wise*, because the coinages are not at all similar, neither morphologically nor semantically:

ENGLISH *-WISE*	GERMAN *-ERWEISE*
denominal	deadjectival
domain adverb	content disjunct

7.   German -*mäßig*

There is, however, a fairly new German suffix which is functionally equivalent to the use of -*wise* in its functions as a domain or viewpoint adverb, namely -*mäßig* (examples are taken from Inghult 1975).

(30)   (…) eine *altersmäßig* schlechte Zusammensetzung (=‘agewise, an un-favourable distribution’)

(31)   Nordrhein-Westfalen — räumlich und *bevölkerungsmäßig* vergleichbar mit der DDR (…) (=‘Nordrhein-Westfalen — sizewise and population-wise comparable to the GDR’)

This function of -*mäßig* appeared in the middle of the nineteenth century. Just like -*wise*, it spread considerably in the middle of the twentieth century and was (and still is) harshly criticized; a German style critic even regards the use of -*mäßig* as “sprachmäßig saumäßig” (‘linguistically like a pig’; cf. “Sprachmäßig saumäßig”, *Kölner Stadtanzeiger* August 4/5, 1978, cited from Welte 1996: 232).

This fairly recent emergence and fast diffusion of new morphological patterns marking the function ‘domain adverbials’ in both English and German support my idea that functional considerations are essential for an analysis of -*wise*, and lead to my last major point, the history of domain or viewpoint adverbials in English and German.

8.   The history of viewpoint adverbials

8.1   Viewpoint adverbials in the history of German

The most interesting fact about this subgroup of adverbials is that they are comparatively young. In both English and German, the category ‘viewpoint adverbial’ is not attested until the nineteenth century.

In his study of German -*mäßig*, Inghult shows that the first instances of -*mäßig* in the limiting function appear as late as the nineteenth century. Still more interesting, however, is the fact that *other* German suffixes marking this function are not recorded before 1800 either:

> EINSCH[ränkung]-Derivate auf -*mässig* sind also eine relativ neue Erschein-ung in der deutschen Sprache (…) [Sie] kommen **vereinzelt schon im 19. Jh.** vor, und es sieht aus, als ob der Gebrauch von Adjektivderivaten mit limitativer Funktion im Deutschen überhaupt erst zu dieser Zeit entstanden sei. **Jedenfalls**

> **sind keine Beispiele anderer Suffixtypen vor 1800 zu belegen**. Aus dem 19. Jh. dagegen sind u.a. folgenden Bildungen auf *-isch, -lich, -al, -är* und *-iv* zu verzeichnen. (Inghult 1975:152; emphasis supplied)

> [Limiting derivations in *-mässig* are a comparatively recent phenomenon in German (…) There are some instances in the nineteenth century, and it seems as if the use of adjective-derivations with limiting function was indeed only employed from that time onwards. There are (…) no examples of other suffixes attested before 1800. In the nineteenth century, however, we find formations in *-isch, -lich, -al, -är* and *-iv*.]

8.2 Viewpoint adverbials in the history of English

Inghult's data for German match my findings for the history of domain adverbials in English (for a more comprehensive account, see Lenker in progress). An analysis of adverbs in *-ly* and their syntactic distribution undertaken in the diachronic corpora on the ICAME CD-ROM (Helsinki, CEECS, Lampeter, Innsbruck), which comprise texts up to the eighteenth century, yields no unambiguous results for domain adverbials. This means that this adverbial function must have indeed emerged after that period, in particular if we are not talking about a few doubtful cases from religious discourse, but of a semantic and syntactic pattern.[15]

For the corpus analysis, data were lifted from the best computer-readable source for the nineteenth and early twentieth century, the *OED* (1989, 2nd ed.) and the *OED*-online (http://oed.com/). Table 1 shows the results of the 'Word' search for *-(c)ally* (letters A to D). The first column lists the earliest attestation of the adjective. This is essential because all of the adverbs in question go back to Neo-Latin/Greek roots in *-al* or *-ical* (Latin *-āl-em, -āl-is*) and were mainly borrowed in the EModE period (see *OED* s.v. *-al* suffix[1]; Marchand 1969: 238–244).[16] The second column lists the earliest attestation of the adverb, the third and essential column records the date for its first recorded use as a domain adverbial.

The dates given in the third column clearly show that the domain usage appears and is indeed already strong from the second half of the nineteenth century onwards, irrespective of when the adjective or adverb had entered the language.

The results are basically the same for the other letters. Among the earliest adverbs used as domain adverbials, *philosophically* and *politically* are attested in the first half of the nineteenth century (Table 2).

Table 1. *OED adverbs in -(c)ally* (letters A–D)

	Adjective (*-al, -ical*)	Adverb	Domain Adverbial
academically	1610	1591	1879
analytically	1525/1601	1656	1879
architecturally	1762	1843	1876
arithmetically	1543	1571	1865
atmospherically	1664	1874	1871
botanically	1658	1757	1849, 1870
choreographically	1893	1911	1959
chronologically	1614	1691	1881
clinically	1780	1862	1876
crumenically	–	1825	1825 (nonce-word)
culturally	1868	1889	1906
developmentally	1849	1849	1949
diagnostically	1625	1657	1891
diplomatically	1787	1836	1877

Table 2. Other *OED* adverbs in *-(c)ally*

	Adjective (*-al, -ical*)	Adverb	Domain adverbial
philosophically	1500	1580	1825
politically	1420	1638	1841

8.3 The origin of the viewpoint or domain use

This emergence of domain uses for these adverbs can be traced back to their original employment as manner adjuncts. Before their independent use as domain adverbials, the adverbs often surface in phrases such as *to speak(e) (more)* ~, *~ speaking*, *~ considered*, *~ studied*, *~ viewed* (see above, 3.3). These phrases, which must have served as the bases or models for the use of the adverbs as domain adverbials, are attested in large numbers also only from the end of the eighteenth century onwards.

For a full example lifted from the *OED* by means of a combined 'Word' and 'Quotation' search, see *botanically*:

(32)   *OED*: *botanically*
  a.   *OED* s.v. *botanically* adv. (*botanical* adj., 1658; *botany* n., 1696)
       'In a botanical manner; in relation to botany; according to the principles or technical language of botany.'

1757 Da Costa in *Phil. Trans.* L. 229 note, Scheuchzer has arranged the fossil plants *botanically.*

1793 W. Curtis *Bot. Mag.* VI. 215 In its improved, *or to speak more botanically*, in its monstrous state.

1848 C. A. Johns *Week at Lizard* 291 It is *botanically* distinguished from the other Heaths, by its anthers.

1870 Yeats *Nat. Hist. Comm.* 102 *Botanically*, this is the region of palms.

b.   *OED* s.v. *myrtle* n.

1849 *Rural Cycl.* III. 538/1 *Myrtle Bilberry, — *botanically* Vaccinium Myrtillus.

c.   *OED* s.v. *herald* n.

1894 H. Drummond *Ascent Man* 295 The Flower, *botanically*, is the herald of the Fruit.

In the earliest quotation (1757), *botanically* is a genuine manner adjunct (*to arrange botanically*).[17] In 1793, it is attested in the phrase *to speak more botanically*, which serves as the basis for its use as a viewpoint or domain adverbial (see the quotations from 1870, 1849, 1894).[18]

8.4   Scientific language in the nineteenth century

This late emergence of the category of viewpoint adverbials in the nineteenth century corresponds to certain socio-historical developments in that period which may be (very roughly) summarized as follows. It may be suggested that the need for a linguistic pattern of marking perspective only arose with the diversification of perspectives after the Middle Ages or even after the Renaissance, at a time when the theological or religious perspective had ceased to dominate (scientific) thinking.

The number of conceivable perspectives on a given subject increased rapidly — and thus gained additional linguistic relevance[19] — with the advent of the new sciences, and especially with the increasing diversification of the empirical sciences into discrete individual disciplines in that period. In a contemporary nineteenth-century source, Trench criticizes the influx of an "army of purely technical words" which occur in treatises on "chemistry or electricity, or on some other of the sciences which hardly or not at all existed half a century ago" (1860: 57–58). At that time, the many new suffixes formed from Neo-Latin or Greek stems indicate that science in the nineteenth century was particularly preoccupied with measuring and precise classification — cf.

e.g. *-graph*, *-meter*, *-ite*, *-ide* or *-ine* (Bailey 1996: 145–151; Görlach 1999: 111–114). Similarly, the new domain adverbials in *-(c)ally* are also formed from Neo-Latin/Greek roots (see above, 8.2) and a large number of them refer to the domain of a particular science (*architecturally*, *arithmetically*, *atmospherically*, *botanically*) or its methods (*chronologically*, *clinically*, *diagnostically*).

Biber & Finegan (1997: 260ff.) track overall changes in the patterns of register variation over the past four centuries, and document a general trend towards a less 'involved', more 'informational' style in specialist written registers such as medical prose. The new domain adverbials in *-(c)ally* are an excellent vehicle for that new informational pattern. They indicate the speaker perspective (most often sentence-initially) without having to name the speaker directly and thus help to avoid the use of a personal pronoun. More recently, Biber & Clark (2002) have also shown that over the past 100 years medical prose has developed a much more compressed style of presentation, which is at the same time less explicit in the expression of relational meaning. Domain adverbials definitely satisfy these new stylic demands because they are an extremely condensed and therefore quick and efficient means of stating the perspective chosen for the proposition, a property that is indispensable for scientific texts, but also quite convenient in other contexts.

9. Pattern transfer: *-wise*, *likewise* and *otherwise*

9.1 *-cally* and *-wise*: Morphology

I would therefore like to suggest that this late emergence of the function of 'domain adverbial' in the nineteenth century was the beginning of the creation and spread of the coinages in German *-mäßig* and, later, English *-wise*. The linguistic efficiency of viewpoint adverbials is obvious and we cannot really imagine twentieth-century academic or scientific writing without them. Yet, the English coinages in *-(c)ally* have one apparent inconvenience: they can only be derived from Latin (or Greek) adjectival bases in *-al* or *-ical*. The suffix *-wise*, on the other hand, can be combined with all nominal roots, irrespective of their etymological origin, and is therefore an ideal candidate to fill this gap in word-formation.[20]

9.2 Earliest attestations

The earliest attestations of *-wise* support this view. Although the *OED* (s.v. *wise* n.[1] 3.b.ii) maintains that *-wise* with the sense 'as regards, in respect of' is "colloq. (orig. U.S.)", the quotations given for the first attestations show that the decisive factors for its use are neither 'medium' (spoken vs. written) nor 'attitude' (formal, informal, etc.), but 'field of discourse' (for these types of variation see Quirk et al. 1985: 15–26).[21]

> (33) 1942 E. R. Allen in J. J. Mattiello *Protective & Decorative Coatings* II. viii. 252 It should be noted that there are two types of hydrogen atoms *positionwise.*
> 1948 *Sat. Rev.* 6 Mar. 16/3 *Plotwise,* it offers little more or little less of what-happens-next interest than may be found [etc.]

The co- and contexts of these examples refer to the fields of discourse of science or arts. The same is true for most of my corpora-examples: they may be more frequent in the spoken medium (see above, (3b)), but they almost exclusively relate to these technical registers.

> (34) John Guillebaud, (…) and author of The Pill (…) confirms that the pattern of having 13 breaks a year (…) is "amazingly safe, *healthwise*". (*The Guardian*, June 17, 2000)
>
> (35) (…) as far as crayfish are concerned are th (…) you know that the ideal unit ummm *sizewise* (…) (ICAME CD-ROM, Wellington Corpus of Spoken New Zealand English)

In German, this relation to the field of science and technology is even more obvious, because in nonstandard German *-mäßig* is rivalled by the new suffix *-technisch* 'technically' (cf. *Arbeitsmäßig/arbeitstechnisch war das ein blöder Tag* 'Workwise, it was a horrible day').

For English, this idea of a transfer of the functional pattern from the scientific discourse is also corroborated by one of the American native speaker informants in Rahn's (1969) study who says about *wise*-creations that he has "heard them usually from people who had studied engineering" (Rahn 1969: 234). All the early studies from 1968 and 1969 furthermore mention the fact that *-wise* is often used in the languages of business, trade and industry, all of which are technical varieties more or less modelled on the field of discourse of scientific language.

9.3 The morphological pattern

Once we accept a transfer from the field of scientific discourse, we have to consider why the suffix *-wise* was chosen for filling the obvious gap in word-formation. The most important factor must have been that *-wise* had become archaic in its original usages as a lexical noun and infrequent or only limitedly productive as a manner adverb (see above, 4.2 a, b, c). The form could therefore be functionally reshifted.

The missing link between the still existent uses of *-wise* and the new domain use must have been highly frequent lexicalized words in *-wise*, in particular *likewise* and *otherwise* (see above, 4.2b).

Likewise, for instance, is functionally similar to domain adverbials in *-wise* when it is used as a conjunct 'similarly; also' (*OED* s.v. *likewise* 2, 3). In this sense, it can be paraphrased by 'seen in the same perspective'.

The more likely model, however, is *otherwise*, which often serves as a domain adverbial of a more or less vague kind. A sentence starting with *otherwise* allows speakers to open up a new perspective without necessarily having to refer to their change of perspective. The *OED* describes this meaning and function by '[i]n other respects; with regard to other points' (*OED* s.v. *otherwise* adv. 3), a definition which shows the tight link between *otherwise* and the new *wise*-adverbials (*OED* definition: 'as regards, in respect of'; s.v. *wise* n.[1] 3.b.ii).

Otherwise is accordingly often found in one phrase together with a domain adverb. Consider, as one of many examples from the *OED*, the phrase *etymologically or otherwise* in the definition for nylon (*OED* s.v. *nylon*).

(36) The word is a generic word coined by the du Pont Co. It is not a registered name or trademark. We wish to emphasize the following additional points: First, that the letters n-y-l-o-n have absolutely no significance, *etymologically or otherwise*.

This close connection with *otherwise* is actually also employed as a stylistic device by such a language-conscious writer as Arundhati Roy (1997: 83) when she says

(37) It didn't make any sense at all. *Weatherwise* or *otherwise*.

10. Conclusion

The new coinages in *-wise* marking sentence adverbials are thus not archaisms which reappeared and became trendy in American usage as a "linguistic

gimmick" or "fad". Neither are they borrowings from German. They are English/American innovations, and were coined for a functional reason: they are employed to form derivations for the comparatively new category of domain adverbials from non-Latin roots which do not allow the element -*(c)ally*.[22] The form -*wise* proved to be a good candidate for fulfilling this function because its old meanings and functions had become archaic and because the lexicalized *likewise* and *otherwise* provided the morphological pattern needed.

Notes

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1. The examples in this paper are taken from either the ICAME CD-ROM or from a corpus of more recent British newspaper publications, *The Independent on CD-ROM* for 1993 and *The Guardian* and *The Observer* for 1999 and 2000 (see also (3) and (4)).

2. The data are lifted from the ICAME CD-ROM; for further information, see http://www.hit.uib.no/icame.

3. Only *wise*-coinages with the meaning 'as regards, as far as x is concerned', i.e. adverbs functioning as sentence adverbials, are listed. For other uses of the suffix -*wise* (adjective compounds such as *streetwise*, manner adverbs such as *crosswise* or lexicalized items such as *likewise* and *otherwise*), see below 4.1 and 4.2.

4. The data are lifted from *The GuardianUnlimited* website (http://www.guardian.co.uk).

5. This peculiar deadjectival form found in one source in the corpus of East African English should probably be regarded as a true nonce-formation.

6. I owe this reference to Christiane Dalton-Puffer; see also Dalton-Puffer & Plag (2000).

7. There are 35 hapaxes among the 37 tokens in the about 11 million words of the synchronic corpora of the ICAME CD-ROM which were searched for the present study (about one million words per corpus). Unfortunately, there was no way to ascertain the total number of words in the British newspaper corpora; for the question of productivity, however, only the relation 'large corpus — high number of hapaxes' (81% BNC / 94% ICAME / 77% total corpus) is important.

8. In the new *Longman Grammar* (Biber et al. 1999), adjuncts, disjuncts and conjuncts are called, respectively, 'circumstance', 'stance' and 'linking' adverbials (Biber et al. 1999: 762 and elsewhere). The examples in this section are mainly taken from Bellert (1977), Quirk et al. (1985) and Biber et al. (1999).

9. For the restriction of these coinages to (Neo-)Latin and Greek bases, see below 8.2.

10. The terms 'adjunct' and 'subjunct' (instead of 'disjunct') seem to suggest that viewpoint adverbs are not regarded as sentence adverbials by Quirk et al. (1985). Apart from this source, however, they are generally described as one of the subclasses of sentence adverbials. The whole category of 'subjunct' has been repeatedly criticized; for a recent assessment, see Valera (1998: 267–270). Biber et al. (1999) return to a tripartite system (see fn. 8).

11. For a comprehensive comparative investigation of the distribution and productivity of the different patterns, see Dalton-Puffer & Plag (2000).

12. West-Germanic *wîsa* was borrowed by the Romance languages and survives as French *guise* or Italian *guisa*. In medieval Spanish, *guisa* competed with the adverbial formatives *cosa* and *mente*, which in the fourteenth century ousted the other suffixes (cf. Paraschkewoff 1976: 170).

13. All the examples in the diachronic sections are taken from the quotations in the *OED*.

14. Paraschkewoff therefore even ceases to regard *-erweise* as an inflected form: he analyses *-er-* as a "Fugenelement" and accordingly wants to move *-erweise* to the category of modals (1976: 193–196, 211). This transfer is not necessary, however, when we employ the term 'disjunct', which intrinsically includes a certain modality.

15. The few doubtful cases belong to the field of discourse of religion or theology (*spiritually*, *ghostly,* etc.); for the relation of this field of discourse to scientific language, see below 8.4.

16. In Old French and hence in early English, *-ālem* became *-el* (cf. *mortālem* and *mortel*); in English (and to some extent in French), this was refashioned after Latin *-al*. The number of these adjectives increased immensely in medieval and Early Modern Latin and hence in Early Modern English, where the pattern is finally also extended to Greek roots (see *OED* s.v. *-al* suffix[1]).

17. In a semantically more detailed analysis, Quirk et al. (1985: 563–564) refer to them as adjuncts of respect, e.g. *she's advising them* **legally / with respect to law**. These predicational 'adjuncts of respect' are the natural bridge between the different uses in question because they fulfil the same role on the phrase level as viewpoint adverbials do on the sentence level.

18. The work of the lexicographers of the *OED* proved to be extremely reliable: the earliest use as a domain adverbial in quotations is usually also listed in the entry for the respective adverb.

19. For the properties of scientific discourse in the EModE period, see e.g. Nate (2001: 141–200).

20. The derivation of adverbs by an originally nominal suffix is not a problem; cf. the comparable case of Romance *-ment*, *-mente* which goes back to Latin *mens*, *mentis*.

21. I will here follow the terminology of Quirk et al. (1985). For the differences and similarities to other notational terms such as 'register' or 'style', see Lipka (1992: 9–26).

22. Whether this is a grammatical function and therefore a case of grammaticalization is doubtful because of the awkward status of adverbs as a grammatical class (for a fuller treatment of the question, see Lenker in progress).

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The loss of the indefinite pronoun *man*

Syntactic change and information structure[*]

Bettelou Los
Free University of Amsterdam

1. Introduction

Rissanen (1997) presents a detailed discussion of the collapse of the Old English system of indefinite marking with *hwa* 'who', *hwilc* 'which', *hwæthwugu* 'something', etc., and connects its loss to the generalization of the *wh*-pronouns as expressions of the relative pronoun. *Wh*-pronouns already had two functions — interrogative and indefinite — and an additional third use may have compromised the communicative function of the system. The old system was replaced by the *some/any* paradigm, with its clear contrast of assertive versus non-assertive contexts, and by the use of *one* as a 'proform', the lexical expression of the head of the noun phrase — a development which Rissanen connects to the levelling and loss of the nominal endings.

The loss of the indefinite pronoun *man* 'one' (cf. Swedish *man*, German *man*, Dutch *men*) by the fifteenth century has proved more difficult to account for, although various contributing factors have been identified. I will argue in this paper that there are two important factors that appear to have been overlooked: one is the competition between subjunctive *that*-clauses and *to*-infinitives, which affected *man* in that it entailed competition between the indefinite pronoun in such clauses and generic (or arbitrary) PRO. The result was a decline in the occurrence of *man* in subclauses. There was also a decline in main clauses due to the loss of verb-second in the course of the fifteenth century, after which only subjects could be 'unmarked themes' in an information-structural sense. The indefinite pronoun *man/me(n)* is unlikely to occur in this position as it cannot provide an anaphoric link with previous material, and its niche was increasingly taken over by the impersonal passive.

2.   Previous proposals

The indefinite expression *man* develops from the noun *man* 'man, human being' in the prehistory of Old English. In what follows I will refer to it as 'the indefinite pronoun', although it formally wavers between a noun and a pronoun (but see van Bergen 2000a, b, c), as is typical of the 'general' nouns that constitute an intermediate category of vague, generic, 'light' predications: *people, creature, thing, stuff* (Halliday & Hasan 1976:274). *Man* is first weakened into *men* and *me* (although it is possible that these spellings reflect the loss of the West-Saxon written standard rather than actual phonetic change in the transition to Middle English) and is lost in the course of the fifteenth century. Last mention in the *OED* of *men* is (1), and of *me* (2):

(1)   **Men** *muste putte hym self at the vpper syde of hym.*
      (1484, *Fables of Æsop* v. vii)
      "One must put oneself at the upper side of him."

(2)   *Things (…), Of whiche* **me** *may not be withoute.*
      (c. 1483, Caxton *Dialogues* 6/20)
      "Things (…) which one cannot do without."

The demise of *man* may have been hastened by the fact that the form may have become too opaque because of the existence of similar forms with similar meanings. Firstly, the plural of the full lexical form *man*, i.e. *men*, can only be disambiguated from the ME form of indefinite *man*, i.e. *men*, by the singular or plural ending of the finite verb — and number is not consistently marked on ME verbs (this is especially true of the modal verbs, which are developing invariant forms at this period). Secondly, the full lexical noun *man* 'man' was acquiring some indefinite meanings, repeating to some extent the earlier grammaticalization that had produced the OE indefinite pronoun in the first place, although this new use of the full lexical noun *man* never became a proper indefinite (Rissanen 1997:521, reporting on Raumolin-Brunberg & Kahlas-Tarkka 1997).[1] However, interference from these other *man*/*men* forms is unlikely to have been the primary cause of the loss of indefinite *man*. The only form such interference could have taken would have been the rise of some other form to take over the indefinite pronoun function. There is one likely candidate for such a form, i.e. *one* — but it is clear that there was no straightforward replacement of OE *man* with LME/EModE *one*, for two reasons.

First, there is the time-lag between the rise of indefinite *one* as an indefinite pronoun and the loss of the older indefinite *man, men, me*, which suggests that

the items were not in competition at any one time (Rissanen 1967, 1997), so that we cannot speak of a straightforward case of one replacing the other.

Second, such a one-to-one replacement is also unlikely in view of the significant differences between the use of *one* as an indefinite pronoun in Present-day English and the uses of surviving indefinites *man*, *men* in the other Germanic languages. These differences concern register and inclusion or exclusion of interlocutors (see Siewierska 1984: 238–54; Seoane-Posse 2000, and references cited there). Impersonal constructions (with *one*, *people*, *they*, *we* or *you*) are not viable alternatives for impersonal passives in Present-day English (*ibid.*), unlike OE constructions with *man*, as we will argue below.

We will see in what follows that the linguistic niche of indefinite *man* was itself largely lost, and that this may have been one of the primary causes of its demise.

3. Syntactic changes and information structure

3.1 *Man* in Ælfric

In order to establish the various functions of the indefinite pronoun *man* in Old English we investigated its use in Ælfric. Ælfric's works consist of, for the most part, original, untranslated prose; though Ælfric draws heavily on various Latin and Greek sources, he is a conscious stylist, as his own views on the translation process, as set out in his preface to the translation of *Genesis*, testify, and his language may be safely regarded as a good representative of authentic Old English.

Man occurs 430 times in Ælfric's works. 72 instances occur in the second conjunct of a pair of clauses coordinated by the conjunctions *and* 'and' or *ac* 'but', as in (3):

(3)   *and* **man** *þa deadan ne mihte, þe þær adydde wæron, (…)*
     and one the dead not could who there cast out were
     nateshwon bebyrgean for heora mægenleaste, ⟨ÆHomM 4, 77⟩[2]
     by.no.means bury for their feebleness
     "and because of their weakness people were completely unable to bury the dead who had been cast out there"

There are so many problems surrounding such clauses that they for the moment have been excluded. One problem is that it is often impossible to decide whether they are main or subclauses; the word order of OE *and/ond* or *ac*-clauses varies and can be either subordinate (i.e. verb-late) or root (with

inversion of *man* after *þa, ne* and *wh*-constituents); see Mitchell (1985:§1685, §1720–1729).[3] We will therefore concentrate on the remaining 358 instances of *man*. They can be broken down into the following syntactic contexts:

Table 1. The use of *man* in Ælfric

Clause type	Subtype	Numbers
main clause	1. *man* clause-initial	26
	2. *man* not clause-initial	68
subclause	3. subjunctive *that*-clause	135
	4. other	129

We will look at each of these subtypes in detail.

3.2 *Man* clause-initial

Subtype 1 is the one in which *man* occupies its most prominent position: the first position of the sentence. The fact that this group is the smallest of all is not surprising: this position is a topic position, the position of given, background information, often reserved for anaphoric material that provides a link with the previous sentence, to maximize textual cohesion ('unmarked theme'). The topic position in Present-day English is reserved for subjects. There is a secondary focus position in front of the subject in Present-day English, reserved for 'marked themes' and hosting material that is prominent in that it is either new or contrastive with what has gone before; for a discussion of marked and unmarked themes see Downing & Locke (1995:222–237) and Halliday (1994). *Man* is too weak in content to be a marked theme; as unmarked theme it only provides anaphoric reference in the loosest sense, and is therefore only expected to occur when textual cohesion is relaxed, in other words, when it starts a new discourse unit, or when other elements take over the burden of textual cohesion. In (4), for instance, the two sentences are linked by the repetition of the verb in the second sentence (*smyrað* 'anoints'), a reminder that textual coherence does not always have to be accomplished by the unmarked theme:

(4)   *Hu   is he gesmyrod?* **Man** *smyrað cyning mid gehalgodum ele*
      how is he anointed   one   anoints a king with consecrated oil
      þonne man hine to cyninge gehalgað.   ⟨ÆCHom II, 1, 7.162⟩
      when one him as king   consecrates

"How is he anointed? One anoints a king with consecrated oil when he is consecrated as king"

A study of the other 25 examples of *man* in clause-initial position bears out that they all occur at, or close to, the beginning of a new episode, often (in six cases) signalled by the presence of *þa* 'then', which has been argued to be an episode boundary marker (Foster 1975; Enkvist 1986; Brinton 1993); but even when there is no *þa*, it is clear that many of these examples of clause-initial *man* introduce a new episode, e.g. (5):

(5) *(ælc man sceal arisan þonne þe æfre on life wæs; wære he on wætere*
     adruncen, oððe hine wilde deor æton, oððe hine fyr forbærnde færlice to
     duste, and ðæt dust wurde toworpen mid blædum, swaðeah se ælmihtiga
     God mæg hine eft aræran, se ðe ealle þas woruld geworhte of nahte, and se
     ðe thises ne gelyfð, ne bið his geleafa naht.)
     Man *bewint þone deadan gewunelice mid reafe (…)* ⟨ÆHom 11, 332–339⟩
     One shrouds the dead.person usually with garment
     "(Every man will then rise again who was ever alive; if he was drowned in
     water, or if wild animals ate him, or if fire burned him unexpectedly to
     ash, and the ash was scattered by blasts, the Almighty God can neverthe-
     less raise him up again, he who created this whole world out of nothing,
     and he who does not believe this, has no faith.)
     The dead person is usually shrouded in a garment (…)" [and the text
     goes on to describe the spiritual significance of this shroud]

Note that the last clause is best translated by a passive, and not by an indefinite
— an indication that *man* is an emptier element than PDE *one*, *people*, *they*, *we*
or *you* and is hardly more than a place-holder for the AGENT role.

