

DE GRUYTER

Marinel Gerritsen (Ed.) et al.

**INTERNAL AND
EXTERNAL FACTORS IN
SYNTACTIC CHANGE**

TRENDS IN LINGUISTICS. STUDIES AND
MONOGRAPHS [TILSM]



Internal and External Factors in Syntactic Change

Trends in Linguistics

Studies and Monographs 61

Editor

Werner Winter

Mouton de Gruyter
Berlin · New York

Internal and External Factors in Syntactic Change

Edited by

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Mouton de Gruyter

Berlin · New York 1992

Mouton de Gruyter (formerly Mouton, The Hague)
is a Division of Walter de Gruyter & Co., Berlin.

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ANSI to ensure permanence and durability.

Library of Congress Cataloging in Publication Data

**Internal and external factors in syntactic change / edited by
Marinel Gerritsen, Dieter Stein.**

p. cm. — (Trends in linguistics. Studies and mono-
graphs : 61)

“A selection of papers that were presented at the work-
shop ... held during the Ninth International Conference on
Historical Linguistics at Rutgers in August 1989” — Introd.

Includes bibliographical references and index.

ISBN 3-11-012747-4 (acid-free paper) :

1. Grammar, Comparative and general—Syntax—
Congresses. 2. Linguistic change—Congresses. I. Gerrit-
sen, Marinel. II. Stein, Dieter, 1946— . III. Series.

P291.I44 1992

92-5409

415—dc20

CIP

Die Deutsche Bibliothek — Cataloging in Publication Data

**Internal and external factors in syntactic change / ed. by Marinel
Gerritsen ; Dieter Stein. — Berlin ; New York : Mouton de
Gruyter, 1992.**

(Trends in linguistics : Studies and monographs ; 61)

ISBN 3-11-012747-4

NE: Gerritsen, Marinel [Hrsg.]; Trends in linguistics / Studies
and monographs

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book may be reproduced or transmitted in any form or by any means, electronic or
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Typesetting: Arthur Collignon GmbH, Berlin. — Printing: Gerike GmbH, Berlin. —
Binding: Lüderitz & Bauer, Berlin. — Printed in Germany

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Introduction: On “internal” and “external” in syntactic change

Marinel Gerritsen – Dieter Stein

0. The purpose of this volume

The present volume contains a selection of papers that were presented at the workshop on internal and external factors in syntactic change held during the Ninth International Conference on Historical Linguistics at Rutgers in August 1989. The workshop aroused such interest and enthusiasm among the participants of the conference that the character of the sessions of the workshop was far from private. The role of external factors in syntactic change has long been denied, but historical linguists now seem to be much more interested in them and their interaction with internal factors. This emerges not only from the great interest in the workshop, but also from recent publications such as Romaine (1982), Gerritsen (1989), Thomason – Kaufman (1988), and Stein (1990).

The following discussion will first put internal and external causation of syntactic change into a historiographical perspective (section 1). Subsequently we will try to define internal and external factors as precisely as possible (section 2), and finally we will summarize what the research presented in this volume tells us about internal and external factors in syntactic change and about the course which further research on this topic should take (section 3).

1. Internal and external factors of syntactic change in historiographical perspective

At the end of their famous article “Empirical foundations for a theory of language change” Weinreich – Labov – Herzog (1968) give seven general principles which define the nature of language change and which

have to be taken as central to our thinking on diachronic linguistics and to studying it in the future. The last principle touches on the relationship between internal and external factors of language change:

Principle 7: Linguistic and social factors are closely interrelated in the development of language change. Explanations which are confined to one or the other aspect, no matter how well constructed, will fail to account for the rich body of regularities that can be observed in empirical studies of language behavior.

Briefly, the question of why a change occurred will never be answered if one does not reckon with both internal and external factors of language change. Weinreich – Labov – Herzog call this the actuation problem. This problem is, according to them, the most recalcitrant among all the problems that have to be solved in diachronic linguistics: the transition, embedding, evaluation, and actuation of linguistic changes. Their article has brought about an avalanche of studies on language change which build on these general principles and which have largely contributed to a deeper insight into the problems that diachronic linguists had to solve. Labov (1982) presented an overview of the results, from which he concludes that progress has been made toward answering all these problems except one, the actuation problem. The question of why a change has been initiated or actuated at a particular time and place was, according to him, far from being solved. Almost a decade later we still find ourselves in the same situation. Why a change occurs is more often than not an open question. This holds for changes on all linguistic levels, but certainly more so for syntactic than for phonetic and morphological changes. This can be ascribed to two factors.

In the first place it is a result of the very simple fact that we know less about syntactic changes than about other changes. This is mainly due to a combination of the following three factors:

a. Syntactic data in texts

The most reliable method for the study of linguistic change during a period for which there are only written records is to study texts. Any one text, however, represents infinitely more information about phonetic and morphological elements than about syntactic elements. In a relatively short text we usually find representations of practically all the sounds and morphemes of a language, but seldom of all the syntactic constructions. This is because a text contains infinitely more representations of phonemes and morphemes than of constructions. In addition, the occur-

rence of certain constructions depends largely on the sort of text studied. Questions and imperatives, for example, will hardly occur in essays.

b. Theories of syntactic change

Theories of syntactic change were developed only recently. Therefore there was no stimulus to study syntactic changes in order to put these theories to the test and/or to refine them.

c. Sameness of propositional meaning

Lavandera (1978) has indicated that the study of variation and change on the non-phonological level is much more complicated than the study of change on the phonological level since non-phonological elements carry referential meaning but phonological elements do not. If we find, for example, [nɪ·ðər] and [naɪðər] side by side, we can be sure that they represent two phonetic variants of one phoneme, the (ei) in *neither*. Since the [i·] and [ai] do not bear referential meaning by themselves, it is clear that they represent two forms with one and the same referential meaning: *neither*. If we find, however, in one period construction (1) and later on construction (2), we cannot state a priori that (1) changed into (2) since the constructions may not have the same referential meaning.

- (1) *Hij is gegaan naar Amsterdam*
 he is gone to Amsterdam
- (2) *Hij is naar Amsterdam gegaan*
 He is to Amsterdam gone

In this context Lavandera does not mention Humboldt's principle (different forms always represent different referential meanings), but in view of this leading principle in diachronic linguistics we have to assume that (1) and (2) have a different referential meaning and that the two constructions are consequently not variants of one syntactic variable. Lavandera argues that due to the fact that elements on levels other than that of phonology have a referential meaning, the methodology used for the study of phonological variation and change cannot be applied blindly to the study of change on other linguistic levels. We should show first that two possible variants have the same referential meaning. It is clear that a strict application of Lavandera's observation complicates the study of syntactic change considerably. She suggests, however, that for the study of variation and change of non-phonological elements the condition of sameness of referential meaning could be relaxed to the condition of

functional comparability: constructions that have a comparable function could be considered variants of one another. This facilitates the study of syntactic change somewhat, although the question of whether two constructions do have a comparable function is an issue in diachronic syntax.

The second reason why we have only a rudimentary knowledge of the causes of syntactic change is the lack of agreement on what is to be considered a syntactic change. We will first try to show which types of syntactic change can be distinguished on the basis of the classical generative model of syntactic change (figure 1; see Traugott 1973). Secondly we will go into the type of factors that are said to be involved in these different syntactic changes:

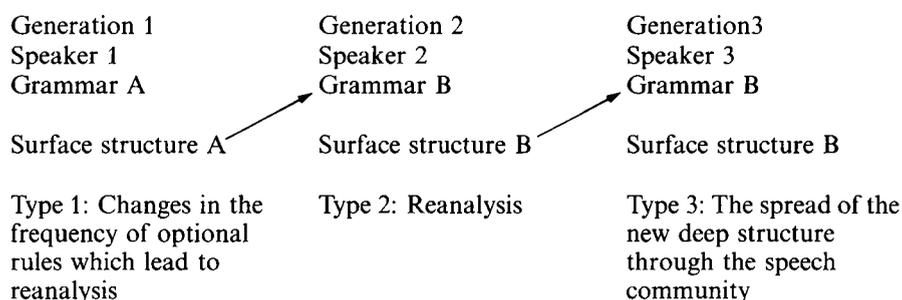


Figure 1. Three types of syntactic change

According to generative grammarians, only reanalysis can be considered a syntactic change (type 2 in figure 1). A child acquiring its language constructs deep structure B from the language input to which it is exposed, whereas those who produce that language input have deep structure A. The reason for this reanalysis is that speakers with deep structure A produce so many structurally ambiguous surface structures that the language learner acquiring the language constructs a deep structure different from that of the speaker. In a verb-final language constituents may, for example, occur after the verb for language-production reasons. If this optional rule occurs frequently, it may lead to reinterpretation of the language as a non-verb-final language. A change in the application of such optional rules is another type of syntactic change (type 1 in figure 1). A change of type 1 may lead to a change of type 2, reanalysis. An important point to notice here – and one which will be taken up in both of the following sections – is that the forces that cause a situation

that is open to structural reanalysis are entirely different in their nature and motivations from the very act of analysis itself. The issue here is at which point to locate syntactic change. A third type of syntactic change is the spread of the new deep structure through the speech community (type 3). Which children or adolescents, or other members of a speech community, deduce the new deep structure first and which later? This is the issue of social diffusion.

The factors that are adduced for the explanation of syntactic change vary over time, depending on the type of syntactic change that is studied and the theory that predominates in a certain period.

Regarding the type of syntactic change, the following can be said. Reanalysis (type 2) is caused mainly by internal factors, although in some very special cases external factors, such as foreign influence and expressivity, may also play a part. Those external factors may be adduced, though, only if they are very well documented (Lightfoot 1979: chapter VII). Syntactic changes of type 1 may be caused by both internal and external factors. The occurrence of structurally ambiguous surface structures may, for example, be a result of the decay of inflectional endings on verbs and nouns. It can, however, also be caused by foreign influence. Borrowing of a subordinating conjunction from English into Dutch, for example, often entails English VO instead of Dutch OV order (see Appel–Muysken 1987: 153–163 for further examples). Syntactic changes of type 3 are determined by external factors. From which language the deep structure is deduced depends on external factors, such as social standing, age, sex, and prestige.

With regard to the influence of linguistic theory on the types of explanations that are given, the following can be said. In what one could call the “prestructuralist period”, changes in optional rules (type 1) are studied and both internal and external factors are given. Behaghel (1932) attributes the stabilization of verb-final order in German to imitation of humanistic Latin patterns. Jespersen (1922) explains the disappearance of verb-final order in English as due to the erosion of case-markings. In the structuralist period it is assumed that language is a system “où tout se tient” and that only internal factors may play a role in syntactic change. We find this opinion especially among generative grammarians who are concerned mainly with reanalysis (type 2). The impact of the generative theory, though, has been very strong, since the influence of external factors on syntactic change is also strongly denied in studies on syntactic change in other frameworks. Mühlhäusler (1980), for instance, considers syntax to be relatively independent of substratum or superstra-

tum influences. Similarly, Polomé (1980) views interference through shift as “limited essentially to phonology and the lexicon”.

The revival of the opinion that external factors could play a role in syntactic change is of recent date. This change in view is partly due to the study of the syntax of creole languages which showed that reanalysis caused by syntactic borrowing is in no way exceptional (Appel – Muysken 1987). It is also due in part to the results of sociolinguistic studies of languages in more or less close contact and to the few Labovian sociolinguistic studies of the internal and external factors that affect the occurrence of the variants of a syntactic variable. These studies show that external factors can indeed play a part in changes in the use of optional rules (type 1).