   Eleven of the 26 clause-initial uses are precepts: *Man ne mæg* 'You/One
cannot…', *Man mot* 'You/One are not allowed to…' or *Man sceal* 'You/One
must…', often, but not invariably, at episode boundaries. This appears to be a
use in which *man* refers to the collectivity of human beings rather than an
indefinite set of human beings, and as such could be said to have more semantic
content than in the previous examples:

(6) *Hit is awriten:* **Man** *sceal hine   gebiddan to his drihtne*
     it   is written one   must himself pray   to his lord
     "It is written: One must pray to one's lord" ⟨ÆCHom I, 11, 172.23⟩

The remaining four cases involve the verb *cweþan* 'say', also at episode boundaries; an example is (7), in which the textual cohesion is accomplished by *þissum* 'this':

(7) **Man** *cwæð on bocum gehu*   *be*   *þissum bearnteame,*
one says in books in.some.way.or.other about this   progeny
þæt (…) ⟨ÆHomM 2 98⟩
that
"It is said in books in various ways about this progeny, that (…)"

The other variants of this expression are either active with indefinite *we*: *We rædað on bocum* 'we read in books' (e.g. ⟨ÆCHom I, 18 244.15⟩), or passive, as in *On bocum is geredd* 'In books is read' (e.g. ⟨ÆCHom I, 22 320.2⟩), or start with an expletive, as in *hit stent on bocum awriten* 'It stands written in books' (e.g. ⟨ÆHom 21 397⟩). There are two things to note about such phrases. The first one is that they confirm the link between OE *man*-clauses and the use of passives which has been noted before (e.g. Fischer 1994); *man* does the same job as the passive in that it obscures the agent of the action. The second one is that all initial constituents here are unmarked themes that do not refer back to the previous sentence — in (7), for instance, that function is delegated to *þissum* 'this' in the prepositional phrase *be þissum bearnteame* 'about this progeny'; in most of the other instances, there is no overt link at all, usually because these sentences start a new episode.

Clause-initial *man* occupies a niche in Old English that is not affected by the syntactic changes that affect the other uses of *man*, as we will discuss below, but it is clear that it is a small niche, and could well be too small to save *man* from its decline through the various factors outlined in Section 2 above.

3.3 *Man* not clause-initial

3.3.1 *Verb-second*

Rissanen notes that OE *man* seems to be used "when the focus of interest is totally removed from the referent of the subject to some other element of the clause" (Rissanen 1987:417–418; 1997:514) and this is an important pointer to its loss in this subtype.

The position of *man* in subtype 2 is far less prominent than in subtype 1, and is as such far better suited to such an empty element as *man*, which may explain why subtype 2 is also far more numerous. Subtype 2 locates *man* in the specifier of a functional position which has been identified as the MoodPhrase (MP) by

van Kemenade (2000), with SpecMP hosting clitics. In this position, *man* will follow the finite verb when the first constituent, in SpecCP, is a *wh*-word, the negator *ne* or a member of a restricted group of adverbs, most prominently *þa* 'then' — as do all other subjects, nominal and pronominal alike:

(8) *ða gebrohte **man** him to, tomiddes þam folce, ænne dumne mann,*
then brought one him to among the people a   dumb man
& se wæs eac swilce   deaf (…) ⟨ÆHom 18, 25⟩
and he was also likewise deaf
"then was brought to him/then people brought to him, among the people, a man who was dumb, and also deaf"

The clitic nature of pronoun subjects emerges when the first constituent is not a *wh*-word, the negator *ne* or an adverb like *þa* 'then', but a topicalized nominal or prepositional object. When these constituents appear in the first position, subject nominals invert in Old English, but pronouns do not, and neither does *man*:

(9) *Be ðisum lytlan **man** mæg understandan (…)* ⟨ÆGenPref 72⟩
by this   little one may understand
"By means of this little thing can be understood (…)"

Van Bergen (2000a, b, c) identifies this as one of the diagnostics for pronominal status, indicating that *man* in these instances at least behaves as a pronoun rather than as the nominal expression it must have been originally. This special behaviour of these pronominals can be translated structure-wise as a failure of the verb to move all the way up to C in such cases; it sits lower, in the Head of the MP (M in tree (11) below). The clitic behaviour of *man* is in itself not important for our argument, but explains why we discuss examples like (8) and (9) under one heading: *man* occupies the same position in each case (SpecMP); it is the position of the verb that is different: C in (8), having moved there from V, via T and M, as in (10), but M in (9), having moved there from V via T as in (11).

(10)

```
                CP
           ┌────┴────┐
         Spec        C′
          ða      ┌───┴───┐
                  C       MP
               gebrohte ┌──┴───┐
                      Spec     M′
                      man   ┌───┴───┐
                            M       TP
                                 ┌──┴───┐
                               Spec     T′
                                     ┌───┴───┐
                                     T       VP
                                          ┌──┴──┐
                                        Spec    V′
                                                 │
                                                 V
```

(11)

```
                  CP
            ┌──────┴──────┐
          Spec            C′
     Be ðisum lytlan   ┌───┴───┐
                       C       MP
                            ┌───┴───┐
                          Spec      M′
                          man    ┌───┴───┐
                                 M       TP
                                mæg   ┌──┴───┐
                                    Spec     T′
                                          ┌───┴───┐
                                          T       VP
                                               ┌──┴──┐
                                             Spec    V′
                                                      │
                                                      V
```
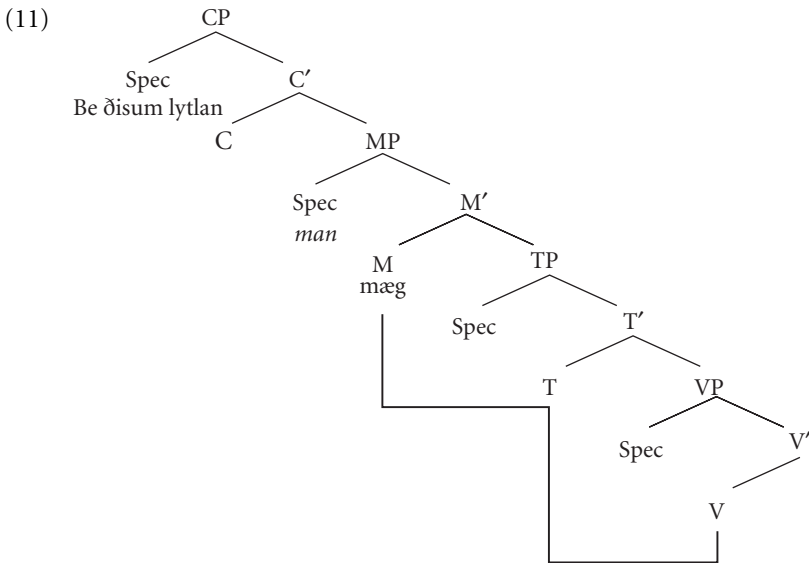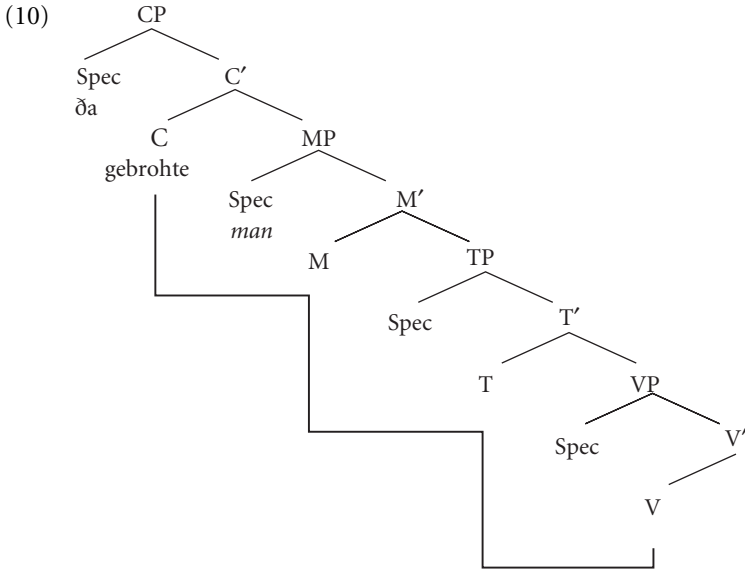
Because subject pronouns sit in SpecMP, it is only attestations of inversion of the finite verb and a nominal (as opposed to pronominal) subject that constitutes solid evidence that V2 is still in place. The decline of such attestations indicates that the loss of V2 sets in at the end of the fourteenth century and gains momentum during the fifteenth century (van Kemenade 1987: 219–223).

The evidence suggests that the loss of V2 should be translated in syntactic terms as a failure of the finite verb to move to a higher structural position in the clause (C after clause-initial *ne*, *þa* and *wh*-forms, M after clause-initial NPs or PPs); after the demise of V2 the verb does not climb any higher than T ('Tense'). Subject and topic in this analysis are both in SpecCP in Old English; but when V2 is lost, the subject remains in SpecTP and no longer appears in SpecCP (based on van Kemenade 1997a, b, 2000, 2001).[4]

3.3.2   *V2 and information structure*

What exactly does V2 mean in terms of information structure? The first position of a clause provides the starting point of the entire message, and usually contains given information (the 'theme'); the most favourable position for new information is towards the end of the clause ('end focus'). In Present-day English, unmarked themes in ordinary declarative clauses are invariably encoded by the nominative subject position in SpecTP, which can only be filled by an NP. Other material may precede it, but such items constitute marked themes which usually imply a contrast of some sort, and have a specific discourse function (see Section 3.2 above). In a V2 language like Dutch and Old English, 'unmarked' themes are not restricted to a syntactic category, as just about any XP may occupy the first position. Unmarked themes may be adverbials, objects or prepositional complements, which means that all these constituents may be used for textual cohesion without evoking any of the special contrastive discourse effects that are associated with marked themes.

When V2 is lost and SV is generalized in English, only subjects can be unmarked themes. This diminishes the syntactic options open to the language user for positioning old information, and it is probably no coincidence that the early fifteenth century produces a number of innovative strategies to turn constituents into subjects: prepositional passives as in PDE *he was well thought of, the doctor was sent for* etc. (see Denison 1985: 190–191), and subject-to-object raising (ECM). These innovations represent new mechanisms to front an NP which is given information and place it in the unmarked theme position, and are therefore connected to the loss of V2.

The case of the passive subject-to-object raising (or ECM-) construction is instructive in this respect as it shows the advantage of an impersonal passive construction over an indefinite construction.[5] It has often been noted that ECM-constructions occur mainly in the passive, from the time of their first attestations to the present day (e.g. Warner 1982 and Fischer 1989, 1992 for Middle English; Fanego 1992 for Shakespeare's English; Mair 1990 for Present-day

English). A corpus example from Mair (1990) demonstrates that the answer lies in the way such passive constructions enable old information to be fronted without becoming marked themes (for a detailed discussion of passive ECM and information structure, see also Noël 1998):

(12)   Thanks to the ubiquitous television set, the best known Canadians in Britain are, quite possibly, Bernard Braden, Hughie Green and Robert McKenzie. Others more talented — Jon Vickers, Lynn Seymour, Mordecai Richler, Sir William Butlin, John Hemming, Oscar Petersen, Garfield Weston, Paul Anka, Glenn Ford, Yvonne de Carlo, Raymond Burr, Donald Sutherland and Christopher Plummer — are probably seldom identified as Canadians. *Many of them* are generally assumed to be Americans, which raises the whole struggle to maintain a separate identity from her giant neighbour. (Mair 1990: 180)

Textual coherence demands that the given information of that final sentence (*many of them*, referring to the list of names) appears as subject, and Mair notes that none of the available alternatives to a passive ECM (active ECM as in (13a), indefinite pronoun and finite clause as in (13b), or expletive subject and finite clause as in (13c)) will meet this requirement. Note that a fourth strategy, fronting out of an active ECM, as in (13d), is also available, but equally undesirable, as it turns *many of them* into a marked theme:

(13)   a.   People generally assume *many of them* to be Americans.
       b.   People generally assume that *many of them* are Americans.
       c.   It is generally assumed that *many of them* are Americans.
       d.   *Many of them* people generally assume to be Americans.

A V2 language does not need such stratagems as there is no ban on non-subjects to function as unmarked theme, as illustrated by the Dutch translations of the relevant clause in (12); (14a) is active with indefinite subject *men* 'one' (akin to OE *man*), and (14b) is passive. The two constructions are functionally equivalent. The unmarked theme is in both cases a PP adjunct (in bold) — a strategy that was no longer available to English after V2 was lost:

(14)   a.   ***Van deze mensen*** *neemt men meestal   aan dat ze   Amerikanen*
            of   these people takes one generally on   that they Americans
            zijn
            are

    b.   ***Van deze mensen*** *wordt meestal   aangenomen dat ze   Amerikanen*
       of   these people is   generally taken.on   that they Americans
       zijn.
       are
       "These people are generally assumed to be Americans"

Such contrasts between V2 and non-V2 languages are discussed in translation studies (e.g. Hannay & Keizer 1993) and in translation manuals (Lemmens & Parr 1995), as particular care has to be taken when translating from Dutch to English to make sure that unmarked themes in Dutch remain unmarked themes in English.

    This example demonstrates the important role of subjects in Present-day English: the burden of textual cohesion is mainly carried by them. This means that they can rarely afford to be contentless.[6]

3.3.3   *The content of Dutch **men**: evidence from translation studies*

How contentless was OE *man*? There are two pointers. One is the evidence from the role of a cognate indefinite in a language in which V2 is still in place. There is a profound difference between the Dutch indefinite *men* and PDE indefinites like *people*, *you*, *we* or *they*. Translation studies have shown that although Dutch *men* generally provides an excellent equivalent for such PDE indefinites, the reverse is not true: Dutch *men* rarely allows a translation by PDE indefinites. Translation textbooks observe that *men* is often used as a deliberate strategy to obscure the agent, and note that a good English translation generally needs a more specific indication of the subject (Lemmens & Parr 1995: 275). The first option is to go for a passive construction in translation. An example is (15), a V2 construction with the adjunct *daarom* 'for this reason' as its unmarked theme, and the finite verb *voegt* 'adds' in second position followed by the subject *men* (Modern Dutch does not have a system of pronominal clitics as we saw operating in the OE example of (9) above):

(15)   *Sap van druiven is maar kort   houdbaar.   Daarom voegt **men***
       juice from grapes is only briefly non-perishable therefore adds one
       wijngist aan het sap   toe.
       yeast   to   the juice to
       "Grape juice can be stored only for a short period of time, and that is
       why yeast is added to it." (Recommended translation, *ibid.* 308)

Dutch *men* is apparently so devoid of content that it obscures the identity of the AGENT as effectively as a passive construction, which explains the equivalence

we saw in (14a–b) above. In contrast to contentless *men*, PDE indefinite pronouns like *we, you, they* or *people* always define interlocutors, either by inclusion or exclusion. Even *one*, which is perhaps the most impersonal of all indefinites, defines and includes interlocutors.[7] It clearly conveys a stronger sense of involvement on the part of both interlocutors than the passive, witness examples like (16a–b):

(16) a. Physical pain is often inflicted upon children.
      b. One often inflicts physical pain upon children.

These examples have been taken from Siewierska (1984: 243) who notes that (16b) carries unfavourable overtones because even with *one* there is a sense that the interlocutors are involved in some way. No such effects are conveyed by (16a), the impersonal passive.

When the PATIENT argument conveys new information, a passive is less desirable because it would locate an informationally salient constituent in the subject position, and the sentence, though perfectly grammatical, becomes stylistically awkward, especially if the constituent is particularly heavy and complex; an example is (17). In such cases, *one* may come to the rescue, as in (18), from Siewierska (1984: 247; see also Seoane-Posse 2000: 105–106).

(17) The snorting contempt with which Truman would have regarded the
      $1000 cowboy boots and the Adolfo gowns can be imagined.

(18) One imagines the snorting contempt with which Truman would have
      regarded the $1000 cowboy boots and the Adolfo gowns. ("A good snob
      is hard to find", *Time* Sept. 19, 1983, quoted in Siewierska 1984)

One, then, is something of a last resort: if the passive, the most natural choice when the agent is an indefinite entity, is unavailable for information-structural reasons, *one* will rescue the structure.

There is evidence that OE *man* exhibits the same functional equivalence with passives as Dutch *men*. Consider the following Old English translations from Latin:

(19) Lat.:   *Eos   qui ducuntur   ad mortem eruere   ne cesses*
                those who ledPASS3PL to death   freeINF not hesitate2SG
        OE translation:
        *þa   þe   **man** læt to deaðe alys hi   ut symble.*
        those whom people lead to death free them out always
        "always set free those who are being led to death" ⟨Æls (Edmund) 214⟩

The Latin passive is translated as an active structure, with *man* as its subject, even though a passive translation is perfectly possible. Another example is (20), which translates a non-finite passive construction by a finite active construction, even though a finite passive construction would again be perfectly acceptable:

(20) Lat.:   *Sicut Filius hominis non venit ministrari   sed ministrare*
              so   son   of.man not came servePASSINF but serveACTINF
        OE translation:
        *Swa mannes sunu ne   com þæt him **man**   þenode ac þæt he þenode*
        so   of-man son   not came that him people served but that he served
        ⟨Mt (WSCp) 20.28⟩
        "So did the Son of Man not come to be served but to serve"

Because subjects have such a prominent function in Present-day English (as only they can constitute unmarked themes after V2 was lost), there is no niche for contentless indefinites of the *men/man* type. Indefinite subjects almost inevitably have to refer, witness the strong inclusion effect of PDE *one* in (16b) above. A typical example of this referring function is the use of *one* as a circumspect, non-committal way of introducing or summarizing the views of the speaker, especially in logical discursive or scholarly texts (see also *OED* s.v. *One* 21). Authors of fiction often play upon the formal, distancing, pompous effect of *one* in such texts. In the following fragment, *one* is made into a protective shield behind which the maligned Tuke cowers:[8]

(21)   "It is of course utterly unrealistic to suppose that reputations in literature are made overnight", said Tuke, who had been brooding on Odingsels' hard words. "**One** despises egotism, of course, but **one** instances oneself; **one** can give Giles a few years, and **one** is perhaps more *engagé*, but **one** has certainly not been overwhelmed with recognition. As for music being, *au fond*, more serious than letters, well **one** feels perhaps that those who are committed to an art are the best judges of its limits." "Better judges than technicians, however capable", said Miss Tooley, bridling. Everybody knew that when Tuke began to refer to himself as "one" Bridget would do battle for him. (Robertson Davies (1980 [1951]) *The Salterton Trilogy*, 653–654)

If the functional equivalence of OE *man* with Dutch *men* is valid, the conclusion of this section must be that the loss of V2 played an important role in the demise of *man* in main clauses. Subjects no longer occupied the same position as topics (SpecCP), which meant that marked themes came to be also syntactically

marked (as topicalized constituents), whereas unmarked themes were restricted to subjects in SpecTP. This means that subjects came to play a far greater role in maintaining textual cohesion. This left little scope for the indefinite pronoun *man* whose main role had been to provide a contentless subject, functionally equivalent to the passive. The changes in information structure resulting from the loss of V2 promoted the use of passives, which took over the function of *man* in main clauses.

3.4   *Man* in subclauses

3.4.1   *In subjunctive **that**-clauses*
OE *man* in subjunctive subclauses (subtype 3 in Table 1) appears typically in clauses of the type in (22) (evaluative predicates), (23) (verbs of commanding and permitting) and (24) (verbs of persuading and urging):

(22)   *Nis   na god   þæt **man** nime   his bearna   hlaf. and*
      not-is not good that one takessubj his childrenGEN bread and
      wurpe   hundum ⟨ÆCHom II,8 69.88⟩
      throwsubj dogsDAT
      "It is not right to take one's children's bread and throw it to the dogs"

(23)   *Godes æ   byt   eac þæt **man** arwurþige   symble hys fæder &*
      God's law commands also that one honourssubj always his father and
      modor   mid   mycelre underþeodnysse ⟨ÆAbusMor 133⟩
      mother with great   obedience
      "God's law commands also that people always honour their father and mother with great obedience"

(24)   *swa swa Crist   lærde   þæt **man** don sceolde, þa þa he on his godspelle*
      as   Christ taught that one do   should when he in his gospel
      swutolice þus   cwæð ⟨WPol 2.1.1 53⟩
      clearly   thus spoke
      "as Christ taught that people should do, when he in his gospel clearly spoke as follows"

Sentence (24) is unusual in that verbs of persuading and urging, when complemented by a subjunctive clause, are almost invariably accompanied by an object whose reference is identical to that of the subject of the subjunctive clause, as in (25) (object and dependent subject in bold):

(25)   *&   we lærað eac georne **manna   gehwylcne**, þæt **he** Godes ege   hæbbe*
      and we teach also gladly menGEN eachACC   that he God's awe havessubj

> *symle   on his gemynde* ⟨LawICn 25⟩
> always on his mind
> "and we also gladly teach each man that he should have the fear of God
> always in his mind"

This is a form of obligatory object control, in which the content of the subject of the embedded clause is determined by the object in the higher clause. This property of verbs of persuading and urging made it possible for the *to*-infinitive to appear as complement, as the identity of the non-overt infinitival subject could readily be inferred from the object of the higher clause ('object-controlled PRO'). An example of a *to*-infinitive after this same verb (*læran*) is given in (26) (controlling object and controlled PRO subject in bold):

(26) *he (…)* **heo**   *lærde* [**PRO**] *to healdanne regollices liifes þeodscipe*
      he   themACC taught   to observe   regulated life's discipline
      ⟨Bede 3 16.226.26⟩
      "he taught them to observe the discipline of a regulated life"

Verbs of commanding and permitting exhibit object control as well, but do not always require the presence of an object. Objects (invariably in the dative) are present in (27) (with subjunctive clause, and object control: the overt subject of the embedded clause is identical in reference to the object of the higher verb) and (28) (with *to*-infinitive, and object-controlled PRO). Controllers and controlled subjects in bold:

(27) **þam cildum**   *ic bead   þæt* **hi** *gehyrsume wæron fæder and*
      the childrenDAT I ordered that they obedient   were   father and
      meder ⟨ÆCHom I, 26 378.23⟩
      mother
      "I ordered the children to be obedient to their father and mother"

(28) *& ic (…)* **þe**   *bead* [**PRO**] *mine bebodu   to healdanne.*
      and I   youDAT order   my   commands to keep
      "and I order you to keep my commands" ⟨Hom S 3, 53⟩

When there is no object in the higher clause that may serve as a controller of the lower subject, the subject position is filled by *man* if the complement is a subjunctive clause (which, as a finite clause, requires a subject), as in (23) above, or by generic PRO when the complement is a *to*-infinitive, as in (29):

(29) *ic æfre fram frymðe   bebead* [PRO$_{gen}$] *þone drihtenlican dæg to*
      I ever from beginning ordered   the   lordly   day to

> *healdenne* ⟨HomU 46 134⟩
> hold
> "I have ever from the beginning ordered to keep the Lord's day"

Evaluative predicates rarely have overt controllers; an example is (30) (controllers and controlled subjects in bold). The majority of instances have generic PRO (in *to*-infinitives) as in (31), or *man* (in subjunctive clauses), as in (22) above.

(30)   *þæt he (…) smeage   (…), hwæt **him**   sy   betst* [**PRO**] *to*
      that he   considersSUBJ   what himDAT isSUBJ best   to
      donne and hwæt [**PRO**] *to forganne.* ⟨WPol 6.2 146⟩
      do   and what   to forgo
      "that he may consider what he should do and what he should not do"

(31)   *acsiað georne hu betst sy*   [PRO$_{gen}$] *to farenne* ⟨WHom 11 216⟩
      ask   eagerly how best isSUBJ   to go
      "ask eagerly how it is best to go"

It seems that the *to*-infinitive developed into a non-finite alternative for the subjunctive clause in Old English. Quantitative studies show that such subjunctive *that*-clauses (after desiderative or conative verbs meaning 'try' or 'want', verbs of commanding and permitting, and verbs of persuading and urging) were replaced by *to*-infinitives in the transition from Old English to Middle English (Los 1998, 1999). This may seem strange at first sight, as one would not expect the subjunctive clause to be functionally equivalent to an infinitive, as the latter has no positions for independent tense (T) or overt subjects (AgrS). The information in T and AgrS in subjunctive clauses is, however, redundant in the majority of cases: subjunctive Tense is never independently meaningful but copied from the Tense of the higher clause (as confirmed by crosslinguistic studies, e.g. Noonan 1985:53). The content of AgrS in the subjunctive clause is similarly predetermined ('controlled') — by the object (or, in the case of monotransitive verbs, the subject) of the higher clause. The absence or presence of these structures does not materially affect or limit the range of expression of the *to*-infinitive, compared to the subjunctive clause; the subjunctive clause does not have an edge over the *to*-infinitive, in spite of its more extensive structure, and it is this that allowed the *to*-infinitive to become functionally equivalent to the subjunctive *that*-clause.

    OE *man*, then, could be said to be in competition with generic PRO. Note that OE *man* (and German *man*, and Dutch *men*) has all the hallmarks of an overt manifestation of generic PRO, including the ban on appearing in object

position (of verb or preposition): *man/men* only has a nominative form. When the *to*-infinitive ousts such subjunctive clauses (and note that most of the *that*-clauses in this section translate as a *to*-infinitive in Present-day English), this use of *man* disappears with it. A small niche remains in those cases in which the selection of generic PRO is unavailable; after a verb of persuading and urging like *teach*, for instance, PRO would be interpreted as controlled PRO, and this is one of the uses in which we encounter a finite clause in Present-day English with *one* as subject:

> (32) The Spanish daily *El Pais* quoted Mr Cela as saying that he did not in-
> tend to let the award change his habits, because the British side of his
> character had taught him **one** should only appear in the press thrice in a
> lifetime — "when born, when dead and when receiving the Victoria
> Cross". (Microconcord Corpus)
> (≠ the British side of his character had taught him$_i$ PRO$_i$ to appear in the
> press thrice in a lifetime)

3.4.2 *In other subclauses*

Together with subtype 1 (*man* clause-initial), *man* in subclauses other than the subjunctive *that*-clause (= subtype 4) appears to be the type that is least affected by the changes discussed so far, although, like Dutch *men*, it does not invariably allow a translation by one of the PDE indefinites. In example (33), for instance, a PDE passive appears to be the best option.

> (33) *And þu wel wast, leof, þæt hit wile hearmian þinum cynerice heora*
> and you well know dear that it   will harm   your   kingdom their
> *receleasnysse, gyf him   **man** ne   gestyrð heora stuntnysse.*
> neglect   if them one not urges their folly
> "and you know well, dear King, that these people will harm your king-
> dom by their flouting of the rules if they are not urged from their folly"
> ⟨ÆHomM 14 152⟩

4. Conclusion

Many proposals have been made in the literature about the disappearance of the OE indefinite pronoun *man* (Middle English *men/me*). We have suggested two additional factors which almost completely destroyed the niche occupied by *man* in Old English. The first one was the loss of V2, which affected the information

structure of the clause, and promoted the use of various passive constructions over the use of an active construction with a *man* subject. The second one was the competition between *to*-infinitives and subjunctive clauses which resulted in *man* in these contexts being largely ousted by generic (or arbitrary) PRO.

Notes

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1. Rissanen (1997:521) points out that this new use should not be regarded as some form of regrammaticalization, as it does not represent a reflex of the original indefinite pronoun (OE *man*, ME *men*, *me*), which had clearly been formally differentiated from the noun *man* well before this period.

2. Throughout this article, the reference to an OE text is enclosed in ⟨⟩ and follows the system of short titles as employed in Healey & Venezky (1985) (in turn based on the system of Mitchell, Ball & Cameron 1975, 1979).

3. Mitchell also notes the problems of editorial punctuation practice and scribal confusion between the *positura* (signifying a full stop) and the Tironian sign for the Latin word *et*, which means that some instances at least of *7* in OE manuscripts do not stand for *and* but mark the beginning of a new sentence (*ibid.* §1724), which further complicates the analysis of *and/ac* clauses.

4. The evidence for a 'MoodPhrase' remains as long as pronominal subjects continue to show a positional difference compared to full nominal subjects. Such a difference is attested until well into the seventeenth century with respect to the placement of the negative element *not* (Fischer et al. 2000:135; Rissanen 1994, 1999).

5. These labels refer to different analyses of the same construction, depending on how the subject of such infinitival constructions (e.g. *him* in a PDE sentence like *I consider him to be a fool*) is treated: as a deep-structure subject that raises to the object position of the higher clause (as in the earlier Extended Standard Theory or, more recently, Minimalist Theory) or as a constituent that is assigned Case by the higher verb without leaving its deep-structure subject position (Government & Binding Theory). The question of which label or analysis fits this construction best is irrelevant for our present purpose.

6. It could be argued that contentless subjects did survive in Present-day English, witness the 'dummy' element *it*. The *raison d'être* of this element is entirely structural: English clauses must have overt subjects, even if the verb has no thematic roles to assign (weather-*it*) or assigns only an internal role, which happens to be conferred on a constituent that cannot raise to the subject position for structural reasons (expletive *it*). OE *man*, on the other hand, does carry a thematic role (AGENT of the verb) and is therefore not as 'dummy' as dummy *it*.

7. There is an additional difference between PDE *one* and Dutch *men* in that the former is associated with a formal register. The greater formality of *one* versus the indefinite use of *you*, *we*, *they* appears to be a fairly recent development (cf. Seoane-Posse 2000 for the situation of these indefinites in Early Modern English). Unlike PDE *one*, Dutch *men* is not restricted to formal discourse and easily surfaces in casual conversation, usually in the less prominent, inverted position, as in (i):

(i) *maar dat realiseer je   je   normaliter niet dat het een eh zo'n   groot gedeelte*
     but   that realize you yourself normally not that it a   uh such.a large part
     van de elektriciteit wordt opgewekt door atoomcentrales   hè,
     of the electricity is   generated by   nuclear power stations [discourse prt]
     *niet in Nederland, in Nederland is **men** dat zich   absoluut niet bewust*
     not in Netherland in Netherland is one that oneself absolutely not aware
     "But you usually don't realize that it is, uh, that such a large part of electricity is generated by nuclear power stations, do you, not in the Netherlands, in the Netherlands people are not aware of this at all" (Ernestus 2000).

8. The same effect could apparently be produced with other indefinite expressions, as with *a man* in the following Dickens fragment, in which the pompous distancing effect of the indefinite expression to refer to one's own person is taken to ridiculous excess:

(i) One of Steerforth's friends was named Grainger, and the other Markham. They were both very gay and lively fellows; Grainger, something older than Steerforth; Markham, youthful-looking, and I should say not more than twenty. I observed that the latter always spoke of himself indefinitely, as "a man", and seldom or never in the first person singular.
    "*A man* might get on very well here, Mr Copperfield", said Markham — meaning himself.
    "It's not a bad situation", said I, "and the rooms are really commodious."
    "I hope you have both brought your appetites with you?" said Steerforth.
    "Upon my honour", returned Markham, "town seems to sharpen *a man*'s appetite. *A man* is hungry all day long. *A man* is perpetually eating." (Dickens, 1849–1850, *David Copperfield*, 419)

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The progressive in Older Scots[*]

Anneli Meurman-Solin
University of Helsinki

1. Introduction

This article offers a corpus-based description of the use and development of the progressive in Scots from 1450 onwards. The discussion is structured as follows. I will start by briefly summarizing patterns of variation and change as reflected in the frequencies and distributions of the variant forms of the present participle; nominal forms in -ING will be referred to when these allow us to understand patterns of idiolectal variation (Section 2). The aim of this analysis is to see which variants can be given paradigmatic status, and to provide evidence as to whether these have specialized distributions as regards their use in various functions. In this context I will also raise the question of whether the use of large electronic databases will allow us to reconsider the criteria we should apply to distinguishing between orthographic and phonological variation on the one hand and morphological variation on the other. I will try to justify the need to re-examine ways of categorizing variants in terms of grammatical systems by illustrating specialized distributions of the various -ING forms in idiolects, including those variants traditionally grouped together as reduced.

Secondly (Section 3), I will analyse the different types of the progressive, providing evidence of the low frequency of the type BE + preposition + a verb form in -ING in texts illustrating the early use of the progressive in Scots. Information on the frequency and spread of this type in Scots might allow us to consider the possible influence of Celtic languages on the development of the progressive in English. The debate concerning Celtic influence is motivated by formal similarities with the type 'copula + preposition/aspectual marker + gerund' in the insular Celtic languages (for a summary of the various hypotheses, see Mittendorf & Poppe 2000: 117–119). I will also examine the use of the active form in a passive sense. Finally, in Section 4 I will relate the use of the progressive in Older Scots to types of discourse.

The study is chiefly based on the Helsinki Corpus of Older Scots, 1450–1700 (HCOS; cf. Meurman-Solin 1995a, b);[1] in addition, a number of examples have been extracted from an expanded sample of the *Criminal Trials of Scotland* (1561–1591), and from seventeenth- and early eighteenth-century letters in the Corpus of Scottish Correspondence (CSC; cf. Meurman-Solin forthcoming), being compiled at present.

2.   Variation in form

2.1   -AND and -ING

What do we know about the distributions of the main variants of the present participle from earlier research? Devitt has examined the diffusion in Scots of what she calls the Anglo-English form in -ING, summarizing her findings as follows:

> With this high initial frequency of 62% -ING, the movement to 99% -ING by 1659 is less dramatic than the movement of the other features [the relative clause marker, the preterite inflection, the indefinite article, the negative particle]. (…) After initial periods of relative stability (the apparent decline between 1520 and 1559 being non-significant), use of -ING increases very gradually until 1600, when it virtually levels off. This pattern for the (PresPrtcpl) variable differs significantly from each of the other variables, at a level of < 0.0001.
>
> Although this change occurs more gradually than the changes in the other variables, it still represents a substantial move toward the Anglo-English standard. The 62% use of -ING in 1520–1539 allows considerable variability among texts (…). But such variability within texts becomes less common after 1600, when categorical usage of -ING becomes the norm (…) the levelling of anglicization overall from 1600 to 1659 masks a new change: from variable -ING usage to categorical -ING (…)
>
> Certainly the shift from -AND to -ING must have been well on its way during the fifteenth century. The sixteenth century sees the increasing and almost complete dominance of -ING, while the first half of the seventeenth century is largely a period of refinement for this advanced change, of moving to categorical use of -ING in individual texts, of -ING becoming the only possible form. (Devitt 1989: 28–30)

The following observations can be made. The period of co-variation is relatively long.[2] As Devitt's interest is exclusively in the relative frequencies of the variant forms, there is no information about what lexical items or syntactic functions

adopt the incoming form earlier than others. Moreover, her database is not sufficiently representative to provide usage information, for example, in more private documents. I will illustrate the importance of such documents later in this study.

According to Dons & Moessner (1999:24), the frequency of present participles ending in -AND in the HCOS is relatively low in the progressive. The absolute number of occurrences is 112, approximately 9 per cent of all uses of this present participle form in the corpus. My somewhat lower figures (see Table 1) can perhaps be explained by the application of stricter criteria, listed in Denison (1993:372–380), in the identification of 'true progressives'.[3]

In Older Scots, specialized distributions of the variant forms of the present participle as well as those of the gerund and the verbal or the deverbal noun (for these labels, cf. Quirk et al. 1985:§17.54) can usually be attested on the idiolectal level, but in some idiolects there is some degree of interchangeability (see example 5).[4]

I would like to stress the following methodological point. Instead of immediately restricting attention exclusively to the morpho-syntactic feature concerned, a thorough analysis of the orthographic and phonological system in each idiolect is necessary. If an analysis of this kind is not available, neither variants of inflexions in each morphological paradigm nor the correlation patterns between each form and function can be identified.[5] The scope of the present study has only permitted illustration of this methodological principle by a small number of examples in Section 2.3. A further important point is that the set of relevant variants in regional varieties cannot be defined in terms of the generally available grammatical descriptions of standard varieties, even though a sufficient degree of equivalence or similarity is usually claimed in the literature.

A closer analysis of my corpora of Older Scots has shown that, beside important differences between the dialect areas of Scotland, variants in -ING were first introduced into linguistic contexts of a very specific kind. In the HCOS, the variant *cuming* occurs exclusively in fixed phrases such as *in (all) tyme(s) cum(m)ing/cum(m)yng* in pre-1500 texts; other early occurrences of present participles in -ING have been attested in stereotypical non-finite adverbial clauses with predicate verbs such as *concerning, consedryng* and *prowydyng*, often used prepositionally, and in *nochtwithstandyng*. Other contexts are *according* replacing *accordand, exseding* as an intensifying adverb, *evirlesting (god)* for *evirlestand* in formulae, and the fixed expression *God willing*. In fact the earliest use of -ING in a context different from those above

has been attested in Lady Home's mid-sixteenth-century letter, in which the present participle *sertifying* occurs as a predicate verb in a non-finite clause.[6]

In addition to the items listed above, present participles in -ING of verbs such as *beseech* and *pray* occur in letters, where the variant is used with a first-person subject left implicit. It is interesting that variants in -ING are earlier in this stylistically marked context:[7]

(1)   Madame pleis zo*ur* grace / It is w*ri*tin to me how zo*ur* grace hes gottin ye eschete of w*illia*m / edmistoun" q*lk* Is u*er*ay p*ro*ffetable vnto zo*ur* grace becaus / all ent*eress* and clame y*t* w*illia*m edmistoun" allegit to haue of / zo*ur* grace Is now Indowtit zo*uris* Maist hum*m*elie **beseking** / zo*ur* grace no*t*w*t*standing ony laubo*uris* of o*ur* contray p*a*rtiis y*t* / yair be na p*a*rt y*ar*of disponit to yame bot at all ye samy*n* / Remane haill In zo*ur* grace hand*is* q*lk*is doand Is zo*ur* grace hono*ur* and p*ro*ffett and als zo*ur* grace may ye mair esely / help zo*ur* s*er*uito*uris* my bruy*er*is wyff & bairnis (CSC 1545? Lord Methven NAS SP2/2:102, *Correspondence of Mary of Lorraine*, CII:138)

As illustrated by this example, a writer may vary between variants in -AND (e.g. *is doand*) and -ING, but the latter is preferred in the marked context. Similarly, the choice of *praying* instead of *prayand* is particularly frequent in final formulae of the type *praying God to conserve/preserve you*, as in example 2:[8]

(2)   **praying** god to p*r*eserff *z*ur grace (CSC 1547 Sir Adam Otterburn NAS SP2/2:136, *Correspondence of Mary of Lorraine*, CXXXVI:188)

In the post-1570 texts of the HCOS, the present participle form -AND in the progressive is exclusively used in only six texts. There are no examples of this form in the progressive in the seventeenth century. Example 3 illustrates a sporadic use of the variant in an otherwise highly anglicized sermon by Bruce:

(3)   and the Lord **is beginnand** to abstract his mercie and grace from this Countrey, for the contempt of this quikning worde, quhilk hes sa clearlie sounded heare (HCOS 1590–1591 Bruce, 25)

Table 1a–d presents the statistical findings. The reduced variants discussed in Section 2.2 have not been included as they have primarily been attested in another database, the Corpus of Scottish Correspondence. The BE + *in/a* + -ING type (11 examples in the HCOS; see Section 3.1) has also been excluded.

Table 1 illustrates the replacement of the present participle in -AND in the progressive, which was completed by 1640, the gradual increase of the progres-

Table 1. The progressive in the HCOS. Types BE + -AND and BE + -ING.
Absolute numbers and mean frequencies per 1,000 words. N = number of texts per period, collections of private and official letters being counted as one text each.

Table 1a. Period 1450–1500

Text	-AND	Mean	-ING	Mean	Total	Mean
Acts of Parliament	2	0.07			2	0.07
Gilbert Hay	3	0.10			3	0.10
Dicta Salomonis	4	0.62			4	0.62
Porteous of Noblenes	1	0.27			1	0.27
Total (N = 10)	10	0.10			10	0.10

No occurrences in 6 (60 per cent) out of the total of 10 texts.

Table 1b. Period 1500–1570

Text	-AND	Mean	-ING	Mean	Total	Mean
Acts of Parliament	3	0.10			3	0.10
Stirling Records	4	0.36			4	0.36
Peebles Records	8	0.40			8	0.40
Fife Sheriff Court Bk	2	0.23			2	0.23
St. Andrews Kirk S.	1	0.18			1	0.18
Criminal Trials	9	1.17	6	0.78	15	1.95
Compl. of Scotland	1	0.12			1	0.12
Lamb, *Resonyng*	1	0.15	1	0.15	2	0.31
Boece, History	4	0.18	2	0.09	6	0.28
Official Letters	12	0.34	2	0.06	14	0.40
Bible	2	0.45	1	0.23	3	0.68
Total (N = 17)	47	0.23	12	0.06	59	0.29

No occurrences in 6 (35 per cent) out of the total of 17 texts.

sive over time, clearly accelerated in the latter half of the seventeenth century, and a high degree of heterogeneity between texts. With respect to the growing frequency of the progressive in Scots, my findings largely coincide with those reported by Elsness (1994) in his analysis of the progressive in the EmodE section of the Helsinki Corpus of English Texts: he notes that the number of progressive examples rises from 33 (mean frequency per 1,000 words = 0.17) in the period 1500–1570 to 52 (= 0.27) in the period 1570–1640 and to 100 (= 0.58) in the period 1640–1710.

As shown in more detail in Section 4, in the sixteenth century the highest frequencies for the progressive have been attested in trial proceedings, but

Table 1c. Period 1570–1640

Text	-AND	Mean	-ING	Mean	Total	Mean
Acts of Parliament	1	0.02	2	0.04	3	0.06
Stirling Records	1	0.10			1	0.10
Huntar, Handbook			2	0.29	2	0.29
Skeyne, *Pest*	1	0.13	1	0.13	2	0.27
Basilicon Doron			1	0.05	1	0.05
Bruce, Sermon	1	0.16			1	0.16
Row, Sermon			4	1.63	4	1.63
St. Andrews Kirk S.	5	0.30			5	0.30
Criminal Trials	12	1.21			12	1.21
Roy Trial	1	0.26			1	0.26
Wishart Trial	1	0.26	1	0.26	2	0.51
Fowler			1	0.17	1	0.17
Lesley, History			4	0.38	4	0.38
Pitscottie, History	3	0.28			3	0.28
Moysie, History	3	0.28	1	0.09	4	0.38
Lithgow, Travelogue			4	0.33	4	0.33
Melville, Diary			10	0.68	10	0.68
Birrel, Diary			8	0.63	8	0.63
Johnston, Diary			28	3.02	28	3.02
Lesley, Diary			1	0.12	1	0.12
Private Letters	2	0.14	4	0.27	6	0.41
Official Letters			1	0.09	1	0.09
Total (N = 30)	31	0.10	73	0.24	104	0.34

No occurrences in 8 (27 per cent) out of the total of 30 texts.

attention can also be drawn to the mean frequencies in Sir Archibald Johnston of Wariston's diary, dating from 1632–1639, and James Row's sermon, the so-called *Pockmanty Preaching*, which has been described as "exceptionally informal and vernacular in its style" (Aitken 1978:102). Table 1(d) shows consistently higher frequencies for texts representing the narrative text category (i.e. histories, biographies, travelogues and diaries), and confirms the finding that a generally greater number of occurrences of the progressive can be attested in trials.[9] In Sinclair's scientific treatise, sections describing the so-called 'experiments' are primarily expository, those recording 'observations' being narrative (Meurman-Solin 1993:92–93).

2.2 'Reduced' variants

Table 1d. Period 1640–1700

Text	-AND	Mean	-ING	Mean	Total	Mean
Acts of Parliament			2	0.05	2	0.05
Stirling Records			3	0.31	3	0.31
Aberdeen Records			5	0.29	5	0.29
Skene, Handbook			1	0.62	1	0.62
Reid			1	0.09	1	0.09
Sinclair, Science			17	1.12	17	1.12
Sinclair, Narratives			14	1.78	14	1.78
Welsh, Sermon			4	0.90	4	0.90
Standsfield Trial			15	1.81	15	1.81
Presbyterian Eloquence			6	0.70	6	0.70
Apology for Clergy			2	0.24	2	0.24
Spalding, History			19	1.23	19	1.23
Prince of Tartaria			2	0.60	2	0.60
Lauder, *Journals*			16	1.63	16	1.63
Lamont, Diary			9	1.29	9	1.29
A. Brodie, Diary			6	0.49	6	0.49
J. Brodie, Diary			16	2.42	16	2.42
A. Hay, Diary			11	1.10	11	1.10
Somerville, Biography			10	1.36	10	1.36
J. Turner, Biography			3	0.39	3	0.39
Private Letters			17	0.93	17	0.93
Official Letters			3	0.41	3	0.41
Total (N = 23)			182	0.74	182	0.74

No occurrences in 1 (4 per cent) out of the total of 23 texts.

There are texts in the HCOS where the variants *-in(e)*, *-yn(e)*, *-en(e)* occur in verbal nouns as well as present participles, as illustrated below. The variant of the present participle *failing* in the fixed phrase *failing thereof* is *failyene* in example 4:

> (4) The inqueist ordanis the baillies gang vesy the briggis and calsayis thairof gif thai be sufficient vphalding ('be held up') be the dichtaris as thai promist, and to caus thame mend all failyeis sufficient, quhilkis beand mendit ('being mended') to se gif thai will vphald the samin, and **failyene** ('failing') thairof to discharge thame and cheis vtheris in thair places.
> And als ordanis Andro Wychtman to caus fill vp the holis with erd or gravall quhair he tuk the clay till his kill bigging ('kiln building'), incontinent, becaus the fludis ar cummand ('are coming') on hand. (HCOS 1555 *Peebles B. Rec.*, 218)

In *A Dictionary of the Older Scottish Tongue* (s.v. *failzeand / failzeing of*), the variant *failyene* is grouped together with variants of forms ending in -ING, and an example (dating from 1572) is quoted from the same source as example 4. However, there is not yet sufficient evidence to justify a grouping of this kind since further corpus-based research may show that the forms *-in(e)* or *-en(e)* have an independent status as variants in a pattern of complementary distributions, and that they are systematically preferred in specific functions in certain idiolectal and/or geographical varieties of Scots (in this connection, cf. Section 2.3, examples 7 and 8). Their occurrence may be conditioned by features of individual lexical items, spelling conventions, function, genre-specific practices, or pronunciation. Moreover, as also illustrated by example 4, a careful reconstruction of relationships between a number of other variants (the past participle *vphalding*, instead of *vphaldin*, the use of *beand mendit* in an absolute clause, the verbal noun in the compound *kill bigging*, the Present Continuous *ar cummand*) should be included in the descriptive account.

For a closer examination of formal variation of this kind, a larger corpus of data extracted from diplomatic editions or manuscripts will have to be analysed; the HCOS has allowed us to identify local records and letters as particularly important sources for such a study.

2.3 Distributions of variants in idiolects

As stressed above, a statistical analysis of the so-called reduced variants is not presented because of their relative infrequency in the HCOS. However, it is noteworthy that in the data analysed so far, the prevailing trend is that the variants of the present participle are not used interchangeably. Yet it is possible to find idiolects such as the one illustrated in example 5:

(5) My dearest Sister I am impatient to hear how dear Mary is. I wou'd have sent last week but **was expecting** every day to hear from yow, becaus yow told me yow wou'd send. I am now very feard she is worce that I have not heard from yow. I am wearie with wreten before I am well begune to yow, for I **have been wreten** to Leslie. My mother tells me that her dearest cusen, Montrose, **is dying**; (…) Your bairne **is** very well and **going** alone. (HCOS c. 1697 Margaret, Countess of Northesk, to her sister, Countess of Leven, *Memorials of the Family of Wemyss of Wemyss*, Vol. 3: 158)

This writer has a grammar of the following kind: -*ing* in the Present and Past Continuous (*was expecting, is dying, is going*), -*en* in the Present Perfect Continuous (*have been wreten* 'have been writing') and as the gerund form of an irregular verb (*wearie with wreten* 'weary with writing').

   Another pattern of variation can be illustrated by a passage from Sir James Melville's *Memoirs*:

(6)   sche (…) askit how I cam ther. I said, as I **was walken** with my L. of Hundsden, as we past by the chamber dur, I hard sic melodie, quhilk rauyst and drew me within the chamber I wist not how; excusing my falt of hamelynes, as being brocht vp in the court of France, and was now willing to suffer what kynd of punissement wald pleise hir lay vpon me for my offence. (HCOS 1610 Sir James Melville of Halhill, *Memoirs of his own Life*, 1549–1593, 124)

The prevailing present participle form is in -*ing*, but in this passage reporting a dialogue (cf. Section 4), the form *walken* ('walking') is chosen in the Past Continuous.

   Letters are a rich source in the study of the progressive. The number of variants in -*in* or -*ine*, or -*en*, -*ene* seems to be on the increase as a larger corpus of letters becomes available. Patterns of variation may reflect a relatively high degree of systematicity. This is illustrated in examples 7 and 8. Example 7 is a letter by Alexander, sixth Earl of Eglinton, to his spouse:

(7)   My hert my most louing deutie remem/beritt to zou and all zour coumpanie vithe / my seruis to my lady our mother, I **haue / bein** this day **seine** my lord our brother and / sister, vho hes bein bothe very euille atteise / and **is mendin** very vekly, I did neuer sie / any of them in the fasoun, I houp the vorst / of bothe ther seiknes is past; I haue meid zour / excus to them and thy did exsep it most gledly / for thy say, thay do knau that ze ar not ebeill / to trauille as ze ar for the present. I am beissie / doine my tourins that I may deispache my / self homuard to zou so soun as I can (…) as for neuis I haue non bot that my lady / sempeill is deleyuer of ane docheter: sue wissing / zou all helthe and happines I rest. Zour most louing / housba*n*de till dathe / Ponoun 21 iune / Eglintoun (CSC 1613? Alexander, sixth Earl of Eglinton, to Anna, Countess of Eglinton, NAS GD 3/5/52, *Memorials of the Montgomeries*, 30:187–188)

It is relevant that the only instances of the variant in -ING occur in marked contexts in formulae, namely the optative verb *wissing* 'wishing', in a non-finite clause with an implicit first-person subject, and the participial adjective *louing*

'loving'. Variants in the progressive end in *-in* or *-ine* (*haue bein seine* 'have been seeing', *is mendin* 'is mending'); there is a gerund form in *am beissie doine* 'am busy doing', and the deverbal noun *tourins* 'tourings'. The Earl seems to have a richer paradigm of forms, since, beside the Present and Past Continuous forms prevailing in contemporary texts, he uses a Present Perfect Continuous *I haue bein this day seine* 'today I have been seeing'.

   One of his younger sons had a military career. In this son's letter, written in Paris, the present participles and verbal nouns end in *-in*, but the form in the progressive is *-ing*. His spelling system differs from that of more trained writers, and some of the variants have therefore been explained by giving a Present-day English equivalent (cf. Meurman-Solin 1999):

(8)   I am in peries ('Paris') and hes be goun ('begun') my exercies / to fenes ('fence') and danes ('dance') with your lo (lordship's) oled ('old') mester angles / and that my fencin and dansin extendes monthli / to 25 lib~ 10 soues and my mathamatikes monthli to 8 lib~ 10 s~ / bot con cernin ('concerning') my reyeddin ('riding') my bririn ('brethren') uil ('will') not let / me begin it uil ('while' in the sense of 'before') I hef dereksion fre ('from') your lo / uich ('which') I expec day bifor and that aer ('are') all the / girrer ('together') in pencion and peyes ('pays') fortin crouenes / in moneth for bay ('buy') mani extreordineres and / at my ariuel in perris I touk of a sout ('suit') of cloth / of sil uher ('where') of ther aer four elles for clothes and / kassak uith four elles of pax to leyen ('line') my kassak / uith uhich med ('made') en end of the monnies uhich I / had restin (…) bot I **am expecing** dayli for comanscien[?] ('comission') / {verso} fre your lo bot to tel yowr lo truli **uer** ('we are') all / **louking** errer ('either') for monnies or elis ('else') for a letter / uher your lo thinkes to fornis ('furnish') ous ('us')… praying to god to continou your lo in all hellth and hapines (CSC 1633 Alexander Montgomery NAS GD 3/5/192, *Memorials of the Montgomeries*, 230)

It seems relevant that the writer is consistent in the choice of variants; the variant ending in *-ing* is exclusively used in the progressive and in the final formula, whereas forms such as *fencin, dansin, concernin, reyeddin, restin* ('fencing, dancing, concerning, riding, resting') are used in other functions.

   It seems a corpus of approximately one million words is not sufficiently large to provide conclusive evidence of factors conditioning the choice of variants; moreover, the generally low frequency of the progressive forms in pre-eighteenth-century texts does not allow a statistically significant account of

formal variation (cf. also the conditioning of discourse type discussed in Section 4). In my view, the examples of forms ending in *-in(e)* or *-en(e)* given above cannot be exclusively explained by referring to the system of phonetic spellings often adopted by these writers. Instead, they may consciously distinguish between, for instance, *-in(e)* or *-en(e)* and *-ing*, using the latter in particular contexts. That the Earl of Eglinton should choose *-ing* exclusively in formulae in his early letters may suggest change from above, i.e. a practice consciously adopted from prestigious language use (cf. Meurman-Solin 2000b).[10] As illustrated above, in present participles in the progressive he uses the variant *-in(e)*.

   I would thus like to suggest that the form in -ING was perhaps consciously selected by the above informants as a more prestigious incoming variant, and was typically introduced as part of a stylistically marked discursive practice (cf. Meurman-Solin 2000a, b). It is evident that the co-occurrence patterns of the different variants are worth studying in great detail. The study of correlation patterns between form and function in varieties of English can shed light on whether variants previously marginalized as irregular or sporadic may be viewed as candidates for paradigmatic status in the grammar of a specific regional or local variety. At the same time, however, we need not reject the hypothesis of there also being variation resulting from the use of phonetic spellings and hypercorrect spellings (cf. Meurman-Solin 2001b). Comparisons between idiolects are important; example 9 is particularly interesting as it exhibits an explicit intertextual link between *a* and *b*:

(9) a. Caus buy ane pund of razines to give hir by the way. Also caus buy ane pair of rucht mittenes (CSC 1642 Alexander, sixth Earl of Eglinton, to Henry Seton, *Memorials of the Montgomeries*, Vol. 1: 256–257)

 b. Item, for ane pond of resings 00 lib 6 s
Item, for ane payr off rucht metting and twa to the bairne 00 lib 6 s (*ibid.*, account by Henry Seton)

The Earl of Eglinton asks his merchant to send him, among other things, raisins (*razines*) and a pair of mittens (*mittenes*), but Henry Seton, his Edinburgh merchant, writes *resings* and *metting* in the account annexed to the letter.

3.   Variation in type

3.1   BE + preposition + -ING

The constructions with a preposition are formally similar to the insular Celtic types involving the copula + preposition/aspectual marker + gerund (for a list of examples, see Mittendorf & Poppe 2000:117), which has produced the hypothesis of Celtic influence. In the literature, it is also generally hypothesized that the collocate BE + preposition + gerund influenced the development of the English progressive (cf. Mustanoja 1960:587ff.). However, before anglicization developments in Scots may have been different since the present participle had a distinctive form in -AND, which was only very rarely used in nominal functions.[11]

The findings indicate that both the BE + *in* + -ING and the BE + *a* + -ING types are infrequent in the HCOS and several contemporary family correspondences, including a selection of early eighteenth-century letters. Variants in -*in*(*e*) or -*en*(*e*) have not been attested in these types in the present data. There are altogether 10 examples of the BE + *in* + -ING type in the HCOS. While this corpus yields only one example of the BE + *a* + -ING type, five instances have been attested in the still incomplete CSC. The dates of the examples are very interesting, especially as, in addition to one example in Sir John Lauder's *Journals*, dating from 1665–1676, the BE + *a* + -ING type has only been attested in post-1670 letters.