A sign of the renewed interest in external explanations of syntactic change is Thomason – Kaufman (1988). The authors deal extensively with external factors in syntactic change. According to them, the prejudice in favor of internal explanations of syntactic change is due to the fact that, formerly, external explanations were offered without fully exploring internal explanations. They show that the criticism of the use of external factors for explaining syntactic change does not always cut ice. The statement that language A has borrowed feature X from language B cannot take the edge over the argument that language C with feature X has never had any contact with language B. It is quite possible that a syntactic change is caused by external factors, such as borrowing, in one language but by internal factors in another language. Furthermore, one has to realize that a syntactic change caused by borrowing does not have to result in the same construction in the receiving as in the giving language. Thomason – Kaufman call into question the methodological inclination to consider the possibility of external causation only when all efforts to find an internal motivation for a change have failed. A weak internal motivation for a change is less convincing as a cause than a strong external motivation, and the possibility of multiple causation should be kept in mind. We can then arrive at an explanation that is as complete as possible. It is a matter of course that external explanations given for a change should be very well documented and that it should be shown that a certain external cause has effected not only one change in a system, but several changes, since it is highly improbable that an external factor would affect only the level of syntax, but no other levels. Furthermore one has to keep in mind that a syntactic change that is related to the borrowing of a lexical element may occur sooner than a syntactic change that is not related to it.

Although the contribution of external factors to syntactic change is no longer denied, we do not yet have much insight into the precise influence of external factors, let alone into the interaction of internal and external factors in syntactic change. More than twenty years after Weinreich – Labov – Herzog (1968) suggested that we concentrate our thinking on diachronic linguistics, the question of which internal and external factors play a part in a change still remains unanswered with regard to syntactic change. It seems that time is now ripe for a fuller exploration of the interaction of internal and external factors in syntactic change.

2. “Internal” and “external”: Definitions and problems

Up to now we have behaved as if the notions “internal” and “external” were clear-cut terms which could be used in a straightforward way. One thing which the contributions in this volume illustrate is the heterogeneity of conceptions of this dichotomy. “Internal” and “external” are deictic terms, if not gradient deictic terms. The following discussion will try to establish how these terms can be defined.

The terms “internal” and “external” are members of a semantic field which includes nearly half a dozen terms (“natural”, “social”, “autonomous”, “structural”). For an initial definition of the two terms we will follow the distinction made by Campbell (1980: 18 ff.), which is coterminous with that made by Coseriu (1974: 195) between *natürlich* (natural) and *künstlich* (artificial). By “internal factors” are meant those inherent in, and arising out of, any given synchronic state of the language system. By “external” factors are meant the forces arising out of the location and use of language in society.

An interesting point arises with processes such as grammaticalization, syntacticization, and automation of pragmatically, or otherwise internally induced, preferences, which figure prominently in a number of contributions in this volume. Are these processes to be called “internal” factors, as would normally be assumed? Rather, there seems to be a good case for calling such processes externally induced with syntactic results (cf. Dubois 1985). The factors involved may also be called “external” (see Giacalone Ramat, Lehmann, this volume) in the sense that the driving forces involved are “broader-than-linguistic” tendencies, such as economy, to create standard, ready-made, prefab-like procedures instead of having to compute individual solutions for each case.

If this type of factor is to be reduced to its more general behavioral base, then where should the line be drawn between “external” and “internal”? This would lead to a dividing line between what are specifically linguistic faculties and what are more general tendencies which form part of linguistic faculties. The latter would be what is commonly referred to as “natural” tendencies (see Stein 1990: chapter XIII). The borderline issue would then be reduced to natural vs. non-natural tendencies. This argumentation shows the extreme extent to which the dichotomy “external” vs. “internal” is theory-laden.

In fact, the very dichotomy between “external” and “internal” has as its long-standing theoretical underpinning the idea that it is possible and useful to hypostasize an abstract, non-observable entity as something logically separate from use, speakers, and speech community. If we do as most linguists probably do, i. e., accept the useful existence of that figment, then the borderline between the two terms under discussion seems at first perfectly clear: the locus of a given force decides on which side of the fence it belongs. However, the abstract system, too, is located in society, is a social possession – which annihilates the usefulness of this criterion of location in society.

An important point of principle that arises if such a stand is adopted, is what is left over as purely linguistic (i. e., internal) factors. Judging from the papers in this volume, there are two main groups of such internal factors: structural patterns and typological constraints. But here again it could be argued that motivation to fall in with a pre-existing pattern is merely a version of behavioral economy.

If these deliberations sound like an atomization of the notion of syntactic change, it must be stressed that the notion of syntactic pattern is primarily a synchronic one, and the question of the internal/external factors is part of a developmental frame of reference. The question of whether language change can be explained internally is an extrapolation of that syntactic position into an area of inquiry to which it was not geared. The classical autonomous position here is that of Lightfoot (1979).

After having analyzed the dichotomy fairly radically, for the purpose of the present discussion we will adopt the traditional view of external factors like prestige, acts of identity, taboo, and forces that are part of standardization, such as reduction of variation, types of varieties, especially written varieties, etc. Everything else discussed in the previous paragraph, including so-called natural forces, will be subsumed under “internal”.

The very fact that there is a workshop and a conference volume on this topic implies that at least the contributors would not subscribe to an extreme internalist view. If, as pointed out above, Lightfoot (1979), as an extreme internalist, would barely admit the possibility of external influence, the contributors to this volume represent a considerable range of positions on that question, if not all of the possible positions between that of Lightfoot and the extreme external end of the spectrum. The most autonomous internal position is represented by Stockwell and Minkova, who are only considering another linguistic level (prosody) in its effects on syntactic change. Compared to syntax, prosody is relatively external in a notion of levels. The two levels, however, are still internal, as the authors themselves point out. The other end is represented by Lehmann, the tenor of whose paper tends toward a relativization of syntax as an autonomous level – a (necessarily?) typical result of a developmental view. The other papers range between these two poles.

3. Results and prospects

The volume represents a fairly wide cross-section in several respects. The papers deal with processes of syntactic change in many languages and types of languages. That there is a certain bias on English will not be surprising in view of the above-mentioned difficulties in obtaining empirical data, English being a language with a comparatively well-documented history. Secondly, the papers deal with a wide range of syntactic phenomena, from conjunctions (Mithun, Betten, Schlieben-Lange) to the “classical” topics of syntactic change, such as word order. Thirdly, the papers clearly represent different “schools” of linguistic thought, ranging from more functionalist, via formalist, to more independent positions.

To what extent is it possible to pinpoint any regularities in syntactic change? More precisely, to what extent is it possible to predict which type of force will prevail or gain the upper hand?

There seems to be an overriding tenor that would tend to give logical priority to internal factors, in particular, structural prerequisites, pre-existing tendencies, “structural niches” (Mithun, Aitchison, Fischer, Gertsen, Rickford, Stein, Giacalone Ramat, Fuji) which are activated by external conditions. No case is treated in which the result of an external factor would introduce linguistic forms that go against the typological or structural grain of the language. But beyond this statement the indi-

vidual answers given – not unexpectedly – do not at all provide a unanimous picture. Because of the multiplicity of internal and external factors involved, no hard and fast rules emerge for which type of factor will dominate. It also emerges that – within one developmental process – different types of internal and external factors may interact at different stages. Whereas analysts of syntactic and other changes have tended to conceive of linguistic change as long-term monodirectional, it can be shown that there are changes with a complicated interaction of different forces with several changes of direction, caused by different forces in changing “feeding” relationships (Schlieben-Lange, Stein). For predicting what will happen under which constellation of external and internal factors, the central problem seems to lie in a kind of selectivity: under what at first glance seem to be “the same conditions” the same process is not bound to result. To illustrate this problem we would like to take an example from Rickford’s paper, because his case from contemporary English highlights the problem for historical linguistics. A study of classic variables in Black English with material from research to East Palo Alto draws attention to the effect of rising black self-awareness in not complying with the forms of white speech. However, the divergence is not across the board with all eligible variables (e. g., possessive and plural *-s*, absence of third singular *-s*, invariant *be*), but there is selectivity – only the last-mentioned variable is socially semiotized. The reason why particular variables are chosen among several candidates, and which ones are not chosen to serve as identity markers, highlights the delicate interaction of acts of identity as external, and of linguistic selectivity, as internal factors.

The relative unpredictability of the resulting process is related to the incomparability of the cases and constellations considered. In section 2 it was shown that the very notions of “internal” and “external” employed in the individual contributions may differ considerably. This incomparability holds true with a vengeance for the factor constellations themselves, even if the same basic conception of the two terms is adopted. From a functional point of view, different conjunctions do entirely different jobs in communication, e. g., if we compare conjunctions and verb phrases or syntactic relations (cases vs. prepositions). On top of the different jobs they do, some are more expendable in surface terms than others. Given the very same type of external factor constellation, different structures will be susceptible in different degrees to those external factors, because of the fundamental differences in function in communication. In other words, there is such a great diversity in “internal” factors that it is

a priori unlikely that there will be identical reactions to the same external factor. In addition, the same constellation of external factors will never be present in any two cases, with factors ranging from acts of identity, via literacy, to contact. The case that probably comes closest to such a situation is that of two genetically closely related languages where development differences can be surmised to be attributable to external causes. Classic cases are the Romance or Germanic languages (Schlieben-Lange, Ebert, Gerritsen, Giacalone Ramat).

If the diversity of syntactic functions as an underrated internal factor makes for diversity of results, this is the more so in view of the probably much larger diversity in potential external factor constellations. There are probably only very few cases where external factors lead to internal effects in a fairly predictable way. One of them seems to be language death. All types of language contact – as an external factor – seem much less predictable in their effects on the structure of the language (Aitchison, Fischer, Mithun, Giacalone Ramat). The clearest statement concerning language contact can be found in Aitchison.

A very specific type of factor crops up in several contributions and has also been discussed in a more general context: the effect of literacy. Discussions about the cognitive divide and related issues have included syntactic phenomena, but not specifically focused on them. In her discussion of changes in marking conjunction Schlieben-Lange points to the fact that this issue is also related to that of social (restricted vs. elaborated) code and to the wider area of autonomous vs. non-autonomous styles. Again, in discussing the impact of literacy, the contributions which consider external factors tend to imply that it is a question of triggering, accelerating or slowing down existing or latent tendencies, and not one of imposing innovations which go against the structural grain of the language (e. g., Fischer). However it is still an open question to what extent there is something like a uniform effect of literacy. The effect of this type of external factor – varieties, standardization – is brought out in the papers by Betten, Ebert, Gerritsen, Fuji, Mithun, and Schlieben-Lange. All these papers indicate that standardization accelerates syntactic change. The papers by Denison and Giacalone Ramat are interesting in this respect, since they show that the decrease in dominance of standard languages furthers syntactic changes.

The question of different syntactic styles as part of different social and communicational codes and styles seems to be a central one for the study of syntactic change, and also one that takes us back to the data question. Schlieben-Lange's and Betten's contributions point to the central issue

of the existence of text traditions in written “high styles”. Most of our data on the European languages discussed here come from such texts. For instance, ever since the inception of written English there has been a distinct and linguistically relevant awareness of high style, as witnessed by histories of English prose style, widely neglected by linguists. It is difficult to gage to what extent, for instance, discussions of word-order changes should take account of such a factor (but see Ebert). This may mean a permanently built-in data bias by this type of external factor.

If, in a wider perspective, we compare change in syntax with change in other components of language (morphology, phonetics, lexicon) with respect to general susceptibility to external factors, it emerges that syntax is the most difficult and complex case. Syntax is the most central component of language in the sense that it is most open to interaction with other components. In other words, syntax is too much the opposite of a closed system for the effects external factors can have on it to be easily predictable. Syntax interacts more with other levels and is therefore more difficult to guard against the effects of any one external factor. This, it seems, is the reason why the identification and prediction of the relative strengths of factors in a given conflicting factor constellation is more difficult for syntax than for other levels of language, a feature highlighted in some of the papers (Lehmann, Fischer, Giacalone Ramat, Stein).

Apart from the merits of the individual analyses themselves, their contribution to the general topic and their results certainly include catalyzing questions and sharpen the focus for further research, which should concentrate on the following issues:

In view of the fact that it is very difficult to obtain the right data to explore fully the causes of syntactic changes in the past, it seems fruitful to study the factors which affect syntactic change in the present (Denison, Rickford). In this way, one will also get an instrument to evaluate the causes that are given for changes in the past. Since the data for the explanation of syntactic changes in the past are very scarce, one runs the risk of assuming too easily that a certain change was caused by particular external factors. The uniformitarian principle also prevails here. One can only say that a certain factor effected a change in the past if it can be proved that such a factor effected a change in the observable present.

Another aspect that seems promising and needs further elaboration is the introduction of a methodology grafted on sociolinguistics (Ebert, Gerritsen, Rickford), although we have to realize that the present is not the same as the past and that the methodology of modern sociolinguistics cannot be applied blindly to the past. The role of socio-economic class

in language use, for instance, cannot be studied for the past since only members of the upper class mastered the ability to write. De facto it is also difficult to study stylistic differentiation since there are hardly any documents in different styles that are written by one and the same person. Ebert demonstrates clearly what precautions have to be taken in using the present to explain the past. He convincingly shows, for example, that the role of women in language change was different in fifteenth and sixteenth-century Nuremberg than it is nowadays. They did not play a part in a change caused by norms since they had less contact with the norm, in comparison with men.

The results of the papers in this volume indicate furthermore that more research is needed on periods in which the standardization of language had a major impact. It seems that this process affected the path of a syntactic change enormously (Ebert, Fuji, Gerritsen).

If it is the case that the identification of the effect of individual factors is hampered by incomparability of cases, a fourth thing to do is to opt for more control of variables, in other words, to compare, for example, only conjunctions in structurally similar languages under the impact of, say, language contact or literacy, or both. Obviously, because of the data limitations that goal will only rarely be achieved.

A last suggestion is to consider cases for which both so-called “formal” and “functional”, discourse-based analyses exist, assuming that this pair of terms is parallel to “internal” and “external”, systematically allowing external influences, but taking over from “internal” the freezing of pragmatically determined use preferences. In this way, controlling for variables would at least be carried out for the specific historical process at hand.

It is our wish that the present volume will lead to a better understanding of internal and external factors in syntactic change and the problematic aspects of investigating them. We hope that this volume will be as stimulating for further research in these fascinating aspects of syntactic change, as the workshop and its atmosphere turned out to be for the participants.

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Syntactic change and borrowing: The case of the accusative-and-infinitive construction in English

Olga Fischer

1. Introduction

In the history of practically every language we come across syntactic constructions that were once foreign to that language but which were (or are) common constructions in other languages with which the language in question was in contact. In studying such syntactic innovations linguists may, and often have, come to the conclusion that a change was brought about by “syntactic borrowing”. Cases in point in the history of English are the use of the absolute participle (the dative absolute in Old English) in imitation of the Latin *ablativus absolutus* (cf. Blatt 1957: 50; Sørensen 1957: 133, 141–142); the introduction of the expanded form *beon* + present participle in Old English (due to Latin, according to Raith 1957 and in the main also Mossé 1938); the employment of subjectless relatives in Middle English (ascribed to French by, among others, Fisiak 1977: 256); the development of periphrastic *do* (due to Celtic according to Preusler 1938, 1939–1940), etc. In most of these presumed cases of syntactic borrowing, however, there is hardly a consensus of opinion on whether the new construction is indeed caused by borrowing or by some other factor or factors or a combination of these. Most linguists, for example, may agree on the first case mentioned above (but cf. Mitchell 1985: § 3825 ff.). The other examples given might well raise doubts. This certainly seems to be the case for the idea that Celtic was responsible for the introduction of periphrastic *do* (cf. Ellegård 1953: 119–120; Visser 1963–1973: 1495–1496; but then again see Poussa 1990).¹ It seems clear that syntactic borrowing is no easy matter to establish, and that in many, if not most, cases, other factors are at least co-responsible for the introduction of a new construction. It is difficult not to agree with Sørensen (1957: 132) that “it is usually impossible actually to *prove* that a syntactical loan has taken place, apart, of course, from cases where a word-by-word translation creates syntactical innovations in the translated version”.

In order to gain more insight into the phenomenon of syntactic borrowing and its interrelations with other causes of language change, I will investigate one such case in the history of English, i. e., the introduction of the so-called “learned” accusative-and-infinitive construction, which according to most investigations is due to Latin. The case will be presented in detail in section 2. First, I will consider some of the theoretical issues underlying syntactic borrowing.

1.1. Prerequisites for syntactic borrowing and types of borrowing

It almost goes without saying that for all kinds of borrowing (except to a certain extent lexical borrowing) a certain length and intensity of contact is crucial. This is true both for oral contact and for the written type of contact. As far as English is concerned, Latin, Celtic, Scandinavian, and French seem to fulfill these particular conditions and are, not surprisingly, often mentioned as possible causes/sources for changes that have taken place in the periods relevant for these contacts.² What is of interest here is how far the type of contact affects the kind of influence a language may have had on English. A distinction that seems particularly relevant is whether the contact was of an oral or a written nature. In the latter case the influence would have been mainly literary and would show up initially only in the written language. It is probably easier to establish this kind of borrowing than borrowing taking place via oral contact. This is because i) we only have written data from these older periods and ii) changes which are the result of oral contact tend not to show up in the written record until quite a bit later, so that it becomes more difficult to establish the exact circumstances under which borrowing took place.³

A factor that plays a more important role in written than in oral borrowing is the element of prestige (which, at the same time, brings in other, stylistic, factors). This in turn may influence the way in which a foreign syntactical form is diffused. Romaine (1982: 212) writes, quoting from a paper by Naro and Lemle, that natural syntactic change “tends to sneak through a language, manifesting itself most frequently under those circumstances in which it is least noticeable or salient. ... syntactic change actuated by learned reaction or hypercorrection [i. e. cases of prestige borrowing] would work in the opposite way, i. e. would manifest itself first in the most salient environments”. It would be interesting to see how far this hypothesis applies to the diffusion of the accusative-and-infinitive construction in English.

Another problem involving the recognition of syntactic borrowing is the question of how one can distinguish whether a syntactical point of agreement between two languages is due to influence or to parallel development. Blatt (1957: 38 ff.) has set up a number of criteria which may be of help in settling this point: i) Does the new construction fit the syntactic system of the adopting language at all or is it quite alien to it? ii) Has the new construction supplanted another (indigenous) construction (in which case Blatt thinks foreign influence is more likely)? iii) What is the frequency of the construction in translated/learned texts as compared to original literature?

1.2. The permeability of the syntactic component

Another question that has to be asked is, how likely is it that one language borrows a syntactic construction from another, or, in other words, how susceptible is the syntactic component to foreign influence? Opinions seem to diverge rather on this point. Birnbaum (1984: 34) writes:

.. the most commonly held view is that syntax is indeed highly permeable as compared to, at any rate, phonology and morphology. By the same token, the vocabulary of a language, like syntax, frequently absorbs, in the course of its evolution, a great many foreign lexical elements.

This is followed by a list of references to linguists who subscribe to this opinion. Birnbaum, thus, puts the syntactic level on a par with the lexical level as far as permeability to foreign influence is concerned. Danchev (1984: 50), looking at the influence that translations may have on syntactic change, seems to be of a similar opinion:

It is generally recognized today that interlingual interference operates on all language levels and that the syntactic component is particularly susceptible to foreign influence, in its permeability second only to the lexicon.

However, the opposite opinion is also often encountered. Aitchison (1981: 119 ff.) gives the reader to understand at various points that lexical elements are far more easily borrowed than syntactic ones:

.., detachable elements are the most easily and commonly taken over – that is, elements which are easily detached from the donor language and which will not affect the structure of the borrowing language. An obvious example of this is the ease with which items of vocabulary make their way from language to language ... (Aitchison 1981: 120).

When less detachable elements are taken over, they tend to be ones which already exist in embryo in the language in question, or which can be

accepted into the language with only minimal adjustments to the existing structure (Aitchison 1981: 123).

See also Aitchison (this volume). A similar view is held by Sørensen (1957: 133):

But the comparison with loan-words halts, for syntactical loans are not adopted in the same way that loan-words are. Constructions completely foreign to the receiving language have no possibility of gaining a footing in it; it is a necessary condition that there should exist in the receiving language certain innate tendencies and possibilities with which the foreign idiom does not clash.

Similar caution with respect to syntactic borrowing is expressed by Bock (1931: 116) and Lightfoot (1981 b: 357). The contributions by Giacalone Ramat and Mithun (this volume) also show that for syntactic borrowing to take place the “prospective loans must be compatible with the structure of the target language” (Mithun, this volume) or that “an internal pathway [will] channel the realization of change” (Giacalone Ramat, this volume). It is perhaps not remarkable in this light that most of the accounts of alleged borrowings described in Weinreich’s (1953) study of languages in contact concern the lexicon, the morphology, and the phonology, and not the syntax.

A closer look at the examples of syntactic borrowing given by Danchev (1984) shows that all but one are instances of what I would call superficial syntactic borrowing.⁴ They concern the borrowing of idiomatic phrases (p. 51) and of prepositions in prepositional phrases (pp. 51 – 53). These borrowed items are very close to lexical items; they refer to specific concepts rather than imitating syntactic structures in another language. In Aitchison’s sense, they are “detachable elements”, i. e., they do not affect the structure of the language. The presence of conceptual or cognitive meaning is indeed what constitutes the difference between lexical and syntactic borrowing. Lexical items are borrowed precisely because they carry cognitive meaning. They represent conscious entities for a language user, who may therefore feel a conscious need to borrow such items. This need is usually external. It may be for reasons of prestige, or because he looks for new items in order to achieve greater expressiveness, or because there happens to be a cultural gap in the vocabulary of his own language. Only in some cases will the need be internal or structural, i. e., when a true lexical gap in his vocabulary exists. In the case of syntax, the borrowing will usually not be conscious (unless perhaps when it is for reasons of prestige – see also below), and therefore will be likely to

happen when the language has a structural, internal need for the foreign construction. Even then the foreign construction must not be too different from native structures, otherwise the borrower would be likely to be conscious of it, which would probably cause him — subconsciously — to reject it (cf. the above remark by Romaine that “syntactic change tends to sneak through a language”). This “structural need”, therefore, does not involve cultural gaps, which is the most frequent reason for lexical items to be borrowed.

In this light one might well wonder whether the adoption of a foreign construction is ever the cause of a syntactic change (except in cases of prestige, but when we often find that the foreign construction is not a permanent addition to the language, cf. the use of the “learned” accusative-and-infinitive construction in Dutch and German, popular during the Renaissance and the Classical Age but dropped soon after, and also the short-lived existence of Latin-inspired “double-gapped relatives” in English, as described by van der Wurff 1988). If there was indeed a structural need in a language that would cause a foreign construction to be adopted, it might be more correct to see the process of borrowing as a mechanism rather than as a cause, i. e., as a way in which a particular problem can be solved. The cause would then have to be found in the linguistic situation that created the need. Beside this there is a third, intermediate possibility, in which syntactic borrowing is neither purely a cause nor purely a mechanism. Aitchison (1981: 127) describes this as an accelerating agent which utilises and encourages trends already existing in the language. It remains to be seen into which category the case of the “borrowing” of the accusative-and-infinitive construction fits, to which we will now turn.