Examples 10–15 illustrate the BE + *in* + -ING type:[12]

(10)   and spak su*m* quh[ ]t" with dene john~ pencher for apair of Endent*uris* yat **wos in makyng** betuex ye said p*rior* & s*er* alexand*er* of hvim~ of xv yher tak of alcambos (ECOS 1442 Durham, *Dean and Chapter Muniments: Locellus*, XXV.6)

(11)   It*em*, sancte Ierom~e sais that till here mes~ w*ith* clen hart and gud dewocioun~e garr*is* the saulys that he prays for feil na payne in purgatory quhil that mes~ **is in doinge**. (HCOS c. 1460 *Vertewis of the Mess*, 192)

(12)   Quhill thir actis **war in doing**, Ethod, king of Scottis, had trubill in his realme. (HCOS c. 1533 *The Mar Lodge Translation of Boece's History of Scotland*, 283)

(13)   Quhen thir things **was in doing** in Scotlande, Edwarde the sixt King of Ingland (…) departit out of this lyf (HCOS 1570 Lesley, *History of Scotland*, 248)

(14)   and farder salang as it salhappin the said wode **to be in cutting** and quhilk salhappin to be transportet and carrit be thame throw this burgh to the schoir thairof, for payment of 100 merks. (HCOS 1603 *Stirling B. Rec.*, 107)

(15)   The actioun anent the discussing of the richtis of the chantorie **is in
       doing** now, and I hawe wryttin (HCOS 1616 Sir Alexander Gordon of
       Navidale, *Sutherland Book*, 126)

The collocate is usually BE + *in making* or BE + *in doing*, but *to be in cutting* 'be
being cut', occurs in example 14. In examples such as these the structure has
been interpreted in the literature as having a passive sense. There are seven
examples of this type in the HCOS.

    The following is an early example of BE + *in* + -ING with an active sense:

(16)   this Turisday my lord Borthik cuming frome the cardenall till his awn
       hows I **was in huntyng** (CSC 1544 Sir George Douglas (non-autograph)
       NAS SP2/1:87, *Correspondence of Mary of Lorraine*, LXXXVII:104–105)

In addition, three examples in the active have been attested in George Sinclair's
scientific treatise. These can be illustrated by example 17:

(17)   But while the Coalhewers **were in digging down**, and had come the
       deepness of 13 or 14 fathom, they were stopped from working by
       Damps, or ill Air (…) (HCOS 1672/1683 Sinclair, *Hydrosticks*, 197)

In the HCOS and CSC data, the BE + *a* + -ING type is even less frequent than the
type with the preposition *in*. Moreover, while the type with *in* has been attested
as early as 1450–1500, the first subperiod in the HCOS, the first occurrence of
the BE + *a* + -ING type is as late as the mid-seventeenth century.

(18)   for I doe confes or ('before') now ye micht have doin quhat ye **ar** now
       adoeing. and quhat ye have now doin is with expressioun of kyndnes and
       schew of tendirnes. (CSC 1671 Margaret Kennedy, Lady Kers, *Memoirs
       of the Maxwells of Pollok*, Vol. 2:319)

(19)   And or ('before') my sones fitt uas could or his br[e]ath out, shoe **uas a
       working** hir beasse ends and **calumniatting** me wher euer shoe went
       amongest hir oune creue, lick ane ungriatt false doughter. (CSC 1671
       David, second Earl of Wemyss, *Memorials of the Family of Wemyss of
       Wemyss*, Vol. 3:113)

Examples 20–22, which have been attested in early eighteenth-century women's
letters, suggest that the BE + *a* + -ING type may indeed be a relatively late
development in Scots:

(20)   I dare say noe more for feare of loosing the post, for they are just come
       to tell me that it **is** just **a going**, and I have my nephew's letter to writ, so

must end writing (CSC 1717 Winifred, Countess of Nithsdale, *Book of Carlaverock*, 258)

(21)   My husband **was** the other day **a saying** that that part that William A[l]ves had was now free (CSC 1720 Winifred, Countess of Nithsdale, *Book of Carlaverock*, 315)

(22)   as for the peadmony we **are a doing**, sister Lucy and I, we have made two pursses, one for my Lord, another for your Ladyship (CSC 1714 Lady Anne Stuart, *Book of Carlaverock*, 187)

The occurrence of the type BE + *a* + -ING in letters may perhaps be seen to reflect discourse features shared with oral narratives (cf. "Others say that" in example 23).

The only example of this type in the HCOS has a passive sense 'was being built':

(23)   Others say that when the Church **was a bigging**, the Devill appeared to one of the maisons (HCOS 1665–1676 Lauder, *Journals*, 56)

Unfortunately, it is not possible to comment on the hypothesis of Celtic influence on the basis of just 16 examples. For this to be possible, we would need an even larger database enabling us to verify the chronology of the BE + preposition + -ING type in Scots. Since such an aim is notoriously difficult to achieve in the early periods, we may have to resort to the concept of 'a notional corpus' used by Mittendorf & Poppe (2000: 127) to refer to an awareness that whatever data has been looked at so far is a fraction of what we would have to examine to say anything conclusive about Celtic influence. Their comments on problems besetting the study of Middle Welsh are revealing. They point out that no digitized database of Middle Welsh texts is available, and that "[m]any questions concerning the dates of Middle Welsh texts and the diachronic and geographic stratification of Middle Welsh are still unresolved". In this situation, they find it appropriate "to treat every single text initially as a separate sub-corpus of the notional corpus of Middle Welsh texts, in the hope to capture idiosyncracies in the use of the periphrastic construction relating, for example, to chronology, genre, and register and to detect the degree of its grammaticalisation".

3.2   BE + -AND in pre-1570 texts

According to Devitt (1989: 29), "the shift from -AND to -ING must have been well on its way during the fifteenth century". Yet as shown in Table 1(a) above,

it is significant that in pre-1500 texts of the HCOS only the variant in -AND is used in the formation of the continuous tenses. All in all, these verb forms also remain infrequent in the sixteenth century except for a few genres. If they occur, the forms are chiefly used in the Present or Past Continuous; there is only one instance of a Present Perfect Continuous in the Acts of Parliament:[13]

(24) And yᵗ merchand & vyerris of ye Realme / **has bene sekand** Justice at ye king of france & at his consale / (HCOS 1482 *Acts of Parliament*, 144.C2)

The type *being* + -ING (e.g. *being lying*) had some currency in English from the mid-sixteenth century to the early nineteenth (Denison 1993:394). The first occurrence of its equivalent in Scots is from the early sixteenth-century Stirling records:

(25) Robart Spettal allegit and offerit to prefe (…) that [he] com to the said Gilbert, he **beand liand** on hus ('his') deid bed (HCOS 1527 *Stirling B. Rec.*, 29)

The verbs in the progressive represent a wide range of semantic categories, but as there are only sporadic examples of each category, a detailed quantitative presentation of the findings is not useful. Even though there may be a higher frequency of intransitive verbs, and verbs expressing state (such as *lie*) or motion (such as *come* and *go*), there are also transitive verbs of action.[14] The following examples illustrate the occurrence of the various semantic categories of verbs:

INTRANSITIVE: MOTION

(26) Madame pleis zour grace george Dowglas was noᵗ heyr bot ye lard of blakater / **is cumand** to zour grace (CSC 1545? Thomas, Commendator of Dryburgh NAS SP2/2:105, *Correspondence of Mary of Lorraine*, CV:142)

(27) Mj lord I commend mj seruice to zour l ('lordship') / for surte ye armye off ingland **is cumand** be sey (CSC 1546 James Cockburn of Langtown NAS SP2/2: 122, *Correspondence of Mary of Lorraine*, CXXII:170)

(28) And this nycht quhen I **wes passand** to my supper I ressauit ane writting fra the Lard of Eistir Wemys (HCOS 1573 David Wemyss of Wemyss, *Memorials of the Family of Wemyss of Wemyss*, Vol. 3:70–71)

INTRANSITIVE: STATE

(29) he **Is liffand** as ane deid man (HCOS 1490 *Porteous of Noblenes*, 180)

INTRANSITIVE: ACTION

(30) the metis yat ar etyn jn the dyner' ressauis the hete of the day jn mannis corps . quhen he **is wakand and trauailand** / and bathe the membris of

ma*n*nis body / and his witt is than vext and trauailit / (HCOS 1456 Hay, *Prose MS*, 95)

(31) Thir thingis war done in Bethany beyond Jordan, quhare Johnne **was baptysand.** (HCOS c. 1520 *St John* I: 28)
And Johnne **was baptizand** in Ennon, beside Salem, for mony watris war thare; and thai com, and ware baptizit. (*ibid.* III: 23)

(32) It*em* he sais that al the visma*n*is wyt is in his mouth, and think*is* that he has neu*ir* yneuch of It and eu*ir* **is techand and lerand**… (HCOS ?1460 *Dicta Salomonis*, 185)

(33) yaj ar / adu*er*tes*s* yat zo*ur* p*ar*tye **is gadderand** and p*ur*posis to be i*n* styrlinge on frydaye (CSC 1543 Richard Kincaid NAS SP2/1: 12, *Correspondence of Mary of Lorraine*, XII: 15)

(34) madame I belewe z*ur* graice has hard how all yis cu*n*treth **wes brekand** / hed no^t bein my haiste haym~ cu*m*in … (CSC 1544 George, Earl of Huntly NAS SP2/2: 92, *Correspondence of Mary of Lorraine*, XCII: 118)

TRANSITIVE: RELATIONAL

(35) It*em* he sais, gret lord*is* **ar** quhilu*m* **hafand** powar our mony pupile (…) (HCOS ?1460 *Dicta Salomonis*, 188)[15]

TRANSITIVE: ACTION

(36) Mademe, eftere humle commendatione of my service to your grace, I **haif bene doand** part of besynes and service consernyng your grace (CSC 1545 Elizabeth, Countess of Moray (non-autograph), *Correspondence of Mary of Lorraine*, 149–150)

(37) Ples zo*ur* grace sen~ my cu*m*yng in yir p*ar*t*is* I **haiff ben" doand** diligence as I my^t best do to haiff / had my lord to zo*ur* g ('grace') effect & ples*ur* … (CSC 1559 Archbishop Hamilton NAS SP2/4: 280, *Correspondence of Mary of Lorraine*, CCLXXX: 424)

The examples listed above suggest that a relatively high degree of interactiveness, or addressee-orientedness, triggers the use of the progressive; this is illustrated in reporting news to the addressee of a letter, giving advice in an instructive text such as Hay's prose works (example 30), and in reported speech (note "It*em* he sais" in examples 32 and 35).

Progressives of verbs other than those of motion or state represent 44 per cent of the occurrences of the BE + -AND type, and these become more frequent in the latter half of the sixteenth century. The sixteenth-century burgh records of Peebles are a good source for tracing their spread. It is interesting that all the instances in this source should occur in modifier or dependent clauses, a

finding that converges with the results obtained by Strang (1982:441) in her analysis of the use of the progressive in narrative prose of the first half of the eighteenth century; she notes that "the construction is truly at home only in certain types of subordinate clause, especially temporal, relative or local". In contrast, Wright (1994) has found that the percentage of main clause progressive occurrences in a corpus of sixteen plays (prose comedy) dating from 1670–1710 ranges from 55.5 per cent, in Congreve, to 78 per cent, in Wycherley. This suggests that the frequency of the progressive in main and subordinate clauses may vary in different genres.

3.3 BE + -ING in 1500–1700

The continuous tenses with a present participle ending in -ING are infrequent before 1570 in Scots, both in general and particularly as compared with the occurrence of continuous tenses with present participles ending in -AND. It is relevant that among 15 texts, some of which are compilations, and letters by 18 writers, only three texts and one letter writer use both variants of the present participle in the progressive in the period 1500–1570. Moreover, of these three texts, the scotticized Bible and William Lamb's *Resonyng of ane Scottis and Inglis Merchand* can be expected to have a mixed system (cf. fn. 6). Example 31, also extracted from the New Testament, can be compared with the following example:

(38)   And I knew him nocht, bot that he be schewit in Jsrael, tharfor I **am baptizing** in watire. (HCOS c. 1520 *St John* I:31)

Adam Otterburn's idiolect could be taken as an example of the high degree of variation in the mid-sixteenth century:

(39)   Forder yair Is ane flemyng schip y^t wes tane be franchemen Reddy to / dep*ar*te in flandris and ye m*er*chandis of Dunde and yis tovne hes tho^t / Ry^t hevy y^t yair ny^{t}bo*uris* **ar lyand** in presoun~ in flandris & ar abill to peris*s* & de in presoun~ w^{t}out help (CSC 1544 Adam Otterburn NAS SP2/1:72, *Correspondence of Mary of Lorraine*, LXXII:92)

(40)   as for tyding*is* heir I see / na thing bot as ye ald kyng **wer levyng** & / Ilk day I heir~ of o*ur* i*n*felicite (CSC 1547 Adam Otterburn NAS SP2/2:130, *Correspondence of Mary of Lorraine*, CXXX:180)

In the HCOS there are two instances of BE + -ING in the extract from Bellenden's translation of Boece's history (a sample of c. 22,000 words), six in *Criminal Trials* (c. 7,700 words) and two in the *Correspondence of Mary of*

Lorraine (c. 31,000 words). Compilations such as the *Criminal Trials* are often linguistically heterogeneous: the two variants co-occur but the forms in -ING are still less frequent.

(41)   The keyis of the lugeing **wes** partlie **standing** in the durris, and pairtlie deliverit to this deponir be Robert Balfour, awnir, all except the key of that dur, quhilk passit throuch the sellare and the town wall (HCOS 1567–8 *Criminal Trials*, 501)

Nurmi (1996: 164–165) has analysed the period 1590–1620 in the Corpus of Early English Correspondence, and BE + -ING also remains infrequent in her data. Considering her findings and the distributions in the Scottish texts, it seems even more significant that in the database of Scots speech-based texts such as recordings of trials should contain a relatively higher frequency of this feature.

Examples of the BE + -ING type in a passive sense do not occur in pre-1570 texts. This could simply be a consequence of the paucity of examples before that date; it deserves notice, however, that examples with a passive meaning occur from very early (see examples 11–13 above) in the case of the BE + preposition + -ING construction, despite the fact that this, too, is uncommon (only 11 examples in the HCOS; see Section 3.1).

After 1570, BE + -ING is however found in a passive sense,[16] as in, for instance, Jean Ross's letter dating from 1640:

(42)   a.   I haue noe tym to wrytt to your la ('ladyship') of / thos things that **ar doing** heer
       b.   bot latt me kno particullarlie / what **is doing** in the lords cause and how your / la is in your health
            (CSC 1640 Jeane Ross, Lady Innes (wife of Sir Robert Innes of that Ilk), to Margaret Lady Ross, her mother, NAS GD 3/5/244, *Memorials of the Montgomeries* 114: 242)[17]

The use in the passive has also been attested in a number of other texts in the HCOS:

(43)   Quhen thir thingis **war preparing**, the Erle of Huntlie caused take Williame M'Kinlocke (HCOS 1570 Lesley, *History of Scotland*, 235)

(44)   And further Depones, that when the Defunct's Body **was bringing up** to the House, the Deponent would have had him brought to his own Chamber (HCOS 1688 *Standsfield Trial*, 18)

(45)   quhairby he had daylie intelligens what **wes doing** in court or abroad (HCOS c. 1650 Spalding, *History*, 59)

To conclude this section on variation in type, let me point out that, despite the variation between -AND and -ING in other functions of the present participle in the pre-1570 texts (see Section 2), its prevailing form in continuous tenses in that period is in -AND (80 per cent between 1500–1570). This could suggest that instead of the merger of BE + present participle (*be doing*) and BE + preposition + gerund (*be on/a doing*) that has at times been suggested in the literature for the English progressive, two parallel, separate developments can be traced in the North: one involving the verbal type, with -AND being gradually encroached upon by the Anglo-English participial form in -ING, and one involving the nominal type with an intervening preposition. It is also possible, though further research is needed to confirm this, that the nominal type with the preposition *in* (see Section 3.1) may have provided a structure with a passive sense (i.e. *be in doing* for 'be being done') at a time when the verbal type did not yet have a passive transform.

4. Narratives and speech-based texts

Examples 46–52 highlight two specific environments in which the use of the progressive can be related to genre-specific features. In proceedings of trials a diversification of the discoursal properties of the recordings took place. The sixteenth-century Scottish trials range from the recording of decisions made, as in the *Sheriff Court Book of Fife*, to detailed recording of the *process* that took place before decisions could be made, as for instance in the *Criminal Trials of Scotland* and *St Andrews Kirk Sessions*. This change is reflected in various degrees of syntactic complexity; on the one hand, a high frequency of passive constructions and nominalizations of verbal processes; on the other, a high frequency of finite clauses with predicate verbs in the main clauses in the Simple Past and those in the dependent and modifier clauses in the Past Continuous. On this continuum less syntactic complexity correlates with the frequency of direct and reported speech in the recordings, and with a higher frequency of the progressive.

Let me illustrate this evolution by discussing extracts from the *Criminal Trials of Scotland*. In the following prototypical example, the Past Continuous occurs in an adverbial clause of time in a narrative where a sequence of events is related in the Simple Past:

(46)   Ansuerit, Remembring hir, quhen sche **was lyand** in chyld-bed-lair, with
         ane of hir laiddis, that ane stout woman com in to hir, and sat doun on
         the forme besyde hir, and askit ane drink at hir, and sche geif hir; (HCOS
         1576 *Criminal Trials*, 56–57)

In example 47 detailed recording combines free indirect speech with some
direct quotes, and with features such as the use of the progressive:

(47)   (3.) ITEM, Being interrogat, how and in quhat maner of place the said
         Thome Reid come to hir? Ansuerit, as sche **was gangand** betuix hir awin
         hous and the yard of Monkcastell, dryvand hir ky to the pasture, and
         makand hevye fair dule with hir self, gretand verrie fast for hir kow that
         was deid, hir husband and chyld, that **wer lyand** seik in the land ill, and
         sche new rissine out of gissane. The foirsaid Thom mett hir be the way,
         healsit hir, and said, 'Gude day, Bessie;' and sche said, 'God speid yow,
         gudeman.' '*Sancta Marie*', said he, 'Bessie, quhy makis thow sa grit dule
         and sair greting for ony wardlie thing?' Sche ansuerit, 'Allace! haif I
         nocht grit caus to mak grit dule? For our geir is trakit; and my husband is
         on the point of deid, and ane babie of my awin will nocht leve; and my-
         self at ane waik point; haif I nocht gude caus thane to haif ane sair hart?'
         (HCOS 1576 *Criminal Trials*, 51–52)

Given the hypothesis of the spoken origin of the progressive in the literature
(see, for instance, Dennis 1940), it is noteworthy that in the present data the
progressive form occurs relatively early in direct speech. Examples 48–50
illustrate direct speech recorded in trials:

(48)   After the quhilk I never spake to the said *Erle* of it quhill the day he gate
         his Assyse; quhaire the said *Erle* standing at the barr, luiking doun and
         sad lyke, I plukit upon him and said, 'Fye! my lord, what Divill is this yee
         are doand! Your face shawes what ye are! Hald up your face, for Godis
         sake, and luik swa and ye **were gangand** to the deid!' (1567–1568 *Crimi-
         nal Trials*, *512)

(49)   *Item.* Deponis, Quhan the deponar and *Pat Willson* come to the Frier Zet
         with the last convoy, and laid the same down, *Robert Ormestoune* come
         furth, and said thir words. 'This is not gude like! I trow this purpois will
         not come to this nycht! I will in and se quhat yai **are doing**.' (HCOS
         1567–1568 *Criminal Trials*, 494–495)

(50) yis deponar said to Pat Willson, at the conveying of the last carriage, thir words, 'JESU, Patt, quhattin ane gaitt is yis we **are gangand**? I trow it be not gude!' (HCOS 1567–1568 *Criminal Trials*, 494)

(51) And my lord thocht lang, and speirit 'Gyf yair was ony part of the house yat they mycht se the lunt, gyff it **was burnand** anouch?' (HCOS 1567–1568 *Criminal Trials*, 499)

There is only one example of a progressive form in the extract from *St Andrews Kirk Sessions* dating from the mid-sixteenth century (c. 5,400 words), but it is interesting that this should occur where the spoken deposition of a witness is being recorded.

(52) Thomas Myretoun (…) depones that he knawis nathing in the causs of adultery, nor of the crymes conteynet in the clame, except that in December twa yeir bypast, or therby, the deponar remembyris in the said Williames awin howss, quhare James Rutherfurde dwelles instantlie, that he and his wyfe **wes wrasland** togiddir, and in the meyntyme that sche bait him in the arme, quhilk he belevis wes nocht of malice, Margaret Lawsone beand present in the chalmer, plus nescit, etc. (HCOS 1559 *St Andrews Kirk Sessions*, 21)

Mustanoja (1960:584–585) points out that the progressive gives a graphic quality to a text. Beside a durative colour, "not infrequently emphasized by the addition of an adverb meaning 'always'", he suggests that "[i]n numerous instances" the progressive form may be preferred "because it has a greater descriptive force, i.e. it makes the narrative more graphic (…) or simply because it is more emphatic". The concept of a graphic presentation appropriately depicts variation between the progressive and other finite and non-finite verb phrases in the recordings of trials.[18] Further study will have to be based on a large database of trial proceedings, but even in this limited sample the effect of the recording style on the frequency and type of progressive verb forms suggests some systematic patterning. The more graphic the story, the higher the frequency of such structures as finite adverbial clauses of time and nominal *that*-clauses. The more detailed the recording, the higher the frequency of the progressive. Although the general frequency of the progressive forms is quite low in the period, it has thus been possible to identify discourse properties of a genre that trigger the choice of this specific linguistic feature (cf. Meurman-Solin 2000a, b, 2001a). In earlier research on the evolution of genres, there is no statistically significant evidence yet of co-occurrence patterns that would suggest a straightforward correlation between syntactic complexity in general,

or specific clause types in particular, and the progressive (cf. Biber 1988: 229–236).

To conclude, that a number of sixteenth-century instances of the progressive in Scots have been attested in proceedings of trials can be interpreted as related to the written text being based on either speech or script, and probably both. As the testimony is not included verbatim in the proceedings, it may not be appropriate to refer to the *genre* of court testimony as a conditioning factor; we should rather talk about the way of recording a process in which both written documents and spoken testimonies are presented and become part of a new written document representing a mixture of discourses. The study of intertextuality is thus highly relevant to interpreting corpus-based data.

5.   Concluding remarks

An approach through which all variant forms of the present participle in Scots are considered in order to identify specialized distributions of varying grammatical functions has allowed us to trace patterns reflecting a relatively high degree of idiolectal systematicity. Further descriptive analysis in transitional periods will provide information on the direction of change. Consistently applied rules in idiolectal grammars of letter-writers, for instance, can provide relevant evidence not available elsewhere. Developments in the idiolectal use of the progressive form have been illustrated by systems in which the present participle form in *-in(e)* is consistently preferred in the progressive, for instance, whereas the form used in contexts such as formulaic expressions ends in *-ing* (e.g. example 7). By examining the discourse-specific use of the progressive and the specialized distributions of all the variants occurring as equivalents of Present-day English -ING, we may be able to suggest relationships between these idiolectal systems; ultimately, comparative work of this kind may provide evidence for taxonomies that are perhaps somewhat different from those presented in earlier work as well as evidence depicting the direction of change in the various varieties of English. To study contact phenomena such as the influence of Celtic languages, we must first focus on the compilation of representative text corpora.

Notes

* I am grateful to Teresa Fanego and an anonymous referee for valuable comments on earlier versions of this paper.

1. The size of the Helsinki Corpus of Older Scots, 1450–1700, is approximately 850,000 words of running text representing 15 different, chiefly non-literary genres (acts of Parliament, burgh records, trial proceedings, histories, biographies, travelogues, diaries, pamphlets, educational treatises, scientific treatises, handbooks, private letters, official letters, sermons and the Bible). Bibliographical information is available in Meurman-Solin (1995b) and http://www.hd.uib.no/corpora.html.

2. In the data examined by Devitt (1989:29) "-AND is the dominant form in only eleven of the 121 texts, and all before 1580. More revealing is what happens in the texts after 1600. Although the general pattern showed no significant increase in the proportion of -ING over -AND after 1600, individual texts are moving toward greater consistency. By 1659, only two of twenty texts are using both -AND and -ING. Thus the anglicization of the present participle appears to continue even after -ING has become the norm; -ING is increasingly becoming the only possible form". She points out that the spread of -ING may have taken place earlier in literary texts than in her data, which chiefly consists of non-literary ones.

3. According to Dons & Moessner (1999:24), the mean frequencies (per 1,000 words) of forms in -AND in the progressive in the HCOS are as follows: 0.1 (10 instances) in pre-1500 texts, 0.28 (58 instances) in texts dating from the period 1500–1570 and 0.14 (44 instances) in the period 1570–1640; the form does not occur in 1640–1700, the last subperiod of the corpus. Whether the figures only comprise 'true progressives' (cf. Denison 1993:372–380) is not clearly indicated as the grammatical categories applied have only been defined relatively briefly, chiefly in reference to Quirk & al. (1985:§17.54).

4. It is noteworthy that, in some sixteenth- and seventeenth-century texts, there is also variation between past participles in *-en(e)*, *-in(e)/-yn(e)* and *-ing(e)/-yng(e)*, for instance *halding* and *speking* for the prevailing *halden* and *speken*. Interestingly, in a letter dating from 1546, James Cockburn of Langton (NAS SP2/2:122) first chooses the past participle form *gettyng*, but then cancels the final *-g*. Variation of this kind also occurs in non-morphemic word-final elements. Thus the variants *samen* and *samyng* 'same', and *befor wretyng*, instead of *befor wretyn*, co-occur in the following example: "Alssua, that ilk day, John Smayl has mayd the samen condission that he sal kyp the samyng ordenans befor wretyng and be the samyng cwndission" (HCOS 1457 *Peebles B. Rec.*, 120). Similarly, "yis / mornyng george dowglass is ryddyng ('has ridden') by my place" (CSC 1543–4? Adam Otterburn NAS SP2/1:44, *Correspondence of Mary of Lorraine*, XLIV:53–55).

5. A study of this kind must be based on diplomatic editions or manuscripts (see fn. 7).

6. I also looked at distributions of high-frequency items such as *accordand* and *according*: the variant in -AND occurs only in the 1450s. The variant *pertenand* resists longer, but, interestingly, the variant *pertening* is more frequent in the Acts of Parliament in the post-1460 texts. The variant *considering* occurs only in the Acts in pre-1500 texts. The formulaic expression *God willing* is almost invariably used: there are only two examples of *God willand* (in Peebles and Aberdeen records) in the HCOS. In analysing the distributions of forms in -AND and

-ING in the HCOS, I have excluded the New Testament and William Lamb's *Ane Resonyng of ane Scottis and Inglis Merchand betuix Rowand and Lionis* because of their special nature; the former is a scotticization of Purvey's revision of Wycliff's New Testament, the latter a dialogue between speakers of two varieties.

7. In the digitized texts, *y* is used for a thorn, *z* for a yogh. Expansions in contractions are in italics. The texts of the HCOS have usually been quoted here as rendered in the editions as the process of checking the texts against manuscript has not yet been completed. The letters in the CSC corpus have been checked against manuscript if not stated otherwise. As regards the *Correspondence of Mary of Lorraine*, 1542–1560, chiefly autographs have been included; however, as indicated by the reference, two examples have been extracted from non-autograph letters.

8. In the *Correspondence of Mary of Lorraine*, two of the four Edinburgh informants use only variants in -AND, the third the variant in -ING only in *tweching* and *nochtwithstanding*. Only Adam Otterburn, a representative of the merchant class, has a fuller set of uses of present participles realized by both variants. However, it may be significant that in his idiolect variants in -ING are also particularly frequent in non-finite clauses with an implicit first-person subject in formulae at the end of a letter. This pattern of distributions is repeated in all mid-sixteenth-century letters in my corpora.