2. A case-history: The accusative-and-infinitive construction in English

2.0. Introduction

In this section, I will consider the introduction of the accusative-and-infinitive-construction (henceforth aci [*accusativus cum infinitivo*]) in English. It has generally been agreed by linguists in the past and today that the so-called “learned” variety of the aci construction entered English as

a borrowing from Latin.⁵ By the learned variety the construction is meant as used especially after *verba sentiendi et declarandi*, i. e., of the type,

- (1) ...[I] was advised to give the kids what they wanted unless I wished my son to be socially ostracised. ... (LOB corpus, r05–20)

The “learned” aci is different from the “ordinary” aci construction (cf. Blatt 1957: 66) in that in the former type the NP (*my son* in [1]) which is syntactically the object of the matrix verb (the pronominal substitute for *my son* would be *him*, not *he*) does not receive its semantic function (in terms of Chomsky 1981, its thematic role) from the matrix verb *wish* but from the infinitival construction *to be ostracised*. In the “ordinary” type (i. e., after perception verbs and causatives) as in

- (2) *I let him go*
I see him come

him is semantically as much object of the matrix verb as it is subject of the infinitive, *I see him – he comes*.⁶

A first look at the data from both the Old and the Middle English period seems indeed to confirm the idea that the learned aci construction is of foreign import, in contrast to the ordinary aci. In both the Old and Middle English periods the aci construction after perception verbs and causatives is extremely frequent and occurs in all types of prose and poetry, original as well as translated works. There is no doubt that this construction is native to the language. It is moreover a common construction in all other known Germanic languages. The “learned” type of aci, however, does not occur at all in Old English, except in glosses and other rather slavish translations from Latin such as Bede and Wærferth (for some explainable exceptions, see Fischer 1989). In Middle English it begins to occur with any frequency only at the end of the period and more often in formal and/or translated prose than in the usually more colloquial poetic texts.

However, it has also been remarked that the structure of English was ripe for the reception of the learned aci construction in the Middle English period. This would explain why the construction begins to appear in late Middle English outside Latin-influenced texts, which was never the case in Old English, nor for that matter in other Germanic languages like German and Dutch (cf. Krickau 1877: 15; Bock 1931: 116). A number of factors are said to be responsible. Thus, the loss of distinction between the dative and the accusative case, the attrition of the verbal inflective

system, the optionality of the complementiser *that*, and a few other factors have very likely smoothed the path for the aci construction in English (for a full account of the literature, see Fischer 1989). Warner (1982: 134), approaching it from the opposite direction, shows that the first “genuine” aci constructions closely resemble already existing structures in English: “The change [i. e. the new aci types] appears first where ‘least salient’, or where only a ‘minimal alteration’ of previous structures is involved.” In both cases we might expect the gradual introduction of the “foreign” aci construction: i. e., where the language system affords a small opening (as a result of change in the system itself) and/or where the foreign aci can be adapted to resemble the existing structures as much as possible.

In two recent papers (Fischer 1989, 1991) I examined another factor that may have influenced the introduction of aci constructions into English, viz., the change in word order from basically SOV in Old English to SVO in Middle English. I would now like to work out the ideas presented in these two papers in more detail by looking at the complete spectrum of complementation structures of verbs that are associated with aci-type structures, such as perception verbs, causatives, and “persuade”-type verbs, and by tracing the behaviour of these verbs all through the Middle English period up to the time at which we see the introduction of the genuine or learned aci type, i. e., the infinitival construction after *verba sentiendi et declarandi*.

2.1. The data

For this purpose I have collected all the instances in which these verbs occur in a number of chronologically ordered texts. The choice of texts was rather narrowed down by the time factor. In order to examine the data within a reasonable space of time, I had to restrict myself to texts which were available on computer tape and which were codified so that I could elicit the necessary information from them fairly quickly. The following texts have been used:⁷ from the second half of the thirteenth century, the alliterative poem Layamon’s *Brut* (the more archaic Caligula ms., ll.1-8650, 75,500 words, edited by Brook – Leslie 1963, 1978); from the late fourteenth century the poem *Confessio Amantis* by John Gower (complete, 207,300 words, edited by Macauley 1900–1901); from the last three quarters of the fifteenth century a collection of letters and documents belonging to the Paston family (235,300 words, edited by Davis 1971). I was able to complement these texts by a fourth one from

the third quarter of the fifteenth century, i. e., Malory's *Morte Darthur* (edited by Vinaver 1967, 336,700 words) for which a complete concordance was available. From the first three texts I have extracted all the required instances by means of the Query programme (cf. Meys 1982; van der Steen 1982).⁸

These four texts together present a fairly satisfactory chronological overview, but they are not homogeneous as far as genre is concerned. However, stylistically the texts are fairly close. None of the texts are direct translations from Latin or French. Although the first two are poetry and the last two prose, they can all be described as informal and relatively colloquial. The only exceptions are certain parts of the *Paston Letters* which consist of wills, indentures, and other formal documents. Constructions found in these sections will in some cases have to be considered separately. For a discussion of the style question in relation to syntactic change, see also Gerritsen (this volume). Concerning genre, the texts of Layamon, Gower, and Malory form a close unit in that they are all works of fiction, all three with a historical bias. Gower's *Confessio Amantis* stands out a little bit in that it is more overtly didactic in nature than the other two. The *Paston Letters*, as a collection of mainly private letters and documents, is a somewhat strange mixture of genres and rather different as a whole from the other texts. The question arises whether the *Paston Letters* can be fruitfully compared to the other three texts.

2.1.1. Problems of genre and style

It is well known that genres are not clearcut and that texts that appear to be of two completely different genres may well have many lexical and syntactic features in common. In order to get some grip on the genres represented by our four texts, I will be using a typology of text types that has been set up for present-day English by Biber – Finegan (1987). I work from the assumption that by and large the lexical and syntactic features that Biber – Finegan distinguish in order to establish salient text types for present-day English will be applicable to Middle English texts. The authors distinguish nine clusters of text types on the basis of a factor analysis, where each factor (there are three in all) represents a number of linguistic features which share a common communicative function.

In their scheme, the three Middle English fictional texts fall squarely within the cluster "Imaginative Narrative" (Biber – Finegan 1987: 39).

The *Paston Letters*, as we have already seen, a mixture of two genres, belong to a certain extent to clusters 2, 6 and perhaps also 8, all related to “Exposition”: of a formal nature (2), an informal nature (6) and formal accompanied by narration (8). At the same time, since it concerns more or less spontaneous letters written between intimates, it exhibits features of clusters 3 and 7, “Informational-Interaccional” and “Interaccional Narrative” respectively.

Having roughly established to which clusters the different texts belong, we can now look at the factors underlying these clusters, i. e., at what this clustering means in terms of differences in linguistic features. Each factor represents a scale with two poles, which are described as follows:

Factor 1: interactive vs. edited

Factor 2: abstract vs. situated

Factor 3: reported vs. immediate

Figure 1 gives the plot of the factor score of Layamon’s *Brut*, *Gower*, and *Malory*, indicated by F (Fiction) and the factor score of the *Paston Letters* indicated by L (Letters) 1 and 2, where L1 represents the factor analysis for expository texts and L2 that for interactive texts.⁹

With the help of table 1, we can now read what the scores in figure 1 mean in terms of linguistic features. As for factor 1, we note that there is not a lot of difference between the fictional texts and the expository parts of the *Paston Letters*, but clearly the more spontaneous parts of the *Letters* are highly interactive. This is indeed clear from the high

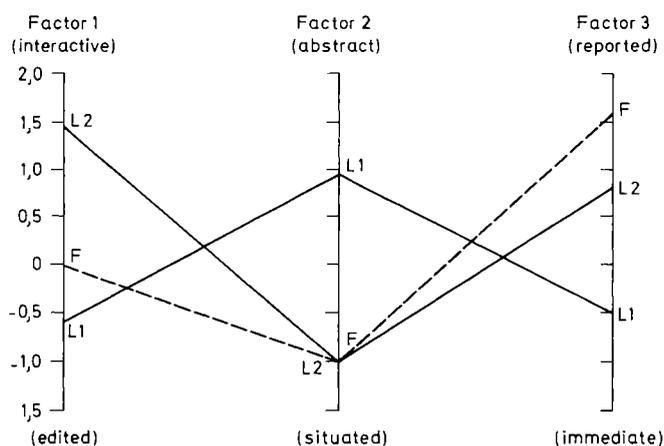


Figure 1. The factor scores for the texts in the Middle English corpus.

Table 1. The factors represented by their linguistic features (from Biber – Finegan 1987: 28)

Features	Factor 1	Factor 2	Factor 2			
Features with positive weights greater than .35	questions	.79	nominalizations	.74	past tense	.89
	<i>that</i> -clauses	.76	prepositions	.61	3rd ps pronouns	.61
	final prepos.	.68	specific		perfect aspect	.47
	proverb do	.67	conjuncts	.61		
	contractions	.67	agentless			
	<i>I/you</i>	.62	passives	.60		
	general hedges	.61	<i>by</i> -passives	.47		
	<i>if</i> -clauses	.57	<i>it</i> -clefts	.45		
	WH-questions	.52	split aux.	.42		
	pronoun <i>it</i>	.49	attitudinal			
	other subordin.	.48	disjuncts	.35		
	specific		(word length)	.40		
	emphatics	.46.				
	demonstrative <i>be</i>	.42				
	WH-clauses	.41				
general						
emphatics	.41					
(present tense)	.42					
(infinitives)	.35					
Features with negative weights greater than .35	word length	-.71	place advbs	-.57	present tense	-.62
	type-token		time advbs	-.55	adjectives	-.40
	ratio	-.65	relative pron.			
			deletion	-.50		
			subordinator			
			that deletion	-.42		
		(3rd person pronouns)	-.35			

frequency of questions and *wh*-clauses in general in the data of the *Letters*, but this does not show up after the *aci* verbs under discussion here: there is not a higher frequency of *wh*-clauses in the *Paston Letters* than in the other texts.¹⁰ The same is true for *that*-clauses; they are not more frequent in the *Paston Letters* after *aci* verbs.¹¹ Also the use of infinitival constructions after *aci* verbs is, overall, not higher in the *Paston Letters*; indeed, with the perception verbs *see* and *hear*, and the verbs *bid* and *make*, it is noticeably lower. Only *cause* and *desire* seem to have a somewhat stronger preference for infinitival complementation in the *Paston Letters*. A very clear difference is the regular use of the present tense and the high frequency of *I/ye*. The only way in which this affects our investigation is

in the relatively frequent use of an imperative construction especially after the verb *pray*,

- (3) a. *I prey zow fore-zette nozth to brynge me my
‘I pray you forget not to bring me my
mony ... (PL 18,15)¹²
money’*
- b. *I preye write to myn modre of your owne
‘I pray write to my mother of your own
hed ... (PL 79,1–2)
head [accord]’*

It is just possible that these represent bare infinitival rather than imperative constructions. However, since the bare infinitive is never found where an imperative is out of the question, i. e., in clauses such as (4 a – b)

- (4) a. ... *þat blyssyng þat I prayed zoure fadir to gyffe
... ‘that blessing that I prayed your father to give
zow þe laste day ... (PL 30,3)
you the last day ...’*
- b. ... *and than he answereth and prayeth me no more to
... ‘and then he answers and prays me no more to
speke of that mater ... (PL 88,56–57)
speak of that matter ...’*

where the subject is neither *I* nor the addressee *you*, it is far more likely that instances such as those illustrated in (3) are indeed imperatives.

Two final points which show the *Paston Letters* to be indeed more interactive than edited will be mentioned here although they have no serious consequences for the study of the verbs under discussion. The first is the high frequency of the pro-verb *do*. I have counted 226 instances (this is about 27% of the total number of occurrences of full verb *do* in the *Letters*) as against only 91 in *Gower* (ca. 17%), 189 in *Malory* (ca. 11%) and 29 in the shorter text of the *Brut* (ca. 7%). The second concerns a minor lexical difference not included in Biber – Finegan’s list. The “interactive” parts of the *Paston Letters* have a much smaller number of perception-verb constructions than the fictional “edited” texts. The total occurrence of *see* is only 177 in the *Letters*, as against 669 in *Gower* and 1191 in *Malory*, even though these three texts do not differ much in length. Moreover, the greater majority of *see* forms in the *Letters* do not convey physical perception but rather the meaning of “to visit” or “to see (un)to”, etc. The total number of instances of *hear* (including *hear*

of) in the *Paston Letters* is 121, as against 417 in *Gower* and 335 in *Malory*.

Concerning factor 2, it is clear that the more official, documentary parts of the *Paston Letters* differ greatly here from both the actual letters and the fiction. In particular, agentless passives and *by*-passives are frequent in these documentary sections. This may have an important effect on *aci* complementation as well. The Appendix shows that the use of a passive infinitive is clearly more frequent after the verbs *do*, *let*, *cause*, *desire*, and *grant* in the *Paston Letters*. On the other hand, after the verbs *command*, *make*, and *suffer*, *Malory* shows a higher number of passive infinitives. At the other end of the scale it may be noticed that the fictional texts show a higher rate of *that*-deletion after the verbs *see* and *hear* and *Gower* also after *grant*.

For the last factor, factor 3, the *Paston Letters* are again clearly different from the fictional texts, but here there do not seem to be any linguistic features that are relevant to this study.

Finally, it should be remarked that as far as Latin (or French) influence is concerned, this is likely to be present in the official language used in the legal, documentary parts of the *Paston Letters*. This will have to be taken into account in the analysis of the data below.

2.2. The “ordinary” *aci* construction: Causatives and perception verbs

In order to gain an idea of what kind of verbs belonged here in the Middle English period, I have consulted the lists of *aci* verbs provided by Visser (1963–1973: 2250–2337). We will first consider here the so-called “pure” causatives included in Visser’s class II: verbs of causing. The relevant verbs for our corpus are *let*, *do*, *make*, and *cause*. Beside these causatives we find a number of verbs that have gradually developed into causatives or partly causatives: *haten* ‘to command’, *bidden*, and *suffren*. In Visser these are given under class VIII (verbs of ordering, etc.), classes IV (verbs of inducing, etc.) and VIII, and class V (verbs of allowing, etc.), respectively.¹³ For the perception verbs I have decided to consider only the central ones *see* and *hear*, since the other verbs occur too seldom in the corpus to be very useful. The list of verbs with all the relevant syntactic information will be found in Appendix A.

2.2.1. The central causative verb: The case of *let*

The verb *let* (< OE *latan*) can scarcely be called a full verb anymore in Middle English. Whereas in Old English, *latan*, in the sense of ‘allow’, still occurs in a double NP construction or with a NP and finite clause,

this is no longer the case in our Middle English corpus. Its occurrence as a full verb, without a (non-)finite complement, is highly restricted, as the figures in the Appendix show. All full-verb occurrences of *let* concern a combination of *let* and a particle, or *let* used idiomatically with a noun (e.g., with *blood* or *tears*), or *let* used in a sense different from ‘allow, cause’. This shows that *let* cannot really be said to occur anymore by itself. Two of the reasons why *let* was gradually reduced to more or less auxiliary status may have been the rivalry of another full verb, i.e., OE *lettan* ‘to hinder’ (OE *lettan* and *lætan* had become similar in many of their present-tense forms by the Middle English period), and the more frequent uses of *lætan* as a full verb in the narrower senses of ‘leave’ and ‘lend’. What we see then in Middle English is that *let* ‘cause, allow’ has become quite separate from other full verb uses of *let*. Full-verb *let* appears in completely different complementation structures:

- (5) *let* + adverb:
A-nan swa þe dæi wes a-gan; swa heo zetæn openeden/
 ‘Anon as the day was gone; so they gates opened/
letten ut cnihtes; bigunnen muchele fihtes (Br 2879–80)
 let out knights; began great fights’
 ‘As soon as the day had passed, they opened the gates, let out
 the knights, and began great fights’
- (6) *let* + noun:
Tho was ther manye teres lete, ... (CA 2: 3228)
 Then was there many tears let
 ‘Then many tears were shed there’
- (7) *let* ‘leave’
- (i) + *to*-infinitive:
Forthi to speke thou ne lete, ... (CA 6: 450)
 Therefore to speak you not leave
 ‘Therefore you do not stop speaking’
- (ii) + *that*-clause:
Ye wolden for noght elles lete, That I ne scholde
 you would for nothing else leave, that I not should
be your wif (CA 1: 3366–67)
 be your wife
 ‘You would do everything in your power for me not to become
 your wife’
- (iii) + NP object:

... *Thei bothe tornen hom ayein Unto Cartage and*
 ... They both turn home again to Carthage and
scole lete (CA 7: 2234–35)

school leave

'They both go back again to Carthage and leave school'

(8) *let* 'hinder'

(i) + (*for*)*to*-infinitive:

... *þey schal not me let so for to do* (PL 415,16)

... they shall not me hinder so for to do

'they shall not stop me from doing so'

(ii) + NP object:

... *but raþer þey wold spend mony to lette*

... but rather they would spend money to hinder

it (PL 37,12)

it

'but they would rather spend money to prevent it'

(9) *let* 'to rent, hire out'

(i) + NP object:

I pray yow help to lete it aswell as ye can, rather

I pray you help to let it as well as you can, rather

to hym þanne a-nother man ... (PL 72,93–94)

to him than another man

'I pray you will help me to let it as well as you can, sooner to him than to another man'

(ii) in passive:

... *it is laten for xxij li. by yere, ...* (PL 282,15)

... it is let for 22 pounds per year

Thus, *let* 'allow, cause' distinguishes itself from the other verbs *let* in that i) it never occurs without a clausal complement, ii) the clausal complement is always non-finite, iii) the infinitive is always bare.¹⁴

This consistent use of the bare infinitive further marks the near-auxiliary status of *let* in Middle English. In Old English the bare infinitive was the rule in the complementation of most verbs.¹⁵ In the course of the Middle English period the majority of verbs changed over to a *to*-infinitive complement (for this development see especially Bock 1931), with the exception of the modal auxiliaries, aspectual auxiliaries like *gan*, and the perception verbs. This development therefore, as it were, left *let* isolated from the full verbs.

Next, we will look at the various types of infinitival constructions in which *let* ‘cause, allow’ occurs. Four different syntactic types may be distinguished:

- (i) the “subject” construction
V + NP_s + infinitive:
 - (a) NP_s = animate (cf. [10])
 - (b) NP_s = inanimate (cf. [11])
- (ii) the “object” construction
V + NP_o + infinitive (cf. [12])
- (iii) the “pure” infinitive construction
V + (passive) infinitive (cf. [13])
- (iv) the passive-infinitive subject construction
V + NP_s + passive infinitive (cf. [14])

Some examples:

- (10) a. *Let hym let his master know þat ...* (PL 37,35–36)
Let him let his master know that ...
b. *I prai the let me noght mistime Mi*
I pray you let me not mis-time my
schrifte, ... (CA 1: 220–221)
confession
- (11) a. *Hew down this tree and lett it falle* (CA 1: 2834)
Cut down this tree and let it fall
b. *...& heo letten heom to; gæres liðen* (Br 925)
and they let them to; darts go
‘and they let their darts go towards them’
- (12) a. *heo nom Æstrild & Abren; & lette heom*
they took Æstrild and Abren and let them
ibinden (Br 1244)
bind
‘they took Æstrild and Abren and had them bound’
b. *Anon he let tuo cofres make Of o semblance and*
Anon he let two chests make of one appearance and
of o make (CA 5: 2295–2296)
of one fashion
‘At once he had two chests made, similar in appearance and design’
- (13) a. *This Leonin let evere aspie, And waiteth after gret*
This Leonin lets ever spy, and waits after great

- beyete; Bot al for noght, ...* (CA 8: 1432–1434)
 profit; but all for nothing
 ‘This Leonin had [her] watched all the time and was hoping
 for great profit, but all in vain’
- b. *þe king lette blawen; & bonnien his ferden* (Br 4016)
 the king let blow; and assemble his army
 ‘the king let the trumpets be blown and his army be assembled’
- (14) a. *If that my litel Sone deie, Let him be beried in my*
 If that my little son dies, let him be buried in my
grave Beside me, ... (CA 3: 292–294)
 grave beside me
- b. *I pray yow let thys be sped in all hast*
 I pray you let this be done in all haste
possybyll (PL 339,62–63)
 possible

2.2.1.1. *Let* and the subject construction

The examples in (10) and (11) show that the subject NP is placed between the matrix verb and the infinitive. This is the normal, base-generated position for the NP, whether nominal or pronominal, animate or inanimate. All other positions for the subject are derived. Thus, we regularly find V-infinitive-NP_s and NP_s-V-infinitive orders. The subject NP is moved to final position when the NP is a so-called heavy constituent (15) or when it is a clause (16).¹⁶

- (15) *Heo letten to-gliden; gares swiþe scarpe. heo qualden*
 They let go darts very sharp; they killed
þa Frensce (Br 877–878)
 the French
- (16) ... *Let nevere thurgh thi Wraththe spille*¹⁷ *Which*
 ... Let never through your anger destroy whom
every kinde scholde save (CA 3: 342–343)
 every nature should spare
 ‘Never let your anger destroy anyone whom every human
 being should spare’

The subject NP is moved to the left before the matrix verb when it is topicalised or *wh*-moved. No examples were found of the latter:

- (17) *On he sette ana fla; & he feondliche droh. & þa*
 On he set an arrow, and he strongly drew and the
fla lette gliden; bi Corineus siden. (Br 730–731)
 arrow let go by Corineus' side
 'He set an arrow on and he drew with strength and let the
 arrow go by Corineus' side'

In the oldest text, Layamon's *Brut*, we also find examples of NP_s-V-infinitive where the NP_s is a pronoun. In these instances the pronoun has been moved to a clitic position. Clitic movement was a regular feature of Old English, but it gradually disappeared in the Middle English period (cf. van Kemenade 1987). In the *Brut*, the pronoun already normally appears in the base-generated position. Only in four of the seventeen instances in which a pronoun occurs is the pronoun moved to a clitic position. (18) shows the pronoun in clitic position, (19) in base-generated position.

- (18) ... & *zirne þe liues grið that þu mid griðe*
 and beg of-you of-life peace that you with peace
me leten uaren forð toward Rome. (Br 5377–5378)
 me let go forth toward Rome
 'and beg of you grace of life that you will let me depart with
 peace towards Rome'
- (19) & *let heom tilien þat lond* (Br 8413)
 and let them till the land

The other, later texts show no vestiges of clitic movement.

The V-NP_s-infinitive construction is common with all *aci* verbs (except *ask*), as the Appendix shows.

2.2.1.2. *Let* and the object construction

In object constructions in Old English, the object NP is usually placed between the matrix verb and the infinitive. This was the base-generated position in a language that was still basically SOV.¹⁸ As in the case of the constructions discussed in section 2.2.1.1., the NP could be moved to preverbal position when it was a clitic pronoun or when it was topicalised. Likewise, it would move to post-infinitival position when the NP was "heavy" or a clause. Again, as we have seen above, cliticisation of the object pronoun was already no longer the rule in the earliest text of our corpus. Of the object pronouns in the *Brut*, seventeen occur in base-

generated pre-infinitival position, nineteen in cliticised preverbal position. It is interesting to see that in at least two cases¹⁹, the parallel, but slightly more modern version of the *Brut*, the Otho ms., has placed the pronoun in non-clitic position:

- (20) *oþer he heom lette quic flæn* (Caligula 3199)
 or he them let quick flay
oþer cwick he lette heom flean (Otho 3199)
 or quick he let them flay
 ‘or he let them be flayed alive’

(Cf. also Caligula/Otho 6345.) Cliticisation with *let* does not occur in the other three texts although there seems to be one exception in *Gower*:

- (21) *Bot Jupiter the glorious, ... Vengeance upon this cruel*
 But Jupiter the glorious vengeance upon this cruel
king So tok, that he fro mannes forme Into a wolf
 king so took that he from man’s form into a wolf
him let transforme (CA 7: 3360 – 3364)
 him let transform
 ‘But the glorious Jupiter took such vengeance upon this cruel
 king that he had him changed from a man into a wolf’

It is likely, though, that the topicalisation of the constituent *into a wolf* has also attracted *him* into topic position; these two constituents form a unit in that they are both members of the small clause dependent on *transform* (for small clauses, see Stowell 1981).²⁰

In the course of the Middle English period certain changes take place which directly affect the base position of the object NP in this construction. The gradual change from SOV (in Old English) to SVO (in Middle English)²¹ will eventually force the infinitival object to change from a pre- to a post-infinitival position. This change can be very clearly traced in our corpus. To show these developments in some detail, I will consider the use of the V-NP_o-infinitive construction not just after *let* but also after the other aci verbs in the corpus.