9. In Table 1(d), the mean frequency of the progressive in narrative texts is 1.2/1,000. Interestingly, there is a significant difference between Alexander Brodie's entries in his diary, which date from 1652–1680 (0.49/1,000), and those by his son James in the period 1680–1685 (2.42/1,000).

10. It is interesting that Jane Drummond, who was a governess to the children of James VI until 1617, does not use the progressive, whereas her contemporary Anna Livingston, who was one of the maids of honour to Queen Anne (of James VI) before her marriage to the sixth Earl of Eglinton, uses the progressive with verbs of motion and also with the verb *cause* (for further information on women writers, see Meurman-Solin 1999 and 2001b).

11. According to Dons & Moessner (1999: 24), only three instances of variants in -AND are used in nominal functions out of the total of 1,295 occurrences in the HCOS.

12. Example 10 is from the Edinburgh Corpus of Older Scots (ECOS); I would like to thank Keith Williamson (Institute for Historical Dialectology, University of Edinburgh), the compiler of the corpus, for kindly pointing it out to me. Further study is necessary to examine whether types such as BE + *in* + -ING + *of* and BE + *long* + *in* + -ING (both *be lang in cuming* and *be long a comeing* have been attested in the data) can be significantly related to developments in the spread of the progressive verb forms. There is an interesting example of the former in James Melville's *Autobiography and Diary* (1600–1610, f242v): "Bot as I was thus about to win the king / as in me lay to the kirk / sa was he in winning of me to the / Court". The latter can be illustrated by an example from an early eighteenth-century letter by John Tarbat in the HCOS: "Your ordors anent the elections of the shyre of Ross uas so long a coming that (…) the Uhige partie would, uithout dout, have caried ther design" (*Earls of Cromartie*, Vol. 1: 276).

13. The paradigm of the progressive in the history of English is summarized in Denison (1993: 383–384); according to Visser (1973: §2148), the first Present Perfect Continuous attested in English dates from the fourteenth century.

14. In the earliest autograph letters in Scots, addressed to Mary of Lorraine (of Guise) dating from the mid-sixteenth century, the progressive is chiefly used with verbs of motion (*ride*, *pass*, *gang*, *come*) or with verbs referring to state (*lie, remain*), but transitive verbs such as *do*, *gather*, *make* and *break* also occur in the progressive, as illustrated by the following example: "Madame pleis zow* grace witt ye ma*n* hes failzeit trist and we / **ar makand** new p*r*owision to se ye maneir & to affix ane new / trist /" (CSC 1548 Alexander Gordon NAS SP2/2: 161, *Correspondence of Mary of Lorraine*, CLXI: 227).

15. This example is particularly interesting since the progressive of *have* has not been attested between Late Middle English and its reappearance in the late eighteenth century (Visser 1973: §1841; Warner 1997: 167–168).

16. In one example in the passive sense the present participle is in -AND: "and in the meyne tyme quhen diligent inquisition **was makand** to have done justice in the said mater" (HCOS 1565 *Criminal Trials*, *464)

17. In another example in the same source there is an ambiguous character in the manuscript between BE and -ING which is probably *y* with an omitted flourish, perhaps suggesting a variant of *there*: "your la shall kno that this beerer is sentt / from the genttrie of murray to kno what / **is** y[*ar*] **doing** and to returne als soone as he / cane" (CSC 1640 Jeane Ross NAS GD 3/5/244, *Memorials of the Montgomeries*, 114: 242).

18. Scheffer (1975: 196) draws the same conclusion in his study of Wærferth's translation of *Gregory's Dialogues*. He notes that where the style is lively narrative, picturesque and detailed, the frequency of the progressive is higher, where it is more reflective and moralizing, with the narrative, if any, kept sober and factual, the frequency is lower. See also Rydén (1997: 421), who refers in this way to the core meaning of the progressive in English: "non-progressive predications (…) are factual, informative, presentative rather than graphic, analytical or evaluative".

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Detransitivization in the history of English from a semantic perspective[*]

Ruth Möhlig and Monika Klages
University of Cologne

1. Introduction

Verbs which were originally transitive and developed an additional intransitive use at some point in their history have primarily been studied from a syntactic perspective. The focus of this paper will, by contrast, be on their semantic dimension — following the assumption that "the properties of clause structure are predictable from the semantics of predicates" (Faber & Mairal Usón 1999:37). We look into four different types of uses of selected transitive verbs which result in non-transitive constructions and analyse the semantic processes involved in the development of these non-transitive presentations of transitive events.

Traditionally, transitive verbs have been defined on a purely morpho-syntactic basis as those governing an object in the accusative case. For dealing with languages like Old English or German, however, this definition has proved to be too narrow, since there are verbs which govern a direct object in the dative or genitive case.[1] Apparently, semantic differences are expressed in these distinctive case markings which are more or less systematic: thus, in Old English, dative case marking on direct objects is often correlated with participants which are less affected by the process denoted by the verb, compared to direct objects in the accusative case (Traugott 1992:204); the OE genitive case is typically assigned to the direct object, e.g. when contact between the two participants is only partial (cf. Mitchell 1985:232; Langacker 1991; Traugott 1992:205).

In contrast to the traditional definition, we define transitive verbs on a functional-semantic basis as those verbs which typically take a Goal-object (Dik 1989, 1997)[2] as their second argument, i.e. verbs which express an action or process which affects a second participant, regardless of morphologic case. An activity is conceived as some kind of transfer taking place between an Agent and

another participant (Hopper & Thompson 1980: 251). Following Hopper & Thompson (1980), we take transitivity as a graded concept which involves semantic and syntactic features: highly transitive clause structures are characterized as being dynamic,[3] telic[4] (or perfective), punctual and in the affirmative; at least two participants — a subject and an object — are present and the object is totally affected by the event. The fewer of these features apply, the lower is the transitivity of the clause. Thus, transitivity is not a property of verbs alone, but of a combination of elements present in the clause (Hopper & Thompson 1980: 251). On this scale of transitivity verbs which govern direct objects in the dative or genitive in Old English must be viewed as less transitive, since direct objects in the dative or genitive usually represent less affected or only partially involved participants. In this paper we have focused on verbs which — if they were not introduced into English later than Old English — predominantly show accusative case marking on their direct objects in Old English,[5] i.e. verbs which may originally be regarded as highly transitive.

The term *intransitive use* is here primarily understood as syntactic, that is, as referring to transitive verbs which in certain contexts do not appear with a Goal-object (e.g. generic use, see Section 3.2). We argue that not all verbs used non-transitively arrive at the full status of *intransitive verbs*, the latter being taken as denoting an action or process which does never extend beyond the first participant (e.g. ModE *talk*, *sleep*; cf. Halliday 1994: 109–110).

The theoretical framework adopted by us largely follows that of functional grammar as proposed by Dik (1989, 1997), Halliday (1994) and Givón (1984/ 1990). We have preferred this framework to, for instance, transformational approaches (e.g. Radford 1997), since it allows us to focus on the functional-semantic aspects which may be explanatory of syntactic usage, rather than on the description of the formal rules by which sentences are generated. However, it is conceded that both functional and generative approaches may with some benefit, but also with constraints, be applied to the diachronic analysis of language and language change.

Our diachronic data were drawn from the Helsinki Corpus of English Texts, Diachronic Part (1991, HC), the *Oxford English Dictionary* (1989, *OED*), the *Middle English Dictionary* (1952–2001, *MED*), and the *Microfiche Concordance to Old English* (1985, MC). It has to be borne in mind that these sources, which are in themselves based on historical texts that may only sketchily reflect the full range of historical usage, are selective. Thus, non-occurrence of a pattern at a particular time does not necessarily rule out that this pattern was used at that

time. The sources are, however, suggestive as to the degree to which a pattern was established in the written medium at a given time.

2.   Transitive–intransitive verbs in the history of English

Before we look at the different patterns according to which transitive verbs have expanded to intransitive uses, it should be noted that transitive–intransitive verbs in English go back to various sources and that their development involves processes of transitivization as well as of detransitivization. Thus, several morpho-phonological developments in Old English led to the merging of previously differentiated verb classes, which resulted in homophonous transitive–intransitive verbs of the alternating causative–inchoative type.

We can distinguish between the merger of primary intransitive inchoative verbs with their transitive causative derivatives, and the morphological conflation of OE weak verb classes (cf. Görlach 1997: 83–85): Old English still preserved the distinction inherited from Proto-Germanic between a primary strong stative or inchoative verb and a secondary weak causative derived from it; thus, Old English had *sincan* 'sink': *sencean* 'make to sink', *meltan* 'melt': *mieltan* 'make sth. melt', and *brinnan/beornan* 'burn (up)': *bærnan* 'make sth. burn (up)'. The pair *meltan*: *mieltan* was probably already confused in OE times, whereas *sincan*: *sencean* (> ME *sench*, not later than 14C) and *brinnan/ beornan*: *bærnan* became conflated in *sink* and *burn* respectively in the ME period. However, other OE stative/inchoative–causative pairs like *licgean*: *lecgean*, *feallan*: *fellan* were kept phonologically distinct (*lie*: *lay* and *fall*: *fell*); others like *drincan*: *drencan* were retained in *drink*: *drench*, although the latter went out of use in the causative meaning 'make to drink' at the beginning of the twentieth century and was replaced by the verb *to water*, which competed with *drencan/drench* already in (late) Old English.[6]

Within the classes of weak verbs, class III of intransitive inchoative Gmc. *-ē-verbs had fallen in with class II of the mostly transitive causative/agentive Gmc. *-ō-verbs in the OE weak class II, which was marked by the infinitive suffix *-ian* (Krahe & Meid 1969: 249; Schaefer 1984; Heidermanns p.c.). Thus, a Gmc. *-ō-verb like OE *openian* 'open' shows both transitive causative and intransitive inchoative uses already in Old English. Whether the inchoative or causative use was primary is difficult to establish, the Gmc. evidence failing to yield a clear pattern.[7] However, be it a Gmc. or an early OE development, the verb probably acquired either an additional inchoative or causative interpretation

simply by virtue of its membership in a verb class which incorporated both semantic types, the analysable adjectival base Gmc. *upana-/OE *open* showing both readings — stative/inchoative 'be/become open' and causative 'make open' — and this led to a functional expansion of the verb (cf. Görlach 1997: 84–85).

Such a functional expansion on the basis of an analysable adjectival base may — possibly by analogy with cases like OE *openian* — also have been the case with originally causative English verbs, which developed an inchoative use somewhat later than Old English, e.g. ME *drye(n)* (< OE *drygan*: *dry* adj., inchoat. c1200) and *close(n)* (< OE *clysan*/ME *closen*: *close* < OFr. *clos-* adj., inchoat. 14C), EModE *fill* (< OE *fyllan*: *full*, inchoat. beg17C) and ModE *clean* (derived from *clean* adj., inchoat. 18C).

The development of verbs showing alternative transitive and intransitive uses in English may have been further strengthened by the loss of the OE verbal prefix *ge-* (< Gmc. *ga-*; cf. Krahe & Meid 1969: 37) in the course of Middle English. For Old English, this prefix has frequently been seen as having a transitivizing effect, which resulted in causatives — e.g. *feallan* intrans. 'fall': *ge-feallan* trans. 'overthrow sb.' (='make sb. fall'), *hwītian* 'be/become white': *ge-hwītian* 'make white', *minsian* 'become small': *ge-minsian* 'make small' — or in verbs which were additionally resultative/perfective — e.g. *flōwan* 'flow': *ge-flōwan* 'overflow sth.', *ærnan* 'run': *ge-ærnan* 'reach, gain by running' (Visser 1963–1973: §134; cf. Kastovsky 1992: 380). With other OE verbs, however, there is no difference in meaning between the simplex and the prefixed verb, e.g. *(ge)æmtian* intrans. 'be at leisure, unoccupied', likewise *(ge)openian* trans./ intrans. 'be/become open, make open/apparent' and *(ge)brecan* trans./intrans. 'break'. Thus, the OE data are inconclusive as to whether preverbal *ge-* had transitivizing function, something which could have led to a wide-scale con-flation of an intransitive simplex and a transitive prefixed verb after OE *ge-* had been lost (via ME *y-/i-*). However, in individual cases, such a conflation seems to have occurred.

It is evident from these considerations that from Old English on, a variety of homophonous or homonymous verbs from various origins existed which incorporated both transitive and intransitive uses; it is a special feature of English that this group resulting from processes of detransitivization as well as transitivization increased so considerably over the following centuries. Thus, various verbs, e.g. *cook* (derived from *cook* n. 14C), which shows both transitive and intransitive uses from the seventeenth century on, were originally intransitive and have undergone processes of transitivization, thereby further strengthening

the group of transitive–intransitive verbs. Rissanen (1999: 256) points out that several instances of originally intransitive verbs of motion in the imperative may be found used with a co-referential object in the sixteenth/seventeenth centuries (isolated instances found for *hasten* as late as the eighteenth century) — something which he associates with involvement and emphasis, e.g. "Good Margaret *runne* <u>thee</u> to the parlour" (Shakespeare *Much Ado about Nothing* III.i; see also Görlach 1994: 84).[8] Such instances show that there have been alternatives in degrees of transitiveness in the history of English, facilitated by the overall loss of distinctiveness of syntactic-semantic verbal categories, which has resulted in the transitivization or detransitivization of verbs and in the emergence of various transitive–intransitive patterns (see also Görlach 1994: 83–84).[9]

Further support for the group of transitive–intransitive verbs may have come via borrowing, e.g. ME *moue* and *dresse*: both verbs were apparently borrowed in their transitive, reflexive and intransitive uses from OFr. *(se) mover* (13C) and *(se) drescer* (14C), respectively. Whereas *move* has not undergone any fundamental semantic changes during its history in English, the development of *dress* (ModE 'clothe sb./oneself') was different, the verb being already polysemous in Middle English: the basic meaning of OFr. *(se) drescer* was 'direct sth./sb./oneself';[10] the first known meaning of the verb in Middle English is 'array, prepare, make straight', used transitively and with a co-referential reflexive pronoun. The meaning of ModE *dress* 'clothe sb./oneself' developed in Late Middle English via 'get armed, attired', by metonymy from 'prepare oneself'. The verb *dress* shows co-referential reflexive uses for all shades of meaning already in Middle English, something probably borrowed from Old French. First instances of the intransitive use (as in *He dressed*) are found in the fourteenth century; it is not clear whether this use was also borrowed from French — as is the case, for example, with *move* (see Section 3.1).

It may be argued that the morpho-phonological processes starting in Old English triggered the emergence of the large group of English verbs which have developed additional transitive or intransitive uses. The picture, however, is complex and involves the interaction of phonological, morphological and syntactic processes in addition to the possible effects of language contact. These developments were at least partially semantically motivated and it is the semantic processes that underlie four of the most important detransitivizing syntactic constructions of English that we will discuss in the following.

3. Diachronic patterns of detransitivized use

We will here focus on the diachronic development of four patterns of detransitivization, namely co-referential intransitive use, ergative use, generic use and middle use.[11] These four patterns have frequently been linked with each other, since they all show various detransitivizing effects which result in a change in the predicate frame[12] of individual transitive verbs. We will illustrate the nature and extent of these links on semantic grounds. In doing this, we intend to show that the features in which the four constructions differ are more prominent than those which they share.

The passive voice, which also has a detransitivizing effect (Siewierska 1984: 44; Givón 1990: 564–574), has largely been left out of our present discussion, since — as an increasingly structural part of the voice–aspect system of English from late OE/ME on — it is not bound to isolated lexemes and does not change the predicate frame of transitive verbs, as do the four patterns discussed here (on the interaction between the progressive passive and middle use see Section 3.4).

It is important to note that the assignment of individual verbs to one of the four patterns is not exclusive; i.e. verbs may fall under more than one pattern, although certain semantic restrictions may block multiple occurrence.

3.1 Co-referential intransitive use

Much emphasis has traditionally been placed (e.g. Jespersen 1927: 325–329; Deutschbein 1931: 98–103) on those detransitivized verbs which developed via a stage where they showed co-referential reflexive use;[13] this usually led to polysemous transitive–intransitive verb pairs, e.g.

(1) *John washed the clothes.* (transitive)

(2) *John washed himself.* (co-referential reflexive)

(3) *John washed.* (co-referential intransitive)

Synchronically, the semantic characteristics of this pattern are the following:

a. The Agent of the transitive verb typically is not only animate but human.
b. The transitive Goal-object is first assigned the semantic feature of co-referentiality with the human Agent; this results in a co-referential (pronominal) Goal-object; the feature of co-referentiality is in a second step incorporated into the meaning of the predicate. Since the entity controlling

the action (the Agent) and the entity which is affected (the Goal) are identical, the subject of the co-referential intransitive use strictly speaking is ambivalent to an interpretation as Agent or Goal. However, the Agent is more salient,[14] so that no change of perspective is involved.

c. The states of affairs described by the transitive, the reflexive and the intransitive clauses are typically dynamic, controlled and telic; this means that the semantic characteristics are the same in all three constructions.

The emergence of this type of pattern of intransitive use is not limited to one specific historical period of English;[15] it occurs, for instance, with OE *baþian*, ME *washe(n)* (< OE *wascan*, intrans. c1175), *clothe(n)* (< OE *clāþian*, intrans. 1390s), *dresse(n)* (trans., reflex. < OFr. intrans. c1400), *moue(n)* (trans., reflex., intrans. < OFr. c1250), ModE *shave* (< OE *sceafan*, intrans. a1715)[16] and *straighten* (16C, intrans. 1890s),[17] e.g.

(4) *Bede* 4 21.318.15 Ond seldon in hatum baðum heo *baðian* wolde, (MC)
"And rarely did she want to bathe in a hot bath,"

(5) c1175 *Lamb. Hom.* 159 þos fure kunnes teres boð þe fuwer wateres þa þe beoð ihaten us on to *weschen*. (*OED* s.v. *wash* v. 3.j)
"These four kinds of tears are the four waters in which we are command-ed to wash"

(6) c1320 *Sir Tristr.* 541 þe king no seyd no more, But *wesche* and ȝede to mete. (*OED* s.v. *wash* v. 3.j)

(7) 1393 Gower *Conf.* I. 14 The tresor…Wherof the pouer shulden *clothe* And ete and drinke and house bothe. (*OED* s.v. *clothe* v. 2)

(8) c1440(?a1400) *Morte Arth.(1)* 2052 He *drissede* in a derfe schelde endenttyd with sable. (*MED*)

(9) c1250 *Kent. Serm.* in *O. E. Misc.* 29 þo seide ure lord to þo serganz. *Moveth* to-gidere and bereth to Architriclin. (*OED* s.v. *move* v. 16.a)

(10) a1715 Burnet *Own Time* (1766) II. 219 He was quickly dressed, but would lose no time in *shaving*. (*OED* s.v. *shave* v. 6.b)

(11) 1891 Kipling *Light that Failed* xiii. 256 Dick's shoulders *straightened* again, for the words lashed like a whip. (*OED* s.v. *straighten* v. 4.a)

The development may be interpreted as a semantic process of incorporation of the co-referential Goal into the semantic structure of the verb; this leads to a polysemous verb pair of, for example, transitive *wash* 'make sth./sb. clean by means of water' and co-referential intransitive *wash* 'make oneself clean by

means of water'; the parallel co-referential reflexive use is gradually understood as the emphatic, more intensive variant of intransitive *wash*.[18] However, this incorporation of the feature of co-referentiality does not extend to all verbs which occur in co-referential reflexive use — compare, e.g. *ask oneself, offer oneself* (OE *ascian (hine sylfne), (ge)offrian (hine sylfne);* cf. Ogura 1989:74, 96),[19] etc. This implies that various semantic constraints are connected with the emergence of this pattern.

The most important constraint appears to be related to the lexical domains to which the verbs of this syntactic pattern belong: thus, all verbs investigated by us belong to the lexical domains of BODY-CARE or directed BODY MOVEMENT and are typically found in combination with animate Agents. By virtue of this typical collocation pattern, it was possible for the notion of a co-referential Goal-object to become incorporated into the semantic structure of the verb. The picture is only slightly relativized when one looks at various synonyms of e.g. *wascan/wash, dresse/dress* and *moue/move*: OE *(ge)lafian* 'wash, bathe', which is a partial synonym of *wascan* 'wash', is documented only four times in transitive use (cf. MC); the far more common partial synonym OE *(ge)þwēan* 'wash, cleanse' did develop a reflexive use, e.g. *Exod.* 2.5 "þa eode Pharaones dohtor & wolde <u>hi</u> þwean æt þam wætere" (MC). But apparently it did not survive long enough to develop an intransitive use as well. As a partial ModE synonym of *wash*, the verb *cleanse* from OE *clǣnsian* 'make clean' (derived from the OE adj. *clǣne*) acquired a co-referential reflexive use for the metaphorical meaning 'purge of sin or accusation', e.g. c897 K. Ælfred *Past.* liv. 419 "<u>Hi selfe</u> to *clænsianne* mid ðy wope", but no co-referential intransitive use. However, other verbs denoting directed BODY MOVEMENT or the act of preparing similar to ME *dresse(n)* 'prepare, direct', and ME *moue(n)* — e.g. *direct* (14C derived from Lat. *direct-us* adj.) and *prepare* (15C < Fr. *préparer*) reveal fairly clear patterns in that they both occur in all three syntactic uses by the sixteenth century (*prepare*) and seventeenth century (*direct*), respectively.

The importance of influence from borrowing especially with regard to the co-referential intransitive pattern was mentioned in Section 2 with respect to the French borrowings in Middle English *moue* and *dresse*. However, since various native verbs had developed a co-referential intransitive use by Old English or early Middle English, such as *baþian* and *wasshe(n)*, the pattern as a whole cannot have been borrowed from Old French, although borrowings may have supported this type of construction in English verbs.

3.2 Generic use

Generic use of transitive verbs indicates the habitual and denotes characteristic properties or given truths.[20] It should be noted that — contrary to older approaches (e.g. Jespersen 1927; Deutschbein 1931; Visser 1963–1973) — generic use is here distinguished from absolute uses of transitive verbs: absolute uses occur when the object is implied either by the textual or the situational context (e.g. by being anaphorically given or visible in the communication situation), whereas the objects of generic uses are typically implied by the cultural context (e.g. world knowledge); thus, in absolute uses the object is syntactically elided, whereas generics do not even subcategorize for an object. Absolute uses can occur with any transitive verb in English without changing the verb's transitiveness; they lack the habitual notion which is typical of generics. The ModE examples (12), (13) and (14) for *read* illustrate the differences:

(12) *Mary read a book.* (transitive)

(13) *He is wise who reads.* (generic)

(14) *He picked up the paper and read.* (absolute)

Since with absolute uses no change in the verb's transitiveness is involved, only generic uses are of relevance to our present discussion. The synchronic semantic characteristics of the generic pattern are the following:

a. The state of affairs encoded is typically non-dynamic (or stative). This lack of dynamism is what lends generic constructions their habitual aspect, so that they are interpreted as referring to characteristic properties or given truths.

b. In generic use, the Goal is excluded from the predicate frame: the action denoted by the verb no longer extends to an (implied) second participant. Thus, generic use does not result in a shift of focus; rather, a distinct non-dynamic state of affairs is presented. The first argument (the subject) is interpreted as Zero, i.e. as an unchanging and non-acting entity which is involved in a state (Dik 1997:118; cf. Langacker 1991:288, 556).

c. The Zero-subject is usually animate.

Generic use is already established for OE *rǣdan* 'look at and understand writing', EModE *drink* and *wash* (trans.), and ModE *drive*, e.g.

(15) c950 *Lindisf. Gosp.* Mark xiii. 14 Seðe *redes* oncnauað [c1000 Onȝyte se þe *rǣt*]. (*OED* s.v. *read* v. 15.a)
"[This] understands he who reads"

(16)   1640 Fletcher & Shirley *Nightwalker* iv. sig. H2v, Give me the bottle, I can *drink* like a Fish now, like an Elephant. (*OED* s.v. *drink* v.[1] 11.a)

(17)   1697 Tryon *Way to Health* vi. (ed. 3) 101 It [rain-water] Brews and *Washes* to greater advantage than others. (*OED* s.v. *wash* v. 2.h)

(18)   1717 Prior *Alma* iii. 140 The man within the coach that sits … Is safer much … than he that *drives*. (*OED* s.v. *drive* v. 5.c)

However, generic use is missing in the historical data for most verbs of the co-referential intransitive, ergative and middle use patterns investigated here (e.g. *dress, move; open, break, fill; tell, load*). On semantic grounds, typical transitive verbs of EXPERIENCE such as *feel, taste* and *see* lack generic use, too.

Various semantic factors play a role in the exclusion of these verbs from generic use: verbs which can occur in the generic non-transitive frame, such as *read, drive* and *drink*, mostly belong to the less prototypical transitive verbs in that they encode events in which the object does not register a change of state, such as from close to open, intact to broken or empty to full. Thus, their objects are not prototypical Goals in that they are not affected by the event in the sense of the predicate (cf. Hopper & Thompson 1980: 251).[21] On the other hand, it is evident that in the events encoded by these transitive verbs an activity is involved; i.e. the first participant in the transitive clause is an Agent — thus excluding verbs of EXPERIENCE or EMOTION, which typically have a Processed-Experiencer or ZeroExperiencer as first participant (cf. Dik 1997: 118–120).[22] The first participant within the original transitive frame of verbs subject to generic use must therefore be an Agent (cf. Hopper & Thompson 1980: 252).

Potentially three-place TRANSFER verbs such as *tell* and *load* are usually excluded from intransitive generic use, although on the grounds of the above considerations they do not belong to the most prototypical (di)transitive verbs either. Here, a blocking factor probably comes in with the potential third participant, i.e. Recipient, which is typically implied with TRANSFER verbs, even if it is not realized (Goldberg 1992: 49–50). One might also argue that the monotransitive use of *tell* and *load* (e.g. in *She tells a story, He loads the van*) is already a case of generic use which reduces the verb from a three-place to a two-place predicate. Nevertheless, the TRANSFER verbs *buy* (< OE *bycgean*) and *sell* (< OE *sellan* 'to give (for money)') developed an intransitive generic use as early as Middle English, which seems to be mostly restricted to the idiomatic combination of the two in e.g.

(19)   1340 Hampole *Pr. Consc.* 4399 Nan sal *bye* with þam ne *selle*. (*OED* s.v. *buy* v. 1.b)

but cf.:

(20)   1611 Bible *Gen.* xlii. 6 And hee it was that *sold* to all the people of the
land. (*OED* s.v. *sell* v. 4.a)

The most prominent semantic factor with verbs showing intransitive generic
use (e.g. *read*, *drink*, *drive*, transitive *wash*, *buy* and *sell*) seems to be that they
exhibit a closer collocational binding with their potential Goals: it is evident
that actions such as *reading*, *drinking*, *driving*, *washing*, *buying* and *selling* may
only be carried out with a limited number of objects (e.g. some sort of writing,
some liquid, vehicles, clothes, anything subsumed under the general concept of
WARES),[23] whereas, for example, *dressing*, *moving*, *opening*, *breaking* or *filling*
may be done with a larger number of diverse objects. Thus, specifying the Goal-
object when describing a characteristic property or given truth is of lesser
pragmatic importance with verbs like *read*, *drive*, *drink*, or *wash* (trans.) than
with, for example, *dress*, *move*, *open*, *break* or *fill* (Givón 1984:108–109).[24]

3.3   Ergative use

Ergative use, i.e. the alternating use of verbs in transitive – causative and
intransitive – inchoative constructions, is probably the most interesting pattern
with respect to the interrelationship between verb semantics, morphological
developments and syntactic behaviour. Here, the directionality of the develop-
ment from either transitive to intransitive or vice versa is more or less impossi-
ble to establish on the grounds of diachronic data.

From a synchronic point of view, ergative use is semantically marked by a
single non-Agentive participant; the verb is usually interpreted as inchoative.
Verbs showing this type of construction have frequently been associated with
reflexive verbs (Siewierska 1984:77–79; Palmer 1994:142–145), since in both
uses the subject shares some properties of a Goal,[25] cf.