2.2.1.2.1. Changes in the object construction after aci verbs

When we consider the V-NP_o-infinitive construction occurring after aci verbs in the *Brut*, the NP_o still regularly precedes the infinitive except, as we have seen, when the NP_o is either a pronoun/topic or a heavy constituent/clause. After the verbs *see*, *hear*, and *bid* there is no exception

to this rule.²² After *haten*, five out of the eleven cases have V-infinitive-NP_o order when there can be no question of movement. After the verb *let*, the number is even higher for the *Brut*: fifty of the ninety-six instances have V-infinitive-NP_o order with the NP base-generated in that position.

In the three later texts we see a gradual reduction of the pre-infinitival position. With the verb *see*, the V-NP_o-infinitive construction soon becomes rare. It still occurs four times in *Gower* but not at all in the *Paston Letters* and in *Malory*.²³ It is not replaced by the V-infinitive-NP_o construction, as in the case of *let*, presumably because the *that*-clause, already a frequent alternative, could be used instead. The four instances in *Gower* are of interest because at least three of them are misinterpreted by the editor:

- (22) a. *And now to loke on every side, A man may se the*
 And now looking everywhere, a man can see the
word divide, The werres ben so
 world divide, the wars are so
general ... (CA Prol. 895–897)
 general
 ‘And now a man only has to look around him and he will see
 the world divided, wars being so common’
- b. ... *This queene unto a pleine rod, Wher that sche*
 ... This queen onto a field rode, where she
hoved and abod To se diverse game
 stayed and waited to see various games
pleie (CA 6: 1847–1849)
 play
 ‘This queen rode into a field where she stopped and waited to
 see various games be played’
- c. ... *and sih my colour fade, Myn yhen dimme ...,*
 ... and saw my colour fade, my eyes grow-dim,
and al my face with Elde I myhte se
 and all my face with old-age I could see
deface (CA 8: 2825–2828)
 “deface” [disfigure]
 ‘and [I] saw my colour fade, my eyes grow dim and I could
 see all my face being disfigured by old age’

(The fourth instance, Prol. 880, also involves the verb *divide*.) The verbs *divide* and *deface* are marked by the editor as being intransitive in these cases. He gives no explicit reference to the status of *pleie* in line 1849.

The verb is given as both transitive and intransitive in the glossary. However, when *pleie* is used intransitively, it always has an animate subject. In (22 b), therefore, *pleie* must be transitive and *game* object. The likelihood that *divide* and *deface* are intransitive is very slight. For *divide*, the *Oxford English Dictionary* only gives the intransitive (reflexive) reading from 1526 onwards, while for *deface* it gives no intransitive reading at all. In the other two cases in which, according to the editor, these two verbs are used intransitively, they follow the verbs *bidden* and *maken*.²⁴ After these aci verbs a V-NP_o-infinitive analysis is again equally possible. It seems that the editor has been influenced in his interpretation of these cases by his Modern English intuitions, where the only infinitival construction possible with *see* is the V-NP_s-infinitive construction.

It is not unthinkable that the gradual loss of the V-NP_o-infinitive construction after aci verbs was in some cases furthered by the fact that a number of verbs could be both transitive and intransitive so that original NP_o constructions could easily be re-analysed or re-classified as the, by now more current, V-NP_s-infinitive construction. I found quite a number of such ambiguous examples especially after the verb *let*.²⁵ Of extremely frequent occurrence here is the verb *blow*. It may not be too bold to state that *blow* acquired its intransitive sense of ‘to emit a sound’ – which only became current in Middle English – because of its frequent use in constructions such as (24).

- (23) ... *sir Tristram harde a grete horne*
 ... Sir Tristram heard a great horn
 blowe ... (MA 729,17)
 blow

It is presumably still only transitive in the *Brut* because all four aci constructions with *blawen* show V-infinitive-NP_o order rather than V-NP_o-infinitive:

- (24) *He lette blawwen bemen; and nam al þa burhwes*
 He let blow trumpets; and took all the boroughs
 þa weoren on his broðer londe (Br 2227–2228)
 that were on his brother’s land
 ‘He caused the trumpets to be blown and took all the strong-
 holds that were on his brother’s land’

The V-NP_o-infinitive construction after the verb *hear* dwindles too. The picture is somewhat obscure in that, in the majority of instances I have found, the NP object is a clause. This automatically entails move-

ment of the object to post-infinitival position. However, in *Gower*, we only find three V-NP_o-infinitive constructions – all with a pronoun – and two V-infinitive-NP_o ones (against zero in the *Brut*), where the position of the object NP is not due to a movement rule. In the *Paston Letters*, one example was found (*PL* 32,3) but in *Malory* there are no longer any V-NP_o-infinitive constructions. As in *Gower*, the new V-infinitive-NP_o order is not frequently attested either. I have come across only one example in the *Paston Letters*, none in *Malory*; the finite clause complement may have been used instead (cf. *see*).

After causative *do*, the development is clear. In *Gower* we still find six V-NP_o-infinitive orders (three with pronouns, three with nouns) but also five with non-moved post-infinitival NP_o. In the *Paston Letters*, we only have five examples of the old order (all pronouns) as against forty-eight examples of V-infinitive-NP_o with a non-moved NP. In this text even pronouns now occur there, for example:

- (25) *I pre yow, yf ye dor tak yt uppe-on yow, þat ye*
 I pray you if you dare take it upon you that you
wyl weche-safe to do mak yt a-yens ye come
 will vouchsafe to do make it by-the-time you come
hom; for I hadde neuer more nede þer-of þan I haue
 home; for I had never more need thereof than I have
now, for I ham waxse so fetys þat I may
 now, for I am grown so elegant that I can
not be gyрте in no barre of no gyrdyl þat I
 not be girded in no bar of no girdle that I
haue but of on (*PL* 125,13–16)
 have except one

‘I pray you, if you can take it upon you, that you will be kind enough to have it made by the time you come home; for I had never more need of it than I have now, for I have grown so “elegant” that no girdle that I possess fits me, except one’

(See also *PL* 125,12; 130,31; 180,93, etc.) In *Malory*, causative *do* is rare and only occurs in combination with *make*. All six recorded cases, however, are instances of V-infinitive-NP_o with a non-moved object.

With causative *do* (and also *let* and *make* – see below) the change-over from pre- to post-infinitival object NP is much clearer than with the perception verbs because here there is no viable alternative in the form of a *that*-clause (or any other finite complement). *That*-clauses are non-existent or rare after causatives. No examples at all are found after

let; only two after *do*, both in *Gower*; after *make*, seven examples have been attested in *Gower* but most of these could, and presumably ought to, be interpreted as consecutive clauses:

- (26) a. *Anon the wylde loves rage, In which noman him
Anon the wild love's rage, in which no one himself
can governe, Hath mad him that he can nocht werne,
can rule, has made him that he cannot refuse,
Bot fell al hol to hire assent* (CA 1: 2620–2623)
but [he] fell all wholly to her will
'All at once the wild passion of love, in which no one may rule
himself, has made him such that he cannot refuse; he had to
do what she wanted'
- b. *For of Uluxes thus I rede, ... His eloquence and his
For of Ulysses thus I read, his eloquence and his
facounde Of goodly wordes whiche he tolde, Hath
facundity of gracious words which he spoke, has
mad that Antenor him solde The
made that Antenor him sold the
toun, ...* (CA 7: 1558–1563)
town
'For I have read about Ulysses that his eloquence and his
gracious use of words had forced Antenor to sell him the town'

None are found in the *Paston Letters*, and only one dubious case in *Malory*:

- (27) ... *Merlion dud make kynge Arthure that sir Gawayne
... Merlin did make king Arthur that Sir Gawain
was sworne to telle of hys adventure ...* (MA 108,26–27)
was sworn to tell of his adventure
'Merlin caused King Arthur to make Sir Gawain swear that
he would tell of his adventure'

In the C text, the verb *make* has been replaced by *desire*, with which a *that*-clause is quite regular.

Only with the new causatives *cause* and *suffer* (both borrowed from French in the late Middle English period) do we see an occasional *that*-clause. The infinitival object construction is rare here too. No examples have been found after *suffer*. Only one instance was found after *cause* in *Gower* and one in the *Paston Letters*, both with a post-infinitival non-moved NP.

Next, we come to *make*. *Make* is a late developer as a causative. It does not occur at all as such in original Old English, nor in the *Brut*. In the other texts of the corpus, it is more frequent in the subject than in the object construction. In *Gower* it occurs only three times in an object construction. Moreover, all three cases resemble the ambiguous cases discussed in (22), in which the pre-infinitival NP could be interpreted as both object (of a transitive verb) and subject (of an intransitive verb). The dictionary still classifies all three verbs as transitive.

- (28) ... *That if the lawe be forbore Withouten*
 ... That if the law is not-applied, without
execucioun, It makth a lond torne up so
 execution, it makes a country turn upside
doun (CA 7: 3080–3082)
 down
 ‘... that, if the law is not applied, not carried out, it causes
 havoc in a country’

(The other two instances are found in 3: 822 and 4: 2844.) In the *Paston Letters* there are no instances of the object construction after *make*. In *Malory* there are thirteen instances, all with V-infinitive-NP_o order, of which one is a clause and twelve are non-moved NPs.

Finally we return to *let*. We have seen that in the *Brut* this verb already shows a high frequency of the new object order, V-infinitive-NP_o. In *Gower* only seven examples preserve the old order (four pronominal, three nominal objects), sixteen have the new order – without movement being involved –, while nine have this order with a moved NP object. In the *Paston Letters* only nine cases are found, but all nine show the new order with a non-moved NP. The change is even clearer in *Malory*. All 149 instances have the new order, with 119 involving a non-moved object NP.

The relatively high frequency of post-infinitival object order after *let* in the *Brut* needs further investigation. *Let* is also the only verb that allows a post-infinitival subject when this subject is neither a heavy constituent nor a clause. Some examples:

- (29) a. *Cnihtes fuseð me mid; leteð slæpen þene*
 Knights come me with, let sleep the-ACC
king (Br 368)
 king
 (cf. Otho 368:

- Cniþtes comeþ mid me let þane king slepe)*
 knights come with me let the-ACC king sleep
- b. *Heo letten gliden heora flan & þa eotendes*
 They let glide their arrows and the giants
flu3en (Br 924)
 flee
 ‘they let fly their arrows and caused the giants to flee’

That this is not an order typical only of poetry must be clear from these examples from *Malory*,

- (30) a. *And so they let ren their horsis* (MA 658,23–24)
 And so they let run their horses
 ‘And so they let their horses run’
- b. *Lette go my hande* (MA 86,26)
 let go my hand
 ‘Let my hand go’

A tentative conclusion that could be drawn from the above facts is that *let* seems to have a slight preference, in comparison with other causatives and perception verbs, to occur on the immediate left of the infinitive without an intervening NP. What might be the reasons for this? I would like to suggest some possible causes: 1) *Let* occurs more often than the other verbs with an infinitive only (see section 2.2.1.3.). When there is no NP, infinitive and matrix verb are normally found next to one another. 2) *Let*, more than the other *aci* verbs became “auxiliarised” in the Middle English period (see section 2.2.1.). With “true” auxiliaries (modals, inchoatives, etc.) the most usual position of the infinitive was immediately after the auxiliary. In subject constructions the infinitive already followed the auxiliary in the Old English period, because with an auxiliary the subject of the infinitive has to be PRO; it cannot be a lexical subject:

- (31) *þat boa sculde fallen; fader & his moder. þorh*
 that both should fell; father and his mother through
him heo sculden dei3en (Br 143–144)
 him they should die
 ‘who would slay both his father and his mother; through him they would die’

The tendency for the auxiliary and the infinitive also to stick together in object constructions (V-NP_o-infinitive) is already clearly present in the

*Brut.*²⁶ With pronouns we usually find NP_o-V-infinitive order, with nouns V-infinitive-NP_o:

- (32) a. *Wel ich hit may suggen* (Br 494)
 Well I it may say
 ‘Well I may say it’
 b. *þine sustren scullen habben mi kine-lond* (Br 1545)
 thy sisters shall have my kingdom

We see a similar tendency for auxiliary and past participle to appear together rather than separated:

- (33) a. *þat child was ihaten Brutus* (Br 151)
 that child was called Brutus
 b. *þa þat iherde his kun (...) þat he þe flo*
heuede idrawen (Br 162–163)
 had drawn
 ‘When his kindred heard that ... that he had drawn the arrow’

What I am suggesting, then, is that *let*, in its process of “auxiliarisation”, may have followed the common pattern of the auxiliaries.

There is no evidence for early Middle English that *let* + infinitive could be looked upon as an idiomatic unit which would account for the non-separation of matrix verb and infinitive.²⁷ This seems indeed a later development that becomes visible only in *Malory*. It may well be the last convulsion of *let* + infinitive order – which was clearly an odd customer within the syntactic system – before the construction falls into final disuse (in present-day English only a few idiomatic phrases have survived, such as *let go*, *let slip*, *let see*).

The frequency of the use of *let* + infinitive is also increased by the fact that in the course of the Middle English period there seems to be a tendency for causative *do* to be reinforced by *let*, at least in certain texts, presumably to distinguish causative and periphrastic uses of *do*. In these cases *let* functions as matrix verb and *do* as infinitive. Fifteen such combinations have been found, for instances, in *Gower*. In all instances except one, *let* and *do* are found consecutively. This phenomenon again stresses the auxiliary nature of *let*.

2.2.1.3. *Let* and the “pure” infinitive construction

More than any other *aci* verb, *let* occurs with an infinitive only. In the earliest text of the *Brut*, we come across a fair number of such examples, nine in all. In all cases, although there is no explicit NP, it can be said

that the NP is implicitly present. In four instances, it is the subject NP that has been omitted, since the infinitive is an intransitive verb, for example:

- (34) *Lette þe king gan awal; & lude clepien ouer-al.*
 Let the king go on-wall and loudly call overall
and seide þat Leir kin; icume wes to
 and said that Leir king come was to
londen (Br 1820–1821)
 land
 ‘The king let [people] go on the wall and loudly proclaim everywhere and [they] said that king Leir had come to this land’

In the other five cases a transitive verb is used so that there is, in fact, neither a subject nor an object:

- (35) *þa lette þe king blawen; & beonnede his*
 then let the king blow and summoned his
eorles (Br 8282)
 earls
 ‘then the king let [heralds] blow [trumpets] and summoned his earls’

The omission of the object NP is quite common and can be seen everywhere from Old English to present-day English. Leaving out the subject in this way is not possible in present-day English. In Old English it was fairly usual for the subject NP to be left out with causative verbs provided this subject was non-specific.

The use of *let* + infinitive decreases in the later texts (only two instances in *Gower* and none in the *Paston Letters*)²⁸, but picks up again in *Malory*. There it is presumably due to a new development, already referred to at the end of the previous section, i. e., the “idiomatisation” of *let* + infinitive, because Malory’s twenty-six examples involve only a very small number of infinitives, mainly *be* and *see*, and to a lesser extent *blow* and *ordain*.

It is noticeable that this pure-infinitive construction is far more frequent with *let* than with any other aci verb. Beside the thirty-seven cases attested with *let*, none were found with *see* and *hear*, none with *do*, one with *make*, seven with *bid* (also an archaic verb, used with infinitive only in the *Brut*), two with *suffer* and two with *cause*.

2.2.1.4. *Let* and the passive-infinitive subject construction

The use of the passive infinitive after *let* is a new development which starts in the Middle English period. There are a few examples of *lætan* + passive infinitive in Old English but they can all be ascribed to Latin influence (cf. Callaway 1913: 120 ff.). The passive infinitive only becomes common at the end of the Middle English period. As far as *let* is concerned, I have attested just one instance in the *Brut*, and here the passive infinitive is stative. In other words, the past participle resembles an adjective and the whole construction could therefore be interpreted as a subject construction (as described in section 2.2.1.1.), with *be* as copula followed by an adjective:

- (36) *þa lette he his cnihtes; dæies & nihtes.*
 then let he his knights day-GEN and night-GEN
æuere beon iwepned; (Br 8155–8156)
 ever be weaponed
 ‘then he caused his knights always to be armed, day and night’

In *Gower*, we come across six examples of the passive infinitive. Of these, one is clearly stative – the past participle even has adjectival form (4: 3221) – one may be stative (1: 1254) and four are non-stative. An example of the latter:

- (37) *Bot of o thing I schal thee preie, If that my litel*
 But of one thing I shall you pray if my little
Sone die, Let him be beried in my grave Beside
 son dies let him be buried in my grave beside
me (CA 3: 291–294)
 me
 ‘But I would ask you one thing, if my little son dies, let him
 be buried in my grave, beside me’

In (37) the reference is clearly to the future and *be beried* should be looked upon as a future activity rather than a state.

The passive infinitive increases enormously in the *Paston Letters*, where no less than forty-two examples have been attested. Of these the greater majority is non-stative, none are clearly adjectival:

- (38) *I prey yow let them be sealyd and sent me by*
 I pray you let them be sealed and sent to-me by
Radley wyth the deedys ther-in. (PL 349,8–9)
 Radley with the deeds therein

All these passive infinitives occur in the informal letters, not in the official documents; they are therefore part of the colloquial, intimate style of the letters.

Why this sudden increase in the use of passive infinitives after *let*? It seems to me that this can only be linked to the very clear reduction of the object construction in these same *Letters*. Only nine such constructions occur as against 226 subject constructions. Compare these numbers to the occurrences in the *Brut* and *Gower*:

Subject construction:	<i>Brut</i> : 48	<i>Gower</i> : 62
Object construction:	<i>Brut</i> : 96	<i>Gower</i> : 34
Passive-infinitive subject construction:	<i>Brut</i> : 1	<i>Gower</i> : 6

Why is it that the subject constructions, with both active and passive infinitives, begin to dominate, while the object constructions fade out? In section 2.2.1.2.1., we have already seen that there was a problem with these object constructions. The original V-NP_o-infinitive order was no longer acceptable once the base order had changed from SOV to SVO. The new order that emerges – V-infinitive-NP_o – seems also not entirely satisfactory, seeing that it is being (partly) replaced by a passive infinitive.

The problem with the new post-infinitival order is that it is rather the odd one out in the grammatical system. This V-infinitive-NP_o order is common with true auxiliaries such as modals, etc., where the subject of the infinitive is an empty non-lexical element, PRO (for the term, see Chomsky 1981). With the modals, infinitival PRO is always coindexed with the subject of the matrix (= modal) verb. This is not the case with *aci* verbs like *let*. Here we also have a non-lexical subject of the infinitive, PRO, but this PRO is arbitrary in reference. Another point is that *aci* verbs like *let* occur in a rival construction where the infinitive does have a separate lexical subject, i. e., the subject construction, a construction in which the modals cannot occur.

These above two factors and the increasing obligatoriness of a syntactic subject in Middle English (cf. note 28) must have initiated the move towards a unitary (subject) construction. In some cases, as we have seen above, the infinitive used in the “old” object construction was interpretable as both transitive and intransitive. In that case, the change-over to the subject construction could be smoothly made. In other cases, a passive-infinitive subject construction could be resorted to.

This fairly straightforward hypothesis seems to become quite overturned when we look at the figures for *Malory*:

Subject construction:	229
Object construction:	149 (all with V-infinitive-NP _o base order)
Passive-infinitive subject construction:	19

Although there are a fair number of passive infinitives, the object construction still dominates. The only explanation for this state of affairs can be that in Malory's dialect *let* + consecutive infinitive had very much become an idiomatic phrase. It is here that we have seen a large number of "pure" infinitive constructions after *let* (cf. section 2.2.1.3.), and it is also here that we have seen a relatively high number of instances of *let* + infinitive order even in the V-NP_s-infinitive construction, where it normally does not occur:

- (39) a. *lette go myn hande* (MA 86.26)
 b. *And so they let ren their horsis* (MA 658,23–24)

Malory also provides us with some neat parallel examples that show that the object construction and the passive-infinitive construction were semantically very close.

- (40) a. i *the two kynges lette departe the seven hondred*
 the two kings let split-up the seven hundred
knyghtes (MA 23.9)
 knights
 'the two kings let the seven hundred knights be split up'
 ii *So he let his oste be departed in six*
 So he let his army be split-up into six
batayles (MA 621,26)
 battalions
 b. i *Than kyng Arthure lette sende for all the children that*
 Then King Arthur let send for all the children that
were born in May-day (MA 55,19–20)
 were born on May Day
 'Then King Arthur let all the children be sent for who were
 born on May Day'
 ii. *And this lord, sir Ector, lete hym be sent for for to*
 And this lord, Sir Ector, let him be sent for to
come ... (MA 10,40–11,1)
 come
 'And let this lord, Sir Ector, be sent for ...'

- c. i *So kynge Arthur lette bury this knyght*
 So King Arthur let bury this knight
rychely, ... (MA 80,21)
 richly
 'Thus King Arthur had this knight buried richly'
- ii *Take the knyght and lette hym be buryed in an*
 Take the knight and let him be buried in a
ermytage (MA 119,5–6)
 hermitage

Another interesting example comes from *Paston Letter* 42, of which we have three versions, a rough draft, a second draft, and a fair copy. In the rough draft we come across the phrase *and cause þe pese to kep* 'and cause the peace to keep' (1.16). In the second draft and fair copy this has been changed to *and cause the peas to be kept* (11.35 and 57 respectively). The semantic closeness of the constructions allows the syntactic replacement of one by the other, since communication was not endangered.

2.2.1.4.1. The new passive infinitive with the other aci verbs

The idiomatisation of *let* referred to above does not seem to occur with the other causative verbs²⁹, and we see that here *Malory* does follow the trend sketched above.

	<i>do</i>	<i>make</i>	<i>suffer</i>	<i>cause</i>
Subject construction:	7 ³⁰	122	76	35
Object construction:	6	13	—	—
Passive-infinitive subject construction:	—	19	9	3

It is not surprising that in our corpus the object construction does not occur at all with the recently introduced French verbs *cause* and *suffer*. These verbs only became current when the object construction was already on its way out.

Developments in the complementation of perception verbs are perhaps somewhat different in that in this case the original object construction could be replaced by finite complements, which had always been in use side by side with the non-finite complements (I am ignoring possible subtle semantic differences at this stage). Eleven examples of a passive infinitive have been found after *see* (of these, five are bare³¹ and six have

a *to*-infinitive) and none after *hear*. I will discuss the complementation of these two verbs separately.