(21)   *Mary opened the door.*   (transitive/causative)

(22)   *The door opened.*   (ergative/inchoative)

However, a closer semantic analysis reveals that the two uses differ. The
semantic characteristics of ergative uses are the following:

a.   The subject of the ergative construction is assigned the participant role of
Processed, which denotes an entity that is undergoing a dynamic, but
uncontrolled Process.

b. The Processed-subject of the ergative construction is typically inanimate. It is identical with a prototypical Goal-object of the transitive frame; i.e. a former Goal-object appears in subject position; the Agent is excluded from the predicate frame.

c. The state of affairs in the ergative construction is dynamic and telic, but uncontrolled. The states of affairs coded by the transitive and the ergative constructions differ accordingly: the transitive clause denotes an Action, whereas the ergative use denotes a Process.

Ergative constructions appear to be a means to exclude the Agent, making it possible to view a causative event from the perspective of the entity which is undergoing the process denoted by the predicate. In this they resemble the passive, which has the pragmatic functions of promoting the Goal and demoting the Agent. However, the effect achieved by ergatives goes beyond the perspectivising function: ergatives exclude the element of cause and control (i.e. the Agent) and thus place the focus on the process itself. Whether we perceive the transitive or the intransitive use as primary, i.e. whether we synchronically interpret the alternation as a result of detransitivization rather than of transitivization, seems to be closely connected with the respective verb meaning: the action of opening encodes an inherently causative event more than the action of, for instance, boiling, since, as a dynamic verb, *open* implies the participation of an Agent or Force/Instrument (Dik 1989, 1997). The transitive frame in *open* may therefore be regarded as cognitively primary.[26] The intransitive use of *boil* (e.g. *The potatoes were boiling*), on the other hand, bears a stative notion, which is why it has to be combined with, for instance, *begin*, if an inchoative reading is wished for (e.g. *The potatoes began to boil*; note that the simple past in ***The potatoes boiled* is ungrammatical, apparently for the same reason). Here, the intransitive frame is perceived to be primary. We will, therefore, focus on ergative verbs like *open* for which the transitive frame is perceived as primary and which may accordingly be considered the result of detransitivization.

Similar to verbs that follow the co-referential intransitive pattern, transitive verbs exhibiting an ergative use can be found for all stages of English, e.g. OE *openian* and *brecan*, ME *dryȝen* (< OE *drygean*, erg. c1200) and *close(n)* (~ OE *clysan*, erg. 14C), EModE *tear* (< OE *teran*, erg. 16C) and *fill* (< OE *fyllan*, erg. beg17C), ModE *move* (< ME *moue(n)*, erg. 18C)[27] and *clean* (15C, erg. 18C); e.g.

(23) a900(?) *Lch I* (Herb) 4.12.4 Sona <u>hyt</u> sceal *openian* & syððan hyt geopenud beo þonne nim ðu ða ylcan wyrte ungesodene & cnuca mid hunige, lege to þære wunde oðþæt heo hal sy. (MC)

"Soon it shall open, and when it is opened, take the same herb unboiled and pound [it] with honey, lay [it] on the wound until it is healed"

(24) a1100 *LS* 17.2 (MartinPeter) 148 & efne swa swa se wind sloh on þone lig, swa *bræc* <u>se lig</u> swiðor on ðam winde, efne in þam gelicnesse swa ða gesceafta twa him betweonan feohtan sceoldon. (MC)
"and the more the wind hit at the flame, the more did the flame break in the wind, just as in the parable, so were the two elements to fight with each other"

(25) c1200 *Trin. Coll. Hom.* 155 <u>Sum of þe sed</u> ful uppe þe ston and *dride* þere. (*OED* s.v. *dry* v. 2.a)

(26) 1526 *Pilgr. Perf.* (W. de W. 1531) 260 b, <u>His handes & fete</u> dyd rent & *teare* for the weyght of his blessed body. (*OED* s.v. *tear* v.[1] 7)

(27) 1685 Cotton tr. *Montaigne* I. 211 A soul stretches and dilates itself pro-portionably as <u>it</u> *fills*. (*OED* s.v. *fill* v. 3.a.)

(28) a1774 Goldsm. *Surv. Exp. Philos.* (1776) I. 299 <u>A globe</u> *moving* through a fluid, such as air, that closes behind the body as it moves. (*OED* s.v. *move* v. 16.a)

(29) 1708 *Lond. Gaz.* No. 4431/15 The same Day came in…<u>Her Majesty's Ships</u>…to *clean*. (*OED* s.v. *clean* v. 2.a)

The syntactic development from the transitive to the ergative use occurs apparently without an intermediate syntactic stage.[28] Verbs belonging to this pattern typically form causative–inchoative verb pairs; i.e. in the uncontrolled process, the transitive causative verb receives an inchoative reading, such as can be seen in examples (23) to (29) above. Inchoativity may thus be said to be semantically characterized by being uncontrolled and telic, which means that some process denoted by the verb begins spontaneously; it is not set in motion by some controlled action (cf. Lightfoot 1979:254; Haspelmath 1993). The possibility of being used ergatively seems to be largely restricted to prototypical transitive verbs, i.e. verbs which usually occur with an animate or even human Agent and an inanimate or at least concrete Goal which is totally affected (cf. Hopper & Thompson 1980:252; Givón 1990:565–566).

From a diachronic perspective, several verbs following the ergative pattern originate from morphological developments in Germanic and Old English (see Section 2) — the pattern being either triggered or at least strengthened by the morpho-phonological conflation of stative/inchoative strong verbs with their causative weak derivatives, as happened with, for instance, OE *sincan* 'sink' (inchoative) and *sencean* 'make sth. sink' (causative) in the course of Middle

English. Furthermore, various deadjectival verbs with causative function may have acquired a secondary inchoative counterpart by functional expansion on the basis of their adjectival base, as is possible, for instance, for ME *drye(n)*:*dry* adj. (erg. c1200), EModE *fill*:*full* adj. (erg. beg17C) and others for which an adjective existed that could be analysed as their derivational base at the time of the first occurrence of ergative use; analogical influence from verbs like, for instance, OE *openian*:*open* adj. is possible here (see Section 2). The development of ergative use with a verb like EModE *tear* (< OE *teran*, erg. 16C), which has no paradigmatic relationship to an adjective, makes it evident that by this time the ergative inchoative use of homonymous transitive causative verbs was well established as a means of viewing a causative event from the perspective of an entity which was undergoing a process, i.e. excluding the Agent and thus placing the focus on the process itself.

3.4 Middle use

Various labels have been given to this type of construction: Visser (1963–1973:§163) refers to it as activo-passive and Denison (1993:392) identifies it as medio-passive. The term 'middle use' adopted by us should not be mistaken for what is frequently known as middle voice, e.g. in Givón (1984:620), who applies the term 'middle voice' to what we call ergative constructions (as in *The glass broke*).

Middle use has frequently been regarded as a special form of ergative use (cf. Denison 1993:392; Iwata 1999:547–548). However, although middle uses are at first sight similar to ergative constructions in that the Goal-object of the transitive frame is in subject position, middle uses are characteristically marked by the occurrence of an adverb of manner which is almost always obligatory in the predicate frame.

(30) *Mary read a book.*   (transitive)

(31) *This book reads well.*   (middle)

Middle use has the following semantic characteristics (cf. Iwata 1999:528–529):

a. The subject is usually inanimate. It is identical with a prototypical Goal-object of the transitive frame. Thus, similar to passive and ergative constructions, middle uses are characterized by promotion of the Goal to subject.

b. Middles occur with a manner adverbial, such as *well, easily, better, smoothly, heavily, sooner* or *not*, which is usually obligatory.[29] This adverbial syntactically

introduces the notion of an implicit Agent who is passing judgement on the event (cf. Iwata 1999). However, the adverbial may be omitted if the context of the utterance sufficiently specifies that a judgement is passed on the event, as in examples (32) and (33) for *sell* and (34) for *wash*:

(32)   1616 B. Jonson *Epigr.* iii, To my Book-seller. Thou, that … Call'st a booke good, or bad, as it doth *sell*, Vse mine so, too. (*OED* s.v. *sell* v. 6.a)

(33)   1833 H. Martineau *Brooke Farm* v. 63 They *sell* at about a shilling a dozen. (*OED* s.v. *sell* v. 6.a)

(34)   1765 Franklin *Lett.* Wks. III. 402 Mrs. Stevenson bids me tell Sally, that the striped gown I sent her will *wash*. (*OED* s.v. *wash* v. 2.i)

c.   The state of affairs encoded in middle constructions is non-dynamic and uncontrolled; i.e. it is a State;[30] accordingly, the subject is assigned Zero-function. The focus is on the outcome of the action rather than on the action itself (cf. Iwata 1999: 546), i.e. the state of affairs is telic.

In PDE it seems as if most transitive verbs may be used in a middle construction.[31] However, the diachronic evidence does not show a clear semantic pattern as to what verbs were used in middle constructions first. The earliest instances are for the Speech verb ME *telle(n)* 'recount, narrate' (c1450?), the Cognition verb ModE *read* (17C?), as well as for the more concrete Change-of-state verbs EModE *wash* (16C) and *fill* (16C) and the Transfer/Transaction verb EModE *sell* (17C), e.g.

(35)   ?c1450 *St.Cuth.* 6644 How many ȝere in certayn I fand <u>na boke</u> þat *tellis* <u>playn</u>. (*MED*)

(36)   c1590 Marlowe *Jew of Malta* i. ii. 451 Who …Thinke me to be a senselesse <u>lumpe of clay</u> That will with euery water *wash* <u>to dirt</u>. (*OED* s.v. *wash* v. 15.d)

(37)   1592 Shakes. *Ven. & Ad.* 548 Glutton-like <u>she</u> feeds, yet <u>never</u> *filleth*. (*OED* s.v. *fill* v. 10.b)

(38)   1668 Shadwell *Sullen Lovers* iii, 'Tis <u>a play</u> that shall *read* and act <u>with any play that ever was born</u>. (*OED* s.v. *read* v. 18.a)

(39)   1656 Earl of Monmouth tr. *Boccalini's Advts fr. Parnass.* i. i. 4 There is <u>no Merchandize</u> in this Ware-House which *sels* <u>better</u>, then certain Fans. (*OED* s.v. *sell* v. 6.a)

Middle use of otherwise transitive verbs is distinct from the other three patterns described in that it developed fairly late in the history of English; few instances

are found in EModE, but as Denison (1993: 392–393) points out, the usage increases from the eighteenth century onwards and most instances to be found are from the nineteenth and twentieth centuries (see also Visser 1963–1973: §§168–169).

Middles have frequently been discussed within the context of passive constructions; both middles and passives share the properties of Agent demotion and promotion of the second participant (cf. Givón 1984/1990; Denison 1993; Palmer 1994; Iwata 1999). Denison (1993: 392–393) discusses middle constructions particularly within the context of the progressive passive, which developed around 1800 (Rissanen 1999: 218), and within the context of the older 'passival' use;[32] the patterns are illustrated in examples (40) and (41) (Visser 1963–1973: §§2004–2018; Denison 1993: 148–158; Görlach 1999: 82; Hundt 2001).

(40)   *The house is being built.*   (progressive passive)

(41)   *The house is building.*   (passival)

In contrast to middle constructions, progressive passives, like passivals, typically encode uncontrolled, atelic (or imperfective), dynamic processes; the Goal-object is promoted to subject; i.e. progressive passives and passivals select a Processed (see fn. 2) as their first argument. Thus, what primarily distinguishes middle constructions from the progressive passive and passivals are the properties of dynamism and telicity.

As Denison (1993: 439) observes, Mossé (*Histoire de la forme périphrastique 'être + participe présent' en germanique* (1938)) already made "the important point that the existence of the progressive passive remedies two separate ambiguities, since it admits an explicit contrast both with the active progressive (*he is shaving — he is being shaved*) and with the simple passive (*the house is built — the house is being built*)". We cautiously assume that the occurrence of middle uses with more and more transitive verbs may be indicative of a development towards a grammaticalized construction adding to the voice–aspect system of English which allows the coding of a non-dynamic and uncontrolled state besides the dynamic process variant encoded in the progressive passive (cf. Fischer 1992: 251–252). The overall increase of middle use noted in the literature (Visser 1963–1973: §§168–169; Denison 1993: 392; Görlach 1999: 78) may indicate a historically ongoing process, whereby the middle construction has been gradually extended to more and more groups of verbs, until it may potentially be applied to all the transitive verbs of English. However, the actual productivity of the pattern may only be measured through extensive corpus-based analysis in ModE.

4. Conclusion

Our analysis of selected verbs following one or more of the four diachronic patterns of detransitivization shows the decisive role which semantic properties and developments play in syntactic change. In this light, syntactic detransitivization must be viewed as a very complex process. It does not only involve various semantically distinct lines of development, but it also leads to different results concerning the structure of English.

The limited set of data investigated here suggest the following: the occurrence of individual patterns may be restricted to verbs which share certain semantic properties; thus, verbs following the co-referential intransitive pattern typically belong to the semantic fields of Body-care (e.g. *wash*, *bathe*, *dress*) or directed Body Movement (e.g. *move*, ME *dresse* 'direct oneself'); verbs occurring in the ergative pattern are usually such transitive verbs with a causative function which denote an action that totally affects their objects — i.e. prototypical transitive verbs (e.g. *open*, *break*, *fill*). Verbs which develop generic uses typically exhibit a close semantic, collocational binding with a limited number of objects (e.g. *read*, *drive*, *drink*). Middles differ from these three patterns in that they have become productive with verbs from most semantic classes in the course of ModE.

Compared to the respective transitive uses, co-referential intransitive, middle, generic and ergative uses in English affect the agentivity of the state of affairs: in co-referential intransitive use (*John washed*) the semantic function of the subject is ambivalent to an interpretation as Agent or Goal. In middle use (*This book reads well*) the Zero-subject corresponds to the Goal-object in the respective transitive use and the notion of an implicit Agent is retained. Generics (*He is wise who reads*), like middles, denote States; however, the Zero-subject here corresponds to the Agent-subject of the respective transitive use. Ergatives (*The door opened*) totally exclude the Agent and select the Processed-function instead. The types of states of affairs encoded in each of these four constructions differ accordingly along the lines of dynamism, telicity and control.

With respect to the historical effects of these diverse processes on the linguistic system of English, it seems evident that the co-referential intransitive and ergative patterns change the predicate frame of individual verbs: they result in homonymous or polysemous transitive–intransitive verb pairs which differ in their semantic features and syntactic behaviour, accordingly. The generic pattern and that of middle use do not change the verbs' predicate frames; rather, the representation of the state of affairs as a whole is affected by these

processes of detransitivization. This results in a difference in perspective and aspect. Since the ergative pattern and that of middle use lead to different structural results, we would like to cast some doubt on the frequently stated opinion that middle use is a special case of ergative use (e.g. Denison 1993: 392; Iwata 1999: 547–548).

Our investigation has shown that semantic properties and processes play a decisive role in syntactic change. For a fuller account of the semantic and pragmatic links which hold between the various transitive and non-transitive constructions within the course of their development, detailed, corpus-based studies of the various patterns in the different periods of English are necessary. Given a larger database it would be possible to account in greater detail for the various factors and structural dependencies which influence the occurrence and functions of certain syntactic patterns (e.g. phonological and morphological processes, influence from other syntactic constructions or even languages). Future investigations should also focus on processes of transitivization, as both transitivization and detransitivization play together in the evolution of transitivity alternations in English.

Notes

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1. E.g. OE *helpan* 'help' + dat., Germ. *helfen* 'help' + dat., OE *derian* 'harm' + dat., Germ. *schaden* 'harm' + dat.; OE *ābirgan* 'taste' + gen. (Germ. *schmecken* 'taste' + _nach_ + dat., cf. ModE *to taste of sth.*), OE *fēlan* 'feel' + gen., etc. Some verbs occur sometimes with an accusative and sometimes with a dative, e.g. *ābelgan* 'anger' (Mitchell 1985: 232).

2. Dik (1989, 1997) introduces Goal to describe the affected participant and default function of the second argument of trivalent predicates. It thus corresponds to the notion of Patient as introduced by Bloomfield and used, for example, in Givón (1984/1990). We follow Dik for his distinction between the functions Goal and Processed (the non-agentive function of the first argument in predications denoting dynamic states of affairs; e.g. *The door opened*).

3. Hopper & Thompson (1980: 251) use the label [action] instead of [dynamism], the latter being taken over by us from Dik (1997: 105–126). Please note that the functional and semantic typology of participants and states of affairs used by us is primarily based on Dik (1989, 1997).

4. Cf. Ikegami (1988: 389–390), who defines transitive verbs as those placing focus on the achievement of the intended goal of the action rather than on the action itself.

5. For a discussion of the gradual loss of inflectional case marking see Allen (1995: 158–220).

6. Of course, *drench* is still used in the meaning 'soak', e.g. *I have to change, I'm drenched*; *I got drenched in the rain.*

7. The cognates of OE *openian* in older Germanic already show a conflation of the inchoative and causative readings, i.e. Old Icelandic *opna* 'make/become open', Old Frisian *epenia* 'make/become open', Old Saxon *opanon* 'make/become open', Old High German *offanōn* 'make open; make known' (Heidermanns 1993:640). Schaefer (1984:357) considers both the inchoative and causative frame of deadjectival Gmc. -*ō*-verbs as old.

8. Henry (1995:50–80) describes imperatives "involving a postverbal subject" (*ibid.*:50) for contemporary Belfast English, e.g. "*Run* youse to the telephone" (*ibid.*:51). This would imply that Belfast English has retained an archaic feature which has been lost in Standard English.

9. This loss of distinctiveness of syntactic-semantic verbal categories which in Old English were still morphologically marked is paralleled by the general loss of distinctive marking of word categories, e.g. of verb vs. adjective (*open* v.:*open* adj.), noun vs. verb (*love* n.:*love* v.) and noun vs. adjective (*light* n.:*light* adj.) in the history of English. Few Gmc. languages have gone as far in the loss of inflexional and derivational affixes as English, which has led to the 'homonymic clash' of different lexemes belonging to the same or different word-classes.

10. Gamillscheg (1928) has OFr. *drecier* v. 'direct' (11C) < VLat. **directiare*, which is derived from Lat. *directus*. Rothwell et al. (1992:197) gloss Anglo-Norman *drescer* v. as 'direct', and reflexive *Issi se dresce tut a leyser* (Mar 491) as 'make oneself ready', suggesting that both meanings of ME *dresse(n)* were borrowed from French.

11. Following general usage (e.g. Denison 1993), we apply the term 'ergative' to this type of construction which is sometimes called 'anticausative' (e.g. Siewierska 1984) or 'non-ergative' (e.g. Halliday 1994). For discussions of the diachronic development of the four syntactic types discussed in this paper cf. Jespersen (1927); Deutschbein (1931); Visser (1963–1973); Denison (1993).

12. Dik's (1997:59, 78–82) concept of predicate frames refers to the property of verbal predicates as part of structures which form "a kind of 'blueprint' for the predications in which they can be used (…). Each predicate frame specifies the *form* (…), the *type* (…), and the *valency* or argument *structure* of the predicate" (1997:59; see also Fillmore's (1968) concept of case frames).

13. By reflexivity we understand the syntactic marking of clauses by means of a reflexive pronoun. Semantically, we can distinguish emphatic use, which anaphorically stresses the role of Agent (*He opened the door himself*), and co-referential use, which indicates that the Goal of the state of affairs is identical with the Agent (*He washed himself*; cf. Givón 1993:90). Only co-referential reflexivity is part of our present investigation. We have chosen the term 'co-referential intransitive' to indicate that verbs omitting the co-referential reflexive marker in their intransitive use are still perceived as co-referring to the Agent-subject.

14. Conceptually, the Agent will always be selected as a first choice for the subject position, since it ranks highest in the cognitive scale of participants (cf. Givón 1984:139–140).

15. But as Görlach (1999:78) points out, "[m]any grammarians have noted an increase" in this pattern in the nineteenth century, as well as in other patterns related to processes of transitivization or detransitivization.

16. The verb *shave* < OE *sceafan* 'scrape away the surface of sth.' (cf. Germ. *schaben*) developed a reflexive use only with the specialized meaning of 'scrape away the hair of some person (or animal)' (14C), and even then it took some time until the first co-referential intransitive uses appeared (18C).

17. Deutschbein (1931: 100–101) further explains along these lines OE transitive–intransitive verbs such as *wendan* (trans., reflex., intrans.) 'make sth. turn/direct sth. > make oneself turn/direct oneself to > go', *fysan* (trans., reflex., intrans.) 'make/urge sb. go on his way/in a direction > make/urge oneself (go) on the way/in a direction > haste', and *ætiewan* 'reveal/ show sth. > show oneself > appear'. Furthermore, he cites *openian* 'open sth. > open oneself > become open' among this group, which does not, however, show an intermediate co-referential reflexive stage in the OE data, but only the emphatic reflexive use (cf. Ogura 1989: 99–100; cf. also Section 2).

18. As is typically the case with intransitive verbs, the focus of intransitive *wash* is more on the action itself than on the dimension of extension typically encoded in transitive verbs (Halliday 1994: 110).

19. In Old English, co-referential reflexivity is expressed by means of the personal pronoun, which may be used to refer back to the subject. Sometimes it is emphasized by the pronoun *self*; the combination of the personal pronoun with *self* forms the reflexive pronoun we know from Middle English onwards in emphatic as well as co-referential use. Purely emphatic, non-coreferential reflexivity is expressed by means of the emphatic pronoun *self* without a personal pronoun in Old English (cf. Mitchell 1985: 112; Ogura 1989: 1–2). It is interesting to note that many, if not most, co-referential reflexive verbs which did *not* develop a co-referential intransitive use are found with the personal pronoun + emphatic *self* in Old English, whereas verbs of the co-referential intransitive pattern are usually found with the bare personal pronoun when used reflexively in Old English.

20. Characteristic properties such as expressed in *John is tall ~ John drinks* (= *John is an alcoholic*); given truths = given by virtue of world knowledge.

21. Unfortunately, Dik (1989, 1997) does not distinguish between Goal and, for instance, Theme, which is in some typologies used for an entity that is moved by an action or whose location is described, but which does not undergo a change of state (Saeed 1997: 140; for a slightly different use of the term cf. Langacker 1991: 287–288). With respect to this, Dik's typology should probably be modified. Dik himself does, however, distinguish between prototypical and less prototypical Goals. Also cf. Kastovsky (1973: 266), who calls verbs like *read*, *eat*, etc., which are not susceptible to a causative interpretation, "basically" or "inherently transitive".

22. The choice of the first participant here depends on whether the event is experienced as a dynamic process (= ProcessedExperiencer) or a non-dynamic state (= ZeroExperiencer).

23. Note that generic use of *to read (lectures)* has led to the polysemous meaning 'teach' for *read* (e.g. *He reads at Oxford*).

24. Generic use bears some resemblance to the use of cognate objects with intransitive verbs (e.g. *She thought a terrible thought*), in which the syntactic encoding of an (otherwise redundant) Goal-object is important for pragmatic purposes, e.g. for presenting a qualitative modification or specification of the event referred to (Klages 1996).

25. The frequent association of ergative and middle constructions with syntactic reflexivity (e.g. Givón 1984; Palmer 1994) is usually based on a comparison of different languages, e.g. German and English. (Note that an ergative clause such as *The door opened* would in German be rendered as a co-referential reflexive clause *Die Tür öffnete sich* (reflex. pron.)). In our opinion, semantic or functional relationships between syntactic constructions may only be postulated language-internally (cf. Wierzbicka 1996:425–426). The diachronic syntactic-semantic analysis of selected English verbs executed here does not yield much evidence for a functional and semantic relationship between co-referential reflexive/intransitive and ergative or middle uses. However, they may be linked by the concept of 'middle voice' (Kemmer 1993).

26. But see the contrary assumption in, for instance, Fillmore (1968:26), who regards the transitive use of *open* as secondary, in that only the Object case (e.g. *the door* in *the door opened*) is obligatory in the frame, the Agent and Instrument being optional: *open* + [O (I) (A)].

27. The verb *move* developed an ergative use probably through metaphorical co-referential intransitive uses of the verb with subjects denoting a Mass or Body, e.g. c1400 *Destr. Troy* 1601 "Thurgh myddis þe mekill toune *meuyt* a water, And disseuert þe Cite" (='through the middle of the great town flows a river, and divides the city'; cf. *OED* s.v. *move* 16.a) and 1605 Shakes. *Macb.* v. v. 35 "Me thought The Wood began to *moue*" (*OED* s.v. *move* 16.a).

It may be argued that once a co-referential intransitive polysemous *move* had been established in English, the combination with an inanimate subject after the pattern of the many already existing ergative uses was just a logical consequence for such a prototypical Motion verb as *move*.

28. Note that Deutschbein (1931:100–101) interprets the development of OE intransitive *openian* as one following the co-referential reflexive pattern. Our data, however, do not give evidence for an intermediate co-referential reflexive use for Old English (cf. note 17). Furthermore, the ⟨animate⟩ Agent is lacking in OE instances of intransitive constructions with *openian*, thus ruling out a possible development via the co-referential reflexive stage.

29. This adverb of manner modifies the state of affairs as a whole and not only the predicate, such as in *The door opened slowly* (i.e. it is a predication manner satellite according to Dik's 1989, 1997 typology).

30. According to Iwata (1999:530–532), middle constructions typically occur in the present tense with a generic (stative) meaning, but may also be used with other tenses to denote specific (dynamic) events.

31. Exceptions are, for example, most Contact verbs, such as *hit*: [?]*The ball hits easily*; *beat*: [?]*The drum beats well*.

32. Before the progressive passive existed, the older passival (*were bringing down*) and the non-progressive passive (*were brought down*) were used (Denison 1993:439). The expanded form — the predecessor of the ModE progressive aspect — has existed in English since OE times, but in Old and Middle English it differed in function from the progressive, which became grammaticalized by about 1700 (Fischer 1992:254). The use of the progressive has steadily increased from early in the ModE period onwards (Denison 1993:143). For the relationship between middles and the progressive passive see Denison (1993:392–393).

Passivals probably developed in Late Middle English (cf. Visser 1963–1973: §§168–169; Fischer 1992: 256; Denison 1993: 390). They went out of use with the establishment of the progressive passive (cf. Denison 1993: 150). Visser calls passivals obsolete in ModE. However, as M. Hundt points out, passivals have probably been retained at least in American English, e.g. in "Casablanca *is showing* this weekend at the Alliance Theatre" (*Miami Herald*, 17 July 1992), and "CORONATION STREET goes onto its new timeslot this week, and *is screening* alongside a blast from Rover's past" (*Evening Post*, 27 December 1994), both quoted from Hundt (1998: 116, 118). For a detailed discussion of the two patterns of passival use and progressive passive and their respective developments see Hundt (2001).

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Morphology recycled

The Principle of Rhythmic Alternation
at work in Early and Late Modern English
grammatical variation*

Julia Schlüter
University of Paderborn

1. Introduction

The present contribution is part of a research programme that explores linguistic variability as a source of new insights into the workings of functional factors in language. It is assumed that grammatical variation and change are determined by a network of interacting factors which may reinforce or counteract each other. Some factors that deserve mention here are, among others, semantic tendencies, stylistic biases, cognitive complexity, avoidance strategies, frequency and requirements of information structure. The focus of this paper is on phonological factors, which have been frequently neglected or even ruled out as determinants of grammatical variation. In particular, I will concentrate on the Principle of Rhythmic Alternation, whose effects will be illustrated with reference to a number of variation phenomena.

For the Principle of Rhythmic Alternation, Selkirk (1984: 37) proposes the following definition: "[t]here is arguably a universal rhythmic ideal, one that favors a strict alternation of strong and weak beats". It follows from this that an ideal rhythm consists of a stressed syllable followed by an unstressed syllable, followed by a stressed syllable again, etc. Put differently, both sequences of stressed syllables ('stress clashes') and sequences of (more than two) unstressed syllables ('stress lapses')[1] tend to be avoided.

Making reference to the Principle of Rhythmic Alternation, the data reviewed in this paper support the claim that in areas involving rhythmically different grammatical variants, those variants which give rise to a regular

succession of stressed and unstressed syllables will be preferred over those leading to stress clashes or lapses. Relevant effects of this type have been pointed out by Fijn van Draat (1910; 1912a; 1912b) and Bolinger (e.g. 1965) for English prose as well as by Stroheker (1913), Bihl (1916) and Franz (1939) for versified language. I aim to buttress these authors' findings by providing quantifiable empirical evidence for the effectiveness of this principle in explaining the determination of grammatical choices and linguistic change.

All of the analyses to be presented in the following subsections illustrate cases in which grammatical morphemes and markers are available as rhythmic buffers that can be optionally inserted in accordance with the Principle of Rhythmic Alternation. Section 2.1 takes a look at the rhythmic conditioning of the gradual loss of the formerly obligatory participial suffix -*en*, showing that the past participle *drunken* was preserved in certain rhythmically defined environments. Section 2.2 focuses on the establishment of the adverbial suffix -*ly* and the facilitating or inhibiting role of rhythm in this respect. The adverb *scarcely*, variably replaced by its suffixless counterpart *scarce*, is chosen to exemplify this process of linguistic change. Section 2.3 deals with the variable marking of infinitives dependent on the verb *make* in the passive. It will be demonstrated that, as long as the infinitive marker is not obligatory in this construction, the influence of rhythm manifests itself by slowing down the rate of change in favourable contexts. Finally, Section 2.4 analyses the variable presence of the *a*-prefix in -*ing* forms associated with the verb *set*. While English usage exhibits an up-and-down evolution in this respect, the effect of rhythmic alternation is noticeable at every historical stage. All of these studies are concerned with intermediate phases of language change in which morphemes and markers are no longer or not yet quite obligatory in terms of grammatical motivations. It is precisely in such phases of grammatical indeterminacy that the Principle of Rhythmic Alternation assumes the role of an influential determinant.

2.   Empirical studies

Methodologically, the present work is based on a large collection of historical corpora (details are given in the references). The database covers the sixteenth to nineteenth centuries, i.e. the Early and Late Modern English periods. However, where appropriate, the data are placed in a wider context, ranging from Middle English to late twentieth-century English.

2.1 The distribution of mono- and disyllabic past participle variants

Even today, variation in the form of the past participle of irregular verbs is still a frequently encountered phenomenon. Variants belong to different verb types and involve ablauted, suffixless forms and syncopated weak forms which may or may not be (re-)suffixed with *-en* or *-ed*. In many of the relevant cases the variants differ not only in their morphological shape, but also in their prosodic properties, i.e. a monosyllabic form as opposed to a disyllabic form, equipped with an additional participial suffix. The list of examples includes *drunk/ drunken, shrunk/shrunken, sunk/sunken, struck/stricken, swelled/swollen, shaved/ shaven, fit/fitted, knit/knitted, quit/quitted, lit/lighted, chid/chidden, trod/trodden, got/gotten*, etc. In earlier forms of English (as well as in modern dialects), the number of variants was considerably greater (cf. Fijn van Draat 1912a: 27ff.; Stroheker 1913: 42ff.; Franz 1939: 166ff.; Bolinger 1965: 145ff.).

The following empirical study focuses on the past participles of the verb *drink* and investigates the variable preservation of the Old English participial suffix *-en*, which underwent a gradual process of degrammaticalization, having been omissible in the participle since the thirteenth century (*OED* s.v. *drink* v.[1]).[2] The database is composed of the Middle English section of the Helsinki Corpus (HC; 1150–1500; 0.6 million words), the Early English Prose Fiction corpus (EEPF; 1518–1700; 9.6 million words), the Eighteenth-Century Fiction corpus (ECF; 1705–1780; 11.2 million words),[3] the Nineteenth-Century Fiction corpus (NCF; 1782–1903; 37.6 million words), and the British National Corpus (BNC) imaginative prose section (1964–1993; 19.7 million words). All occurrences of *drunk* and *drunken* are classified according to their syntactic functions. The first category, labelled 'simple attributive uses', contains all cases in which the participles immediately precede a noun and are not premodified themselves; cf. example (1):

(1)   The *drúnken wrétch* fell off the sofa, and fell on to the floor, where he stayed; (William M. Thackeray: *Catherine*, 1839–1840; NCF)[4]

The second category comprises all uses that are not simple attributive ones. This involves, in particular, the large number of non-attributive occurrences of *drunk* and *drunken*, such as postnominal uses, as in example (2), predicative uses, as in example (3), nominalized uses, as in example (4),[5] and verbal uses, as in example (5):

(2)   The beating of drums, the rattle of tomtoms, and the yells and howls of the rebels, *drúnk* with opium and with bang, were enough to remind us all the night of our dangerous neighbours across the stream.
(Sir Arthur Conan Doyle: *The Sign of Four*, 1890; NCF)

(3)   "I would lie a wager they are all *drúnk* in an hour," said he, (…)
(Meadows Taylor: *Confessions of a Thug*, 1839; NCF)

(4)   Long horse-hair settles for the *drúnk*, with horse-hair pillows at each end. (Thomas Hardy: *Far from the Madding Crowd*, 1874; NCF)

(5)   At tea, two or three hours earlier, they had, in the freakishness of affection, *drúnk* from one cup.
(Thomas Hardy: *Tess of the D'Urbervilles*, 1891; NCF)

The syntactic classification adopted here closely correlates with certain prosodic constellations: prenominal contexts constitute the rhythmically most critical contexts for attributive material ending in a stressed syllable, since nouns in English typically carry initial stress.[6] Thus, Bolinger (1965: 146f.; cf. also Fijn van Draat 1912a: 24; Franz 1939: 167) predicts that the disyllabic form preserving the Old English participial suffix -*en* will be particularly favoured in attributive contexts, where the suffix can serve to prevent a stress clash.[7] An illustrative example is given in sentence (1) above. By contrast, the participle in non-attributive uses is usually either followed by an unstressed function word or by a pause,[8] so that stress clashes are rare. This is the case in examples (2) to (5), which are representative of most of the relevant cases. The results of the count are summarized in Figure 1, which lists the corpora in their chronological order.

As can be seen in the comparison of the percentages of *drunk* and *drunken* in simple attributive and other contexts, the expectations are fully confirmed. At every point in the history from Middle English to Late Modern English, *drunken* was preserved in close to 100% of the critical attributive cases. It is only in the late twentieth century that the older form showed signs of an incipient demise in simple attributive uses.[9] By contrast, in all other uses, its frequency suddenly dropped from 40% in Middle English to values between 11 and 1% in the later periods. The stark contrast between simple attributive and other uses found as early as Middle English maintained a quasi-categorical status all through Early and Late Modern English.

However, some qualifications of the binary opposition attributive vs. other uses are in order. In contrast to the earlier centuries, the nineteenth century witnessed the growth of more complex attributive structures. Thus, the Nineteenth-Century Fiction corpus yields 13 compounds in attributive uses involving
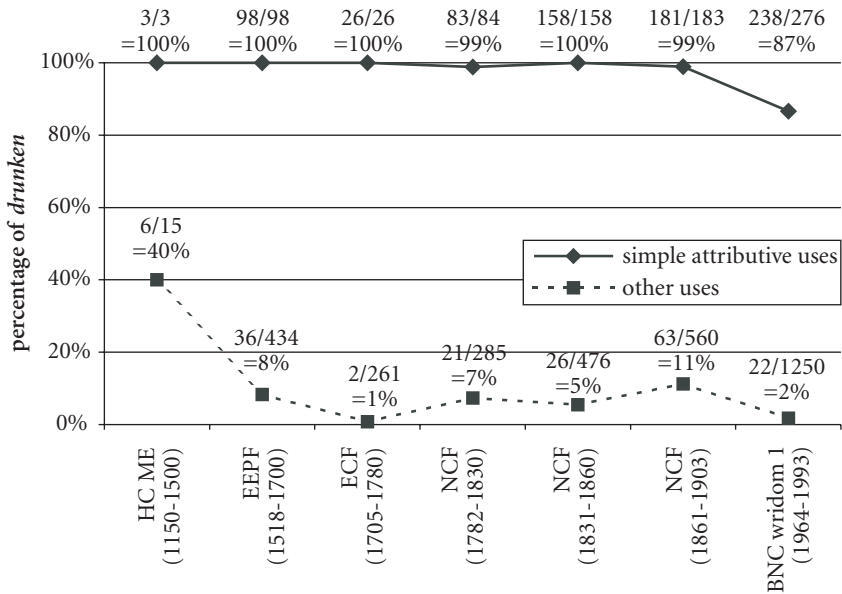
Figure 1. The distribution of the participial variants *drunk* and *drunken* in a series of prose corpora.

the past participle, three of which contain the monosyllabic variant *drunk* (*half-drunk*, *sleep-drunk* and *joy-drunk*, as in example (6), alongside ten instances of *half-drunken*). By virtue of the English compound stress rule, the lexical stress in such complex lexemes regularly falls on the first element, so that even the monosyllabic form of the participle causes no rhythmic problem. Similarly, in two cases the participle is itself premodified by an adverb (*newly drunk* and *partially drunk*, as in example (7)). This constellation affords the possibility of shifting the stress leftwards to the premodifying adverb, so that the participle merely retains secondary stress and the clash with the following noun is mitigated (for the stress shift rule, cf. Selkirk 1984: 169). In the twentieth-century corpus, the trend towards the monosyllabic form in complex attributive structures is even more pronounced: in 16 out of 24 cases, *drunk* is used (10 compounds, among them 6 instances of *half-drunk* and 4 instances of *punch-drunk*, and 6 adverbially premodified participles). Of the remaining 8 cases of *drunken*, 3 are compounded (all of them *half-drunken*), and 5 adverbially premodified. This distribution suggests that monosyllabic *drunk* is accepted as fully grammatical in attributive structures, but only on the condition that these are expanded by additional material and thereby rhythmically disencumbered.

(6)   she yields herself to the influences around her; the soft and sugared air, the *jóy-drunk lárks*, the juicy grass fields thronged with bold dandelions and faint ladies'-smocks. (Rhoda Broughton: *Belinda*, 1883; NCF)

(7)   an exceedingly dirty and *pártially drùnk mínister* of justice asked me if I would like to step in and hear a trial or so:
(Charles Dickens: *Great Expectations*, 1861; NCF)

Composite attributive structures in which attributive *drunk(en)* does not directly precede the noun it modifies equally reduce the danger of a stress clash since the participle is followed by a pause (sometimes indicated by a comma) or by unstressed *and* or *or*, as is the case in example (8):

(8)   the stranger who preceded them divided the press, shouldering from him, by the mere weight and impetus of his motion, both *drúnk and sóber pássengers.* (Sir Walter Scott: *Guy Mannering*, 1830; NCF)

Due to the fact that compounded, adverbially premodified and composite attributive structures are usually unproblematic with respect to the alternation of stressed and unstressed syllables, these are subsumed under the category 'other uses' of Figure 1. The two groups 'simple attributive' and 'other uses' are thus highly correlated with contexts representing a high and a low potential for stress clashes respectively. The obvious explanation for the continued preservation of *drunken* in simple attributive uses invokes the Principle of Rhythmic Alternation, which favours an initially stressed disyllabic form preceding stressed syllables and thus secures an ideal rhythmic pattern.

    The wide discrepancy between the two curves in Figure 1 suggests that the Principle of Rhythmic Alternation has led to the loss of free variation between the participial variants during a long interim of almost five centuries. The functional split has however not gone to completion: the nineteenth- and twentieth-century data show that the use of *drunk* is licensed and widespread in attributive functions wherever material expanding the attributive structure conspires to secure an alternating rhythm. Thus, the morpheme *-en*, degrammaticalized in Middle English (in the sense that it was abandoned as an obligatory participial marker), has not entirely become regrammaticalized as a categorical ending for attributive occurrences of the participle, but primarily subserves rhythmic (i.e. extra-grammatical) preferences instead.

    In conclusion, the Old English suffix *-en* has been able to maintain its presence in Modern English thanks to its suitability as a rhythmic buffer in attributive contexts. The apparent near grammaticalization observable in all

corpus sections from Early Modern English onwards may be attributed to the diachronic influence of the Principle of Rhythmic Alternation. Even so, rhythmic alternation operates in conjunction with the English compound stress rule and the stress shift rule to license the monosyllabic form in more complex attributive structures. The evolution of the disyllabic form *drunken* illustrates a phenomenon which Lass (1990; 1997: 316ff.) refers to as 'linguistic exaptation' (cf. also Aitchison 1991: 148ff.; Brinton & Stein 1995; Vincent 1995): that is, a morpheme that used to code a grammatical function loses this function, but the morphological material itself is still around and is put to a different use — one which may be just as systematic. Instead of marking past participles, the *-en* suffix has from Middle English times onwards been recycled to buffer stress clashes.

2.2 Adverbs with and without the *-ly* suffix

The *-ly* suffix, used to derive adverbs from adjectives, was fully established in this function in Middle English, but even today it may be missing in de-adjectival adverbs in non-standard and even standard language, provided that the circumstances favour its omission (cf. Fijn van Draat 1910: 96ff.; Stroheker 1913: 49; Franz 1939: 223; Nevalainen 1997). Syntactic and stylistic factors play an important role in this respect, but here I focus on the rhythmic aspect of *-ly*-less adverbs.

Exemplary cases of *-ly* omission include a number of intensifying adverbs, popular in earlier forms of English, which boast an unstressed final syllable, e.g. *excessive*, *wondrous*, *wonderful* and *proper*. My corpus studies have confirmed that the *-ly*-less forms frequently served as adverbs, even before items beginning with a stressed syllable, since they never caused a stress clash with the following element:

(9) The execution after the Route was *excéssive blóody*, the Romans remem-
     bring how freely the Affricans had open'd their veines, were not
     vngratefull in their returne.
     (Roger Boyle: *Parthenissa*, Part 2, 1655; EEPF)

Parallel results have been obtained for several non-finally stressed adjectives which may serve as adverbial intensifiers without the addition of a *-ly* suffix even in Present-day English, e.g. *devilish clever*, *hellish good*, *hopping mad*, *boiling hot*, etc. In these cases, the presence of *-ly* offers no rhythmic advantage, since the base forms in *-ish* and *-ing* have an unstressed final syllable. Indeed, it would create the undesirable structure of a stress lapse. It is for this reason,

among others, that these patterns are still very productive in contemporary usage (see Adams 1973:98).

An interesting and longstanding case in point is provided by the alternation between *scarce* and *scarcely*:[10] both can be used as adverbs without a difference in meaning (cf. Stroheker 1913:50). The following corpus study considers only those cases in which *scarce* and *scarcely* immediately precede and premodify full verbs (excluding auxiliaries and cases with intervening material). These full verbs can be subdivided into initially stressed ones, as in example (10), non-initially stressed ones, as in example (11), particle verbs, which are stressed on the particle, such as *pull off* in example (12), as well as verbs, such as *kiss* in (13), which are normally initially stressed (or monosyllabic), but which produce at most a mitigated stress clash in the corpus examples because their stress is absorbed by a stronger emphasis on the following material and is thereby reduced:[11]

(10)   (…) I thereupon told him my name, which he had *scárcely héard*, but I found my selfe in his Armes, as a reward of that discovery; (Roger Boyle: *Parthenissa*, Part 4, 1655; EEPF)

(11)   The generous Atafernes did *scárce abándon* me one moment, knowing my condition needed all the consolation, though it was above all service of a Friend. (Roger Boyle: *Parthenissa*, Part 5, 1656; EEPF)

(12)   that Maharball wanted tyme to answer this Civility, and had *scárce pulld óff* his owne Scarfe and taken his Freinds, before they were come up; (Roger Boyle: *Parthenissa*, Part 2, 1655; EEPF)

(13)   I had *scárce kìst his hánds* as an acknowledgement of his favour and my Ioy but Batiatus came in, (Roger Boyle: *Parthenissa*, Part 1, 1655; EEPF)

The analysis of the data is guided by the hypothesis that, as in the examples quoted above, the suffixed variant *scarcely* will be favoured in contexts involving a subsequent stressed syllable (e.g. example (10)). By contrast, the suffixless variant *scarce* is expected to occur where an unstressed or secondarily stressed syllable follows the adverb and there is thus no need to avoid a stress clash (e.g. examples (11)–(13)). This hypothesis has been tested against a large corpus of fictional texts dating from 1518 to Present-day English (including the same corpora as the previous case study, except for the Middle English section, which contained too few examples).

The results reveal that the use of the two variants differs widely between individual authors: in the Early English Prose Fiction corpus (comprising the sixteenth and seventeenth centuries), the majority (58 authors) have *scarce* only;

four authors have *scarcely* only and the remaining 42 authors fluctuate between both variants. In the Eighteenth-Century Fiction corpus, six authors use *scarce* only; none uses *scarcely* only, but the vast majority of 26 authors use both *scarce* and *scarcely*. In the Nineteenth-Century Fiction corpus, 66 authors alternate between *scarce* and *scarcely* and 32 use *scarcely* exclusively.[12] Finally, of the several hundreds of authors whose works make up the imaginative prose section of the BNC, only five use *scarce* as an adverb at all. All of these are authors of novels set wholly or partly in earlier centuries, employing an archaic style on purpose. While in the sixteenth to eighteenth centuries, *scarcely* appears in only 13 to 17% of all adverbial uses, it makes up 76% in the nineteenth century and reaches 97% (respectively 100%, discounting the historical novels) in the late twentieth-century corpus. There is thus a constant rise in the marking of the adverb in the course of five centuries.

In the works of most authors who alternate between the two forms of the adverb, the distribution of the variants is neutral with regard to rhythm; probably other factors than rhythm prevail in their selection. However, the handful of authors given in Figure 2 seem to be distributing the variants according to the requirements of the Principle of Rhythmic Alternation. In this study, only the works of those authors are included which contain at least two relevant instances of both *scarce* and *scarcely*. Even so, due to the low numbers of occurrence, most results for individual authors are far from attaining statistical significance. Nevertheless, the figures are highly suggestive and allow interesting conclusions.

The solid curve, '*scarcely* preceding a stressed syllable', refers to all instances of the adverb immediately preceding initially stressed verbs; the dashed curve, '*scarcely* preceding an unstressed syllable', subsumes both non-initially stressed verbs, particle verbs and rhythmically overshadowed verbs following the adverb.

As it turns out, for every author *scarcely* occurs in a higher percentage of cases preceding stressed syllables than preceding unstressed syllables. Conversely, the percentage of *scarce* soars before unstressed syllables. Thus, conformity with the Principle of Rhythmic Alternation is achieved in the majority of cases.

Figure 2 shows that individual authors behave very differently. In the text by Brian Melbancke (sixteenth century) there are only seven instances of the adverb preceding and modifying a verb: *scarcely* exclusively precedes initially stressed verbs, while *scarce* precedes verbs that are either initially stressed, non-initially stressed or rhythmically overshadowed. Like Melbancke, the anonymous seventeenth-century author of *Fortunatus* uses *scarce* preceding an unstressed syllable. In the nineteenth century, the same is true of Charles
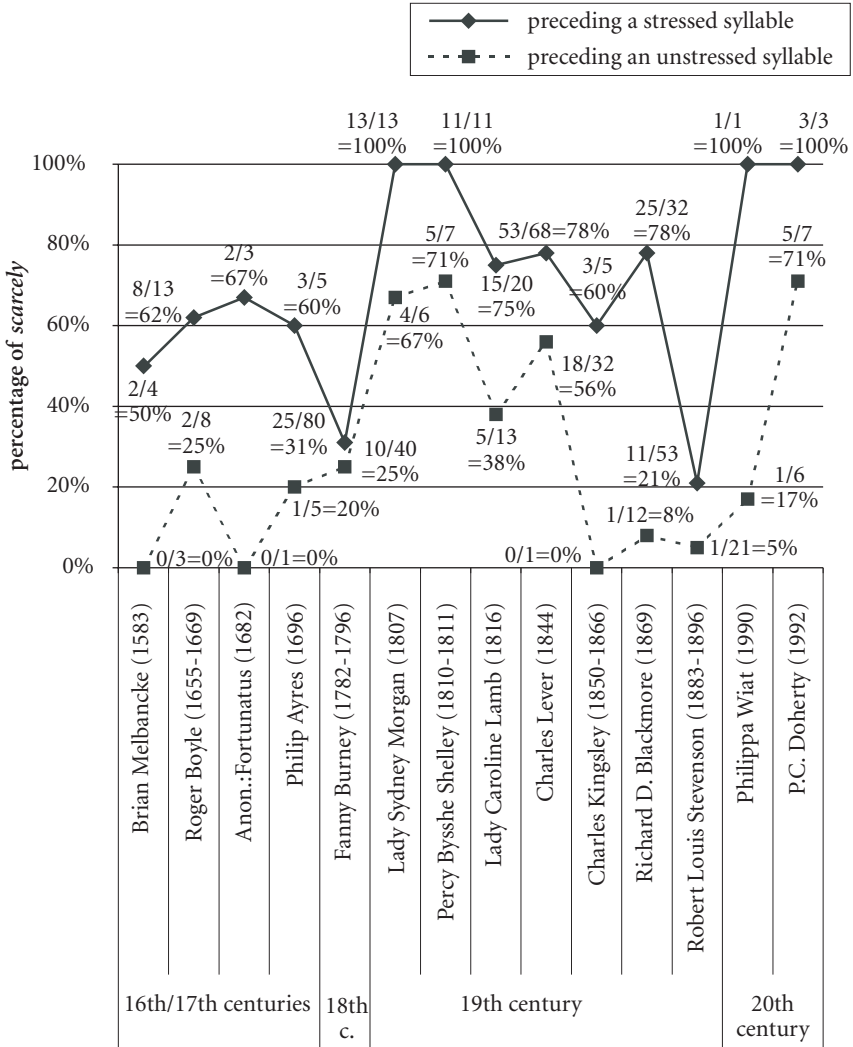
Figure 2. The distribution of *scarce* and *scarcely* immediately preceding full verbs in the works of selected authors in a series of prose corpora.

Kingsley and — with one exception — of Richard D. Blackmore and Robert Louis Stevenson. As late as that century, Robert Louis Stevenson still uses *scarce* as the most common, unmarked form preceding all types of verbs,[13] but even so makes a slight difference between environments with a following stressed or unstressed syllable. Lady Morgan and Percy Bysshe Shelley in the nineteenth century and Philippa Wiat and P. C. Doherty in the twentieth century never let

adverbial *scarce* precede an initially stressed verb. In the works of all authors, the Principle of Rhythmic Alternation only manifests itself in a more or less reduced incidence of *scarce* preceding initially stressed verbs. But within these clearly recognizable tendencies, there is a margin for free variation, which seems to be determined by factors outside the domain of prosody (e.g. processing tendencies).

One strategy which probably contributes to deviations from a perfect alternating rhythm may be a striving for parallelism, favouring the same morphological form for a sequence of two adverbs fulfilling the same syntactic function. Consider examples (14) and (15), in which one non-initially stressed and one initially stressed full verb are coordinated. A rhythmically-guided choice of *scarce* in one case and *scarcely* in the other would have led to a striking structural inconsistency:

(14)   She had *scárce recéived* it, *scárce pláced* it in her bosom, when Lady Margaret attached her. (Lady Caroline Lamb: *Glenarvon*, 1816; NCF)

(15)   He then held out to her his hand, which she could *scárcely appróach* from trembling, and *scárcely kíss* for weeping,
(Fanny Burney: *Camilla*, 1796; NCF)

Useful as it may be in terms of rhythmic alternation, the lack of codification of adverbial forms runs counter to standardization tendencies gaining ground in the eighteenth century (cf. Franz 1939:224). These forces favour a single morphological form for each syntactic function, but they are generally insensitive to the requirements of the Principle of Rhythmic Alternation. As a result, in Present-day English prose *scarce* regularly fills the adjective slots, while — with very few exceptions — *scarcely* has become the dominant adverbial form. These exceptions occur almost exclusively in cases where the omission of *-ly* serves to create a deliberately archaizing style, but causes no rhythmic inconvenience. The latter fact supports the view that the avoidance of stress clashes is a universal factor which is at work at all times, but visible only to the extent that it is not neutralized by contrary forces.

In conclusion, the adverbial suffix *-ly* can function as an accentual buffer, thus averting threatening successions of strongly stressed syllables. Conversely, it may be omitted where a buffer element is unnecessary because an unstressed syllable separating two stressed ones is already present. Unlike the case of the participial suffix *-en*, this phenomenon cannot be properly described as an exaptive change: while the participial suffix was on its way out when it was recycled for rhythmical purposes, the adverbial suffix was actually in the process of establishing

itself. Even so, it replicates the process by which essentially grammatical morphemes receive a subsidiary functional motivation as rhythmic buffers.

2.3 The variable marking of infinitives dependent on manipulative verbs

In Early Modern English, it was possible for a number of manipulative (or directive) verbs (e.g. *make*, *bid*, *charge*, *command*, *entreat*, *forbid*, *let*, *see* and *suffer*) to be followed either by marked or by unmarked infinitives (cf. Stroheker 1913:81ff.; Franz 1939:539; Mustanoja 1960:526ff.). The presence or absence of the infinitive marker *to* was determined by a range of different factors, notably semantic and syntactic ones.[14] The following corpus analysis focuses on infinitives dependent on the verb *make* in the passive (parallel results have been found in connection with the verb *bid*; for both verbs cf. Rohdenburg & Schlüter 2000:484ff.). In the passive, the superordinate verb *made* is normally immediately followed by the dependent infinitive and both verbs carry a lexical stress. In contrast to the active (where object phrases intervene), passivization is therefore liable to produce a high potential for stress clashes. Consider the following examples:

(16)   my eyes have before been *máde to glísten* by this soul-moving beauty;
        (Samuel Richardson: *Clarissa*, 1748; ECF)

(17)   my Father was the happiest Man in the World, and had nothing to vex
        him, but the Enmity he was *máde belíeve* his Children had to him.
        (Sarah Fielding: *David Simple*, 1744; ECF)

In both examples, the dependent verbs *glisten* and *believe* directly follow the superordinate *made*. Since *glisten* in (16) carries initial stress, the infinitive marker *to* comes in handy as a stress clash buffer. By contrast, *believe* in (17) has an unstressed initial syllable which makes an additional buffer syllable superfluous.

    The present study investigates the influence exerted by the stress pattern of the dependent verb on the variable presence of the infinitive marker. The proposed hypothesis is that the marker will be absent relatively more often when the dependent infinitive is non-initially stressed. Figure 3 presents the results of a corpus analysis covering the familiar prose corpora from the sixteenth to the nineteenth centuries. The data include only non-coordinated infinitives or such that are initial in coordinated infinitival structures; i.e. all instances of non-initial coordinated infinitives are excluded (the use of the infinitive marker is governed by different principles here; cf. Ohlander 1941:59; Rohdenburg & Schlüter 2000:450f.). All examples of *made* + infinitive have been categorized
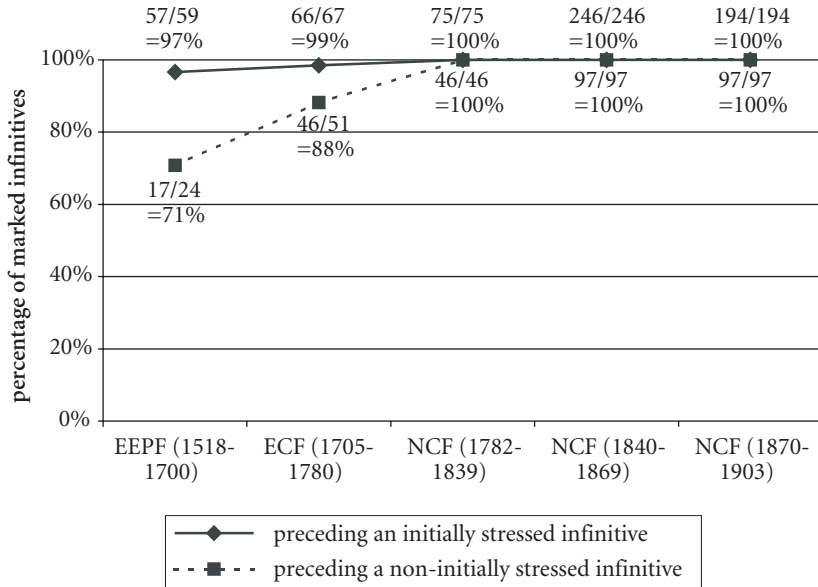
Figure 3. The variable marking of (initial or non-coordinated) infinitives dependent on passive *make* in a series of corpora.

according to the presence or absence of initial stress on the infinitive.[15]

   On average, in the sixteenth and seventeenth centuries 89% of the dependent infinitives are marked by *to*. In the eighteenth century, this is already true of 94%, and in the nineteenth century the corpus yields not a single occurrence of an unmarked dependent infinitive. This shows that the diachronic range of the corpus under consideration extends over the terminal phase of the *to*-less construction. Nevertheless, in the earlier corpus sections, the curves for initially and non-initially stressed infinitives take a clearly distinct course: as early as the EEPF corpus, nearly all initially stressed infinitives are associated with the infinitive marker. Two out of the total of three exceptions to this trend can be explained with reference to the overriding prosodic movement of the sentence:

(18)   as the yonge Fawne will be *máde tàke bréad* at a mans hand, when the old Bucke will not by any meanes looke vpon a man:
       (Austen Saker: *Narbonus*, 1580; EEPF)

(19)   Being come to his House, he put me into the Garden to work, there I was *máde dràw Wáter*, dig, and labour hard all day,
       (Penelope Aubin: *Charlotta Du Pont*, 1739; ECF)

In both cases, the dependent infinitives are immediately followed by object expressions which absorb much of the stress from the infinitives, so that the latter have a relatively weak stress in comparison to the adjacent syllables and can themselves function as buffer syllables.