After *see* the passive infinitive is less rare in our corpus than one would perhaps have expected, considering the possibility of replacement by a finite clause and the fact that the older object construction was not very frequent. As we have seen (section 2.2.1.2.1.) there is only one dubious example of the object construction in the *Brut*, plus one instance that is ambiguous between a subject and an object construction. In *Gower* there are four straight examples and nine ambiguous ones. No examples, not even ambiguous ones, were attested in either the *Paston Letters* or in *Malory*. One of the reasons for the fair number of passive infinitives after *see* may be the frequent occurrence of past-participle complements with *see* (in contrast to *hear*). Formally, the introduction of the passive infinitive would therefore have meant only a small change to an already existing structure.

It is interesting to notice that the passive-infinitive construction that occurs after *see* is not in all cases simply a replacement of the old object construction. One of the essential characteristics of the older, active, infinitival construction (both of the subject and the object type) is that there must be identity of tense domain between infinitive and matrix verb; in other words, the physical perception itself and the activity expressed in the infinitive must take place simultaneously (for more details, see Fischer 1989). Simultaneity is also present in the new, passive construction as can be seen in *I saw the cat be(ing) run over by a car*. However, simultaneity is no longer a necessity in the new passive constructions.³² In *Gower*, for instance, all five instances of the passive infinitive after *see* refer to a (possible) future activity. To accentuate the break between the tense domain of the matrix verb and that of the infinitive, two instances even have the infinitive marker *to*, which never occurs in the active infinitive construction with *see*.³³ Some examples:

- (41) a. ... *And sein, it thoghte hem gret pite To se so*
 ... And say it seemed them great pity to see so
worthi on as sche, With such a child as ther was
 worthy one as she, with such a child as there was
bore, So sodeinly to be forlore. (CA 2: 1239–1242)
 born, so suddenly to be destroyed
 ‘And [they] said that it seemed to them a great pity to see so
 worthy a woman as she was so suddenly be destroyed together
 with the child that was born to her’

- b. *And thereupon to make an ende The Souldan his
 And thereupon to make an end the Sultan his
 hostages sende To Rome, of Princes Sones twelve:
 hostages sent to Rome, of Princes' sons, twelve:
 Wherof the fader in himselfe Was glad, and with the
 whereof the father in himself was glad, and by the
 Pope avised Tuo Cardinals he hath assised With
 Pope determined two cardinals he has appointed with
 othre lordes many mo, That with his daughter
 other lords many more, who with his daughter
 scholden go, To se the Souldan be
 should go to see the Sultan be
 converted (CA 2: 631 – 638)
 converted*

'And thereupon, to conclude this, the Sultan sent his hostages to Rome, twelve Princes' sons; and the father was glad of this, and he has appointed two Cardinals, approved by the Pope, and many other lords who should accompany his daughter to witness the conversion of the Sultan'

We also see that in these constructions the meaning of *see* may change from one of physical perception to one of mental perception ("experience") or to the meaning 'to see to', 'to make sure that'. In this latter meaning the verb *see* comes very close to a causative. It is possible that this too may have stimulated the development of the passive infinitive after *see* (for other such cases, see also [60] and [62 b] in section 2.3.).

The development after the other perception verb *hear* is in some ways rather different from that after *see*. As with *see*, finite complements may have taken the place of infinitival ones in some cases. However, with *hear*, there are no examples of the new passive-infinitive construction at all in the corpus. At the same time the old object construction remains quite common. This seems in conflict with our hypothesis. When we take a closer look at these object constructions, however, it is found that they are of a very restricted nature at the end of the Middle English period. In the *Brut*, and to some extent also still in *Gower*, all orders are represented, and the object could be a clause, a noun, or a pronoun. In the *Paston Letters* and *Malory*, the object is always a clause – which comes naturally in final position. If it is not a clause (in about one third of the cases – see Appendix), it is an element that is co-referential with a clause, especially the element *as*,

- (42) *Custans Mak and Kentyng wold a dysavowyd here*
 Custans Mak and Kenting would have disavowed their
swtys ryt3 fayn þe last hundred, as I
 suits very gladly at the last sitting of the Court, as I
herd sayn of ryt3 thryfty men; (PL 131,7–9)
 heard say by very worthy men

Obviously, these clausal constructions could never be replaced by passive-infinitive constructions.

A certain amount of idiomatisation has occurred with *hear*, too, which may account for the continuing presence of the object construction (cf. *let*). This started much earlier than with *let* (not surprisingly, perhaps, when one considers the far greater restrictions on the kind of infinitive that could go with *hear*). In the *Brut* all but one instance of the infinitive following *hear* concern the verbs *say* (twelve instances) and *tell* (three). In *Gower*, all but three concern the verbs *say* (fourteen), *tell* (seventeen), and *divise* 'tell' (six). In the *Paston Letters*, the infinitive has become restricted to *say* (twenty-nine examples) with only one exception. The same holds true for *Malory*: *say* is used throughout.³⁴ *Hear say* and *hear tell*, moreover, have remained idiomatic phrases up until the present day.

Finally, something must be said about the stylistic connotations of the new passive-infinitive subject construction after causatives and perception verbs. I have already mentioned that all occurrences after *let* are incurred in informal style. The instances with *see*, *make*, and *suffer* are also found exclusively in informal texts. The situation is different after *cause* and *do*. Of the eleven occurrences with *do*, seven occur in the formal documents of the *Paston Letters*, the other four are informal (three in the *Letters*, one in *Gower*). Of the nineteen passive infinitives after *cause*, eight occur in formal sections of the *Letters*, while eleven are informal (eight in the *Letters*, three in *Malory*).

2.2.2. Conclusion

I have tried to show in the previous sections that the emergence of a passive-infinitive construction after causative verbs may well be a consequence of the change in basic word order that took place in the course of the late Old English/early Middle English period. This change in word order did not interfere with the original subject construction but caused havoc in the object construction. It made the old V-NP_o-infinitive order

next to impossible, since in the new SVO order the NP before the infinitive would be looked upon as a subject rather than an object.

The consequences (or remedies used) in this situation were the following: i) In some cases, the infinitive could also be interpreted as intransitive (or was re-interpreted as intransitive) so that the "old" object construction became a subject construction. ii) In some cases, the old object construction could be replaced by already existing finite complements. This possibility, however, was generally only available for the perception verbs because the causative verbs (with the exception of the new causatives *cause* and *suffer*, although even here the number is extremely small) never allowed a finite complement. iii) We see a development towards V-infinitive-NP_o order. Although this is a natural development given the new SVO order, it clashed with other syntactic patterns in the system: a) This order is typical of auxiliary verbs which seem in this period to begin to claim an exclusive right to it, especially the pattern with a bare infinitive (which was also the usual infinitive after most causatives). It should be noted that this also includes the pattern that develops for periphrastic (auxiliary) *do*. b) The new V-infinitive-NP_o order also clashes with the pattern that is most frequent with causatives and perception verbs and that is the V-NP_s-infinitive pattern of the subject construction. Consequently, it became natural, if not necessary, for a new V-NP_s-infinitive construction to develop that could take the place of the old object construction. This then was the subject construction with a passive infinitive.³⁵

How far this new subject construction can also be said to have been influenced by Latin patterns is still a question that needs to be addressed. I have looked at the rise of the passive infinitive in the history of English elsewhere (cf. Fischer 1991). There I have come to the conclusion that the appearance of passive infinitives in Middle English is mainly due to two factors: i) The replacement of the bare infinitive by the *to*-infinitive in most infinitival constructions. This enabled the Old English bare passive infinitive to spread to positions from which it was barred before. ii) The need to replace a number of Old English active-infinitive constructions that had only an object but no subject, due to changes elsewhere in the grammar. Latin influence was discarded as a causatory factor although it could, to some extent, have shown the way in which the original active infinitive could be adapted (i. e., as a mechanism, not a cause). Even this is not very likely, however, in that a number of the active infinitives replaced by passive ones had no comparable passive construction in Latin itself.³⁶

In the following section, we will have a look at other passive-infinitive complements that became current after a different class of aci verbs in the late Middle English period.

2.3. The passive infinitive after “persuade”-type verbs

As with the causatives, I have consulted Visser’s (1963 – 1973) list of aci verbs in order to pick out the “persuade”-verbs relevant to our period and to this investigation. Thus, I have only investigated those verbs that could be suspected to occur with a passive-infinitive construction because they occur with one in Visser or in the corpus itself. The verbs comprise the following three of Visser’s classes: IV, verbs of inducing etc. (pp. 2270 – 2290), here represented by *ask*, *ordain*, *pray*, *require*; V, verbs of allowing etc. (pp. 2290 – 2298), represented by *grant* and *license*; VIII, verbs of ordering etc. (pp. 2302 – 2307), represented by *charge*, *command*, and *order*. I have also included the verbs *desire* and *warn*. The first, although classified by Visser as a “verb of wishing”, clearly also functions as a “verb of inducing” in the late Middle English period. The second is classified by Visser as a “verb of saying”, but its complement structures in Middle English make clear that it shares more features with the verbs of classes VIII or IV above.

Although the subject or aci construction after “persuade”-verbs on the one hand and causatives and perception verbs on the other look the same on the surface, they are syntactically rather different. The arguments are by now well-known and described in most transformational-generative handbooks. Briefly, they concern i) the lack of paraphrase between active and passive constructions with verbs like *persuade* but not with *see*, etc., ii) the possibility of a double object construction after *persuade* but not *see*, iii) the existence of selection restrictions between the matrix verb and the following NP with *persuade* but not *see*, as illustrated in (43).³⁷

- (43) i/a. *I persuaded a specialist to examine John* ≠
 b. *I persuaded John to be examined by a specialist*
 c. *I saw a specialist examine(-ing) John* =
 d. *I saw John be(ing) examined by a specialist*
 ii/a. *I persuaded John to give the lecture*
 b. *I persuaded John that he would give the lecture*
 c. *I saw John give the lecture*
 d. **I saw John that he gave the lecture*

- iii/a. **I persuaded a house to be built (by John)*
 b. *I saw a house be(ing) built (by John)*

These syntactic criteria also apply to the “see”- and “persuade”-verbs in the Old and Middle English periods (for an overview, see Fischer 1989).

Given the syntactic nature of the “persuade”-verbs, especially the strong bond (both syntactic and semantic) between the matrix verb and the following NP, it is not surprising that, what I have termed the object construction (described in section 2.2.1.2.) does not occur with “persuade”-verbs, in either Old, Middle, or present-day English,

- (44) **I persuaded a house to build*
 **I persuaded to build a house*

As Los (1986) has described it, “persuade”-verbs are “interactive” verbs (unlike “see”-verbs): their nature requires interaction between their subject and their object or “recipient”. For that reason, both subject and object need to be animate and both need to be present on the surface. Los (1986: 42) further remarks that the infinitival phrase must express “an action that can be executed or in some way controlled by the recipient”. This additional requirement shows also how the causatives clearly differ from “persuade”-verbs, in that with causatives the “recipient” typically does not control the action expressed by the infinitive.

When we consider the list of “persuade” verbs in Appendix B, we note that quite a few of them seem to occur after all in object constructions, that is, in constructions where there is a matrix verb, an infinitive dependent on it, and a NP object of the infinitive. A closer look, however, shows that these are rather different from the typical object constructions after perception verbs and causatives (but cf. the discussion of the verb *command* below and note 40). Some examples:

- (45) a. *Who that only for Cristes sake Desireth*
 Who only for Christ’s sake desires
cure forto take, ... (CA Prol.: 291–292)
 charge [of a parish] to take
 ‘Who only desires to take charge of a parish for the sake of Christ’
- b. *Neuerthelesse, I assayed hym iff he wolde, iff nede*
 Nevertheless, I appealed to-him if he would, if need
hadde ben, gyvyn me a xij monyth lenger respight,
 had been give me a 12 months longer respite,

whyche he grauntyd to do. (PL 286,11–13)

which he granted to do.

‘Nevertheless, I appealed to him whether he would, if the need should arise, give me twelve months longer respite, which he granted to do’

- c. *Than was she hevy