In contrast to the initially stressed infinitives, of the non-initially stressed infinitives, seven (i.e. 29%) in the EEPF corpus and five (i.e. 12%) in the ECF corpus are left unmarked. This contrast is explained by the Principle of Rhythmic Alternation which does not require any buffer to be added before infinitives that do not carry stress on their initial syllable (e.g. *appear*, *confess*, *obey* and *believe*, as in example (17)). The corpus data prove that while the *to*-less construction is petering out, rhythm and sentence prosody are two important factors accounting for its latest occurrences.

As Figure 3 shows, the marked infinitive after passive *made* becomes obligatory (grammaticalized) in the course of the eighteenth century. By contrast, in the active uses of *make*, the unmarked infinitive is still unchallenged up to Present-day English. A strong hypothesis (cf. Franz 1939: 537) attributes this grammatical split between the active and the passive voice to the fact that the dependent infinitive usually follows immediately upon the passive form *made*. As a consequence, the probability of imminent stress clashes is high, and the infinitive marker *to* is called for on rhythmical grounds. The situation is different in the active, where *make* and the dependent infinitive are usually separated by intervening object expressions (cf. example (20)):

(20)   I would *máke you smíle* in the midst of your gravest airs, as I used to do.
(Samuel Richardson: *Clarissa*, 1748; ECF)

Despite the decisive influence of the Principle of Rhythmic Alternation, the choice of marked or unmarked infinitives after *made* seems to be co-determined by additional factors. One of them is the processing difficulty introduced by syntactic complexity, which may lead to the practically exceptionless marking of infinitives (including non-initially stressed ones) as soon as adverbial expressions intervene between *made* and the infinitive. This is the case in all of the seven relevant corpus examples, e.g. sentence (21):

(21)   Tracts, so numerous that it would be impossible to give their measure or their value by any other calculation than that of their weight, were *máde* by the ingenuity of the fair and pious contributors *to assúme* a very tempting aspect,
(Frances Milton Trollope: *The Vicar of Wrexhill*, 1837; NCF)

In this occurrence, the infinitive marker is not conditioned by rhythm (since *assume* has an unstressed initial syllable), but is indispensable from the point of view of language processing: it clarifies the syntactic relation between the super- and subordinate verbs, which would otherwise easily get lost due to the bulky adverbial insertion. This finding is predicted by the Complexity Principle (cf. Rohdenburg 1996: 151), which stipulates that in cases of increased cognitive complexity more explicit grammatical variants tend to be favoured (e.g. *to*-infinitives are preferred over unmarked infinitives). Similar effects have been described for active constructions in studies by Ohlander (1941), Mustanoja (1960), Quirk & Svartvik (1970) and Fanego (1994).

In conclusion, corpus analyses have shown that the Principle of Rhythmic Alternation accounts for most of the variation involving the variable infinitive marker after passive *made* in the sixteenth to eighteenth centuries. In addition, it explains why *to*-less constructions had the longest lease of life with non-initially stressed infinitives at a time when this construction was already on its way out. Thus, as long as the marked infinitive was not yet grammatically obligatory, the particle *to* was redeployed for extra-grammatical purposes, namely the avoidance of stress clashes.

2.4 The variable presence of the *a*-prefix in *-ing* participles

The Old English prepositions or prefixes *ā*, *of*, *on*, *at* and *ge* had all become semantically bleached and phonetically reduced to Middle English *a* (cf. Fijn van Draat 1912b: 508–514; Stroheker 1913: 25). Although as early as Middle English the particle *a* was almost meaningless, it continued to accompany *-ing* forms ('*a*-prefixing') and remained vigorous in Early and Late Modern English (cf. Franz 1939: 559) and in modern English dialects (cf. Wolfram 1976; 1980 for Appalachian English).

According to Wolfram (1976; 1980), *a*-prefixing is subject to a number of phonological restrictions (intersecting with syntactic and semantic constraints; cf. also Nagucka 1984): firstly, the *a* is never prefixed to a vowel-initial base. This tendency is accounted for by the phonetic principle of optimal syllable structure, which disfavours the creation of hiatuses (cf. the ungrammatical example in (22)). Secondly, *a* is only rarely prefixed to a verb following a vowel-final element, thus equally avoiding hiatuses (cf. example (23), which has to be considered rare). Thirdly, *a* is exclusively prefixed to initially stressed verbs (cf. the ungrammatical example in (24)). This restriction serves to avoid the sequence of two or more unstressed syllables (stress lapse).

(22) *John was *a-eatin'* his food. (Wolfram 1980: 125)

(23)   He was just standin' quietly *a-hollerin'*. (Wolfram 1976: 51)

(24) *He was *a-retúrnin'* from his house. (Wolfram 1980: 126)

While all of these factors have been found to have explanatory potential in the following corpus study, an additional phonological constraint will be investigated. This concerns the question of whether the *-ing* form follows a stressed or an unstressed syllable. Since, according to Wolfram (1980: 126), only initially stressed verbs are eligible for *a*-prefixing, a prefixless *-ing* form following a stressed syllable would create a stress clash. The *a*-prefix can, however, serve as a buffer separating the two stresses.

The hypothesis that will be tested in this study has been borrowed from Fijn van Draat (1912b: 508f.): if the *-ing* form follows a stressed syllable, *a*-prefixing should be more likely to occur than if the *-ing* form follows an unstressed syllable. The database is composed of the same series of prose corpora that has been used in the preceding studies, covering the sixteenth to twentieth centuries. The analysis is restricted to *a*-prefixing in *-ing* forms following transitive and intransitive uses of the verb *set*.[16] Furthermore, only *-ing* forms that are stressed on their initial syllable are counted, because non-initially stressed forms never create a potential for stress clashes. In addition to the prototypical prefix *a-*, other items are included that can fulfil the same function. This concerns the prepositions *on, upon, to, into* and *at*.[17] For convenience, all of these will be referred to — somewhat imprecisely — as '*a*-prefixing' (which is the common designation in the literature).

The examples obtained from the corpus can be subdivided according to their rhythmic contexts. Thus, there may be different kinds of objects preceding the *-ing* form: personal pronouns are normally unstressed and do not produce a stress clash even if the prefix is absent. By contrast, reflexive pronouns end in a stressed syllable. In this case, the presence of the unstressed *a*-prefix (or a comparable preposition) is advantageous. Compare examples (25) and (26):

(25)   These Instructions (…) were sufficient to set *them góing* to the
       Emperour. (Peter Bellon: *The Court Secret*, 1689; EEPF)

(26)   To ease my mind a little, I set *my sélf to wríting*, and made these Verses
       on my departure from Bracilla.
       (Anonymous: *The Player's Tragedy*, 1693; EEPF)

Among the full noun objects, one can distinguish between those ending in an unstressed syllable (non-oxytonic nouns) and those ending in a stressed syllable

(oxytonic nouns). In the former case (e.g. sentence (27)), the omission of the prefix does not cause a stress clash; in the latter (e.g. sentence (28)), it does:

(27) (…), Ile set a *cándle búrning* in the midst of this roome where we all are, open and easie to be seen as my hand: (Thomas Brewer: *The Life and Death of the Merry Deuill of Edmonton*, 1631; EEPF)

(28) In this manner I may say, he set all *whéels a góing* at once, that might in any kinde prejudice and disturb his own King Orontes; (Sir Percy Herbert: *The Princess Cloria*, 1661; EEPF)

Furthermore, there are some instances in which the verb *set*, which generally carries a strong stress, immediately precedes the dependent *-ing* form. This is the case when the object of the transitive construction is pre- or postposed (cf. example (29)), when the construction is passivized (cf. example (30)), or when *set* is used intransitively (cf. example (31)).[18] In all cases, the sequence *set* + initially stressed verb in the *-ing* form creates a potential for stress clashes, which may be avoided by using the intervening prefix as a buffer:[19]

(29) But I will be bold to say, that neither She, nor my Brother, nor even my Father himself, knows what a heart they have *sét a bléeding*. (Samuel Richardson: *Clarissa*, 1748; ECF)

(30) but such a tongue as his might lay matters too open, if once *sét a-góing*, for you see he is not to be over-awed to any thing. (Charles Johnstone: *Chrysal*, 1760; ECF)

(31) some of them let fly several shot at him from their Fuzees, while others *sét a rúnning* after him, thinking to have overtaken him; (Anonymous: *Don Tomazo*, 1680; EEPF)

Figure 4 summarizes the results of the corpus study in a highly simplified way: it focuses exclusively on the contrast between the total percentage of all instances of *-ing* forms following unstressed syllables (including personal pronouns and non-oxytonic nouns; represented by the dashed curve) compared to the total percentage following stressed syllables (including reflexive pronouns, oxytonic nouns and stressed forms of *set* itself; represented by the solid curve).

The data in Figure 4 show that in the sixteenth and seventeenth centuries and in the first part of the nineteenth century, freedom of variation was greatest: in these periods, the imbalance between the two contexts was considerable, with a divergence of 27 to 35%. By contrast, in the eighteenth century, the presence of the prefix was almost obligatory (cf. Fijn van Draat 1912b: 510f.). Even *-ing* forms following an unstressed syllable could hardly run counter to
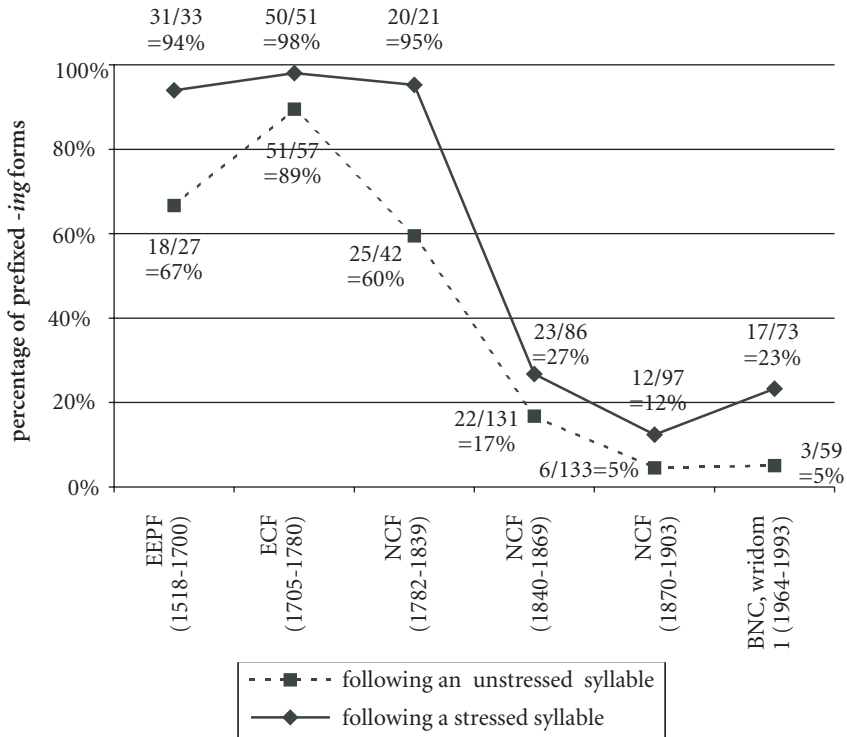
Figure 4. The variable presence of the particle *a/(up)on/(in)to/at* preceding initially stressed *-ing* forms dependent on the verb *set* in a series of prose corpora.

this trend, taking the prefix in 89% of all cases.[20] Since the middle of the nineteenth century, the *a*-prefix has become almost extinct, but traces of it can still be found following stressed syllables, where the prefix retains its buffer function. Despite these diachronic changes, in each chronologically defined subsection of the corpus the proportion of *a*-prefixation is lower following unstressed syllables than following stressed syllables. In other words, the *a*-prefix is consistently more likely to occur in contexts where it can serve to prevent a stress clash.

The corpus examples from the second half of the nineteenth century make it clear that the *a*-prefix has acquired a social stigma: authors use it to characterize the speech of uneducated speakers as non-standard rather than to secure the rhythmic pattern of the language (cf. example (32)). This stylistic use of *a*-prefixing provides a further reason why rhythmic motivations are watered

down in the nineteenth century, and it betrays the standardization pressures affecting the *a*-prefix:

(32) (…) Gambado, who says, "be werry shy of a crupper if your 'oss natural-
ly throws his saddle forward. It will certainlie make his tail sore, *sét him a
kíckin*', and werry likely bring you into trouble."
(Robert S. Surtees: *Handley Cross*, 1845; NCF)

Contrary to expectations, the curve for *a*-prefixing after stressed syllables in Figure 4 rises once more in the late twentieth-century corpus: the avoidance of stress clashes seems to be gaining importance as the percentage of what I have provisionally called *a*-prefixing increases again. A close inspection of the corpus examples shows that this effect is, however, not due to a resurgence of the *a*-prefix, but to an increased use of the preposition *to*, as exemplified in (33):

(33) But oh, he had set her *héart to rácing*, the instant she'd first seen him.
(Sandra Marton: *Roman Spring*, 1993; BNC)

In fact, in stark contrast to the previous centuries (where the *a*-prefix constantly accounted for about 80% of the elements preposed to the *-ing* forms), 18 out of the total of 20 instances that have been referred to as *a*-prefixed contain the preposition *to*, whereas only two make use of the *a*-prefix itself (one of them clearly characterizing a speaker of vernacular English). Presumably, the fully-fledged preposition has less of a non-standard or obsolescent flavour, so that even present-day authors employ it quite freely whenever they require some intervening buffer syllable.

In connection with the avoidance of stress clashes by means of the *a*-prefix, there is some indication of the effects of another factor co-determining the variable presence of the *a*-prefix: the so-called *horror aequi* Principle (cf. Rohdenburg & Schlüter 2000:461)[21] describes the avoidance of the semantically unmotivated adjacency of phonologically similar material. Compare examples (34) and (35) on the one hand to examples (36) and (37) on the other:

(34) But though this strange Message sett all my wounds *frésh a bléeding*, yet I
had so much discretion left, as only to answere it with a Complement
(…) (Roger Boyle: *Parthenissa*, Part 3, 1655; EEPF)

(35) he entertain'd me with such passionate discourses of his Flame, that I
must acknowledge, they sett my old wounds *frésh a bléeding*,
(Roger Boyle: *Parthenissa*, Part 3, 1655; EEPF)

(36)   You shall be satisfy'd with a true Narration of the Disasters of a
miserable Wretch, injur'd by Fortune, and pursu'd by Fate; the Relation
of which, will set my *Wóunds blèeding afrésh*;
(Anonymous: *Cynthia*, 1687; EEPF)

(37)   yet the motion set both his *wóunds blèeding afrésh*; and it was with diffi-
culty they again stopped the blood.
(Samuel Richardson: *Clarissa*, 1748; ECF)

In (36) and (37), the *a*-prefix preceding the *-ing* form is consistently avoided,
presumably on account of the *horror aequi* effect provoked by the adverb *afresh*,
which itself contains an *a*-prefix deriving from the same source as the verbal
a-prefix (cf. Stroheker 1913:25). Additionally, the *-ing* form *bleeding* is in both
cases rhythmically overshadowed by the strongly stressed and focused adverb
afresh. As a consequence, the stress clash with the preceding noun *wounds* is
mitigated and thus rendered more acceptable. While in (34) and (35) rhythmic
alternation requires the presence of the verbal *a*-prefix and there is no *horror
aequi* effect to counteract this tendency, in (36) and (37) both sentence prosody
and the avoidance of identity effects facilitate the omission of the prefix in the
-ing form.

To sum up, the study has revealed that *a*-prefixing in English has taken a
changeable route of evolution, first gaining ground on and then losing ground
to the prefixless variant. In the midst of this indeterminacy, the Principle of
Rhythmic Alternation has at all times been a powerful factor influencing the
choice between prefixed and prefixless *-ing* forms following the verb *set*. In
interaction with other factors (e.g. standardization tendencies and *horror aequi*)
it explains part of the synchronic distribution and of the diachronic preserva-
tion of the *a*-prefix and functionally similar prepositions in sixteenth- to
twentieth-century English.

3.   Conclusion

In this paper I have presented the results of empirical studies of four different
grammatical variation phenomena, all of which show that the presence or
absence of grammatical morphemes and markers may be determined — among
other factors — by the Principle of Rhythmic Alternation. This concerns (a) the
variable presence of the suffix *-en* in the participle *drunk*, (b) the variable
presence of the adverbial suffix *-ly* in *scarce* used as an adverb, (c) the variable

marking of infinitives depending on the verb *make* in the passive and (d) the variable prefixation of -*ing* forms with the prefix *a*- (or the insertion of certain prepositions). A number of comparable findings have been obtained for the variable use of the -*er* suffix, which could be optionally appended to the irregular comparative *worse* in the sixteenth and seventeenth centuries (cf. Schlüter 2001), for the -*ed* suffix in the participle *lighted*, which was partly replaced by the monosyllabic variant *lit* (cf. Schlüter to appear), for variable infinitive marking dependent on the verb *bid* in the passive (cf. Rohdenburg & Schlüter 2000: 484ff.), and for the fate of the final vowels deriving from Old English inflectional endings (cf. Minkova 1990; 1991: 155ff.).

In all of these cases we witness situations in which grammatical morphemes or markers are lingering, without however being assigned a definite grammatical function: they may be involved in processes of grammaticalization (like the adverbial suffix or the infinitive marker), or degrammaticalization (like the participial suffix -*en*), or simply in longstanding cases of grammatical changeability (like the *a*-prefix). Each of these situations is inherently linked up with a more or less extensive period of variability during which the morphemes and markers under consideration are neither obligatory nor unavailable. As has been demonstrated, it is in precisely these phases of indeterminacy that the Principle of Rhythmic Alternation gets a chance to overrule grammatical motivations.

The effects of this principle have a synchronic as well as a diachronic dimension. Irrespective of other factors, it has been shown that rhythmic alternation sometimes constitutes the primary determinant of the synchronic distribution of these variants; in other cases, it operates within a more narrow margin defined by competing influences. Diachronically, the principle helps to establish new morphological variants wherever they can improve the rhythm; on the other hand, it contributes to the retention of obsolescent variants wherever they can preserve rhythmically optimal configurations. In this way, the Principle of Rhythmic Alternation can lead to the elimination of the variability if one of the variants proves disadvantageous in the majority of its occurrences (e.g. the *to*-less infinitive after *make* in the passive, or the monosyllabic form *drunk* before nouns). However, this regularization entails the loss of flexibility in individual cases (e.g. even non-initially stressed infinitives dependent on *made* are regularly marked nowadays; even non-initially stressed nouns were almost systematically preceded by *drunken* as an attribute from the sixteenth to the nineteenth centuries). As a result, rhythmic alternation is observed in the greater part of the occurrences, but not in every single instance.

The corpus studies have shown that the Principle of Rhythmic Alternation interacts with other determinants of grammatical variation such as standardization pressures, the *horror aequi* Principle, the Complexity Principle, semantics and a number of other phonological factors such as optimal syllable structure and considerations of sentence prosody. This list is by no means exhaustive. As has been illustrated in some of the above-mentioned examples, these influences operate synergetically or antagonistically, depending on the alternatives in question. The considerable efficacy of the Principle of Rhythmic Alternation revealed in this contribution gives only a foretaste of the wealth of insights that can still be derived from the study of linguistic variation and change.

Notes

1. Depending on the linguistic background of the researcher, the notion of 'stress lapse' is variously defined as a sequence of two (cf. Plag 1999: 156) or three (cf. Selkirk 1984: 49; Kager 1995: 382) unstressed syllables. It is agreed that the presence of only one unstressed syllable separating two stressed ones represents an ideal constellation. There is evidence in the above-mentioned works that the avoidance of sequences of more than one unstressed syllable is a matter of degree: two unstressed syllables are universally avoided less strongly than three.

2. The following orthographic variants were retrieved from the corpora: *drun(c)k(e)*, *dron(c)k(e)*, *dran(c)k(e)*, *drūk(e)* and *drōk(e)* as suffixless forms (for ease of reference subsumed henceforth under the spelling *drunk*); *drun(c)ken*, *dron(c)ken*, *drūken*, *drōken*, *drunkyn*, *drunkun* and *drunkē* as suffix-containing forms (subsumed under the spelling *drunken*). In the corpus search, a wildcard was prefixed to these forms to include all premodified and orthographically fused forms. All past tense forms were excluded from the data in Figure 1, since, with the exception of three past-tense uses of *drunken*, which were inflected for plural in the Middle English part of the corpus, they regularly involved the suffixless form.

3. In those cases in which the ECF corpus included more than one edition of a publication, only the earliest edition was taken into consideration.

4. In this example and elsewhere, acute accents indicate primary stress. Where appropriate, grave accents will be used to mark reduced primary or secondary stress. The italics are my addition.

5. Contrary to the information provided, for example, by the *OED* (s.vv. *drunk*, *drunken*), the variant *drunken* was also, although rarely, used as a nominalized adjective. This is the case in four corpus examples; cf.:

(i)   euery one at a banquet is compelled to drinke carouse, to the end the sober may not disclose ye words or deeds of the *drunken.* (Henry Wotton: *A Courtlie controuersie of Cupids Cautels*, 1578; EEPF)

6. Cf. Kelly & Bock (1988: 391): 89% of the 4,218 most frequent disyllabic English nouns are initially stressed. Monosyllabic nouns (which are at least as frequent) have not been included in this count, but note that they are inherently stressed syllables.

7. Franz (1939: 167) additionally remarks that the preservation of *-en* in attributive past participles may initially have been due to the fact that in Old English, after the definite article and demonstrative pronouns, attributive past participles took the endings of the weak adjectival declension (e.g. *se foresprecena here* 'the aforementioned army').

8. A pause occurs, roughly speaking, where the participle is followed by a relatively wide syntactic and prosodic disjuncture (for a more technical analysis, see Selkirk 1984: 301–320).

9. It is striking that *drunk* in simple attributive uses begins to establish itself in high-frequency collocations such as *drunk driver(s)*, *drunk driving* (which tend to be treated as compounds by the stress-assigning rules) and *drunk man/men*, *drunk husband(s)*, *drunk woman/women* (which involve generic nouns). The threatening succession of two stressed syllables is perhaps averted by allocating only reduced stress to these highly given combinations.

10. There is little evidence from the etymology as well as from the spelling variants listed by the *OED* (s.v. *scarce*) that — as has been suggested by an anonymous reviewer — *scarce* could be given a disyllabic pronunciation in earlier centuries. Even if the *r* could possibly be syllabic, the corpus findings prove that there is a clear distributional difference between *scarce* and *scarcely*, which can only be explained by their dissimilar rhythmic structure.

11. Concerning the reduction of stress due to the length and complexity of following material, cf. Bolinger (1965: 149f.); Zwicky (1969: 429).

12. There is also one author who has only one adverbial use and happens to employ *scarce* in this context, but this case has to be considered exceptional.

13. In this respect, he resembles Sir Walter Scott, who is equally Scottish-born. These results — albeit sporadic — seem to suggest that the rate of adverb marking in Scottish English lags somewhat behind that in the more southern varieties.

14. Effects of the following factors on the marking of verb-dependent infinitives in Middle and Early Modern English have been demonstrated in the literature: (1) various iconic tendencies (degree of transitivity or impingement of the matrix clause subject on the object, (in-)directness of the relation between the events denoted by the matrix verb and infinitive, (non-)actualization of the event denoted by the infinitive; cf. Fischer 1995; 1996; 1997); (2) certain syntactic characteristics that may be subsumed under the concept of processing complexity (active/passive contrasts, degree of separation of matrix verb and dependent infinitive due to intervening material, non-canonical sentence structures, change of object in coordinated infinitival structures; cf. Ohlander 1941; Mustanoja 1960: 522; Quirk & Svartvik 1970; Fanego 1994; Fischer 1995: 15; Rohdenburg & Schlüter 2000: 446–452). In contrast,

rhythmic influences are frequently either treated as an aside (e.g. Ohlander 1941:66; Fanego 1994:201f.) or denied as significant constraining forces (e.g. Fischer 1995:2; 1996:267).

15. To find passive uses of the past participle *made*, a corpus search was carried out that retrieved all forms and spelling variants of the auxiliary *be* (*am*, *art*, *is*, *are*, *was*, *wast*, *wert*, *were*, *be*, *bee*, *being*, *beeing*, *been*, *beene*, *bē*) immediately preceding *made*.

16. The following verb forms were searched: *set*, *sete*, *sett*, *sette*, *setting*, *sets*, *settes*, *seting*, *setst*, *settest*, *setts*, *setteth*, *settyth*, *setting*, *settynge*, *setyng* and *setted*, each one followed by an -*ing* form at a maximal distance of eight words. Besides the ending -*ing*, the spelling variants -*yng*, -*inge* and -*ynge* were included.

17. Cf. Visser (1973:1894). These prepositions are subsumed under the same category because, in terms of rhythm, they all function alike; even the disyllabic items *upon* and *into* can take over a buffer function if they are completely destressed; this constellation creates a ternary rhythm, which is not particularly objectionable. There is however some evidence that the prepositions are treated as more independent items than the *a*-prefix: they may precede -*ing* forms that do not satisfy Wolfram's above-mentioned conditions. The corpus yields forms like *on retreating* (EEPF), *upon enquiring* (ECF), *to examining*, *to replacing*, *to recovering*, *on debating*, *upon devising* and *upon inquiring* (all NCF), which are initially unstressed and in some cases begin with a vowel. Since these -*ing* forms constitute no potential loci for stress clashes, they are excluded from the data in Figure 4.

18. The disyllabic form *setting* does not occur even once in these three constellations. Note that the second unstressed syllable provided by the -*ing* suffix would secure an alternating rhythm. Nevertheless, the sequence *setting (a-)*V-*ing* is eschewed due to the strong avoidance effect provoked by repeated -*ing* forms (see in particular Bolinger 1979). Cf. also the remarks below in relation to the *horror aequi* tendency.

19. In the case of object extraposition or passivization, the *a*-prefix may additionally be motivated along the lines of the Complexity Principle (Rohdenburg 1996; cf. the relevant remarks in Section 2.3) as an explicit marker of the syntactic relation between *set* and the -*ing* form.

20. According to Fijn van Draat, the great rhythmic value of the prefix was no longer clearly recognized in the eighteenth century and generally, "[s]ense of Rhythm was but weakly developed" in this period. By contrast, for the nineteenth century, the author claims a "re-awakened sense of Rhythm" (Fijn van Draat 1912b:511, 512).

21. The term *horror aequi* was originally introduced by Brugmann (1909:146ff.) to designate the perception of a cacophony created by the close adjacency of phonologically similar elements.

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E. F. K. Koerner, Editor
Department of Linguistics, University of Ottawa
OTTAWA, Canada K1N 6N5
koerner@uottawa.ca

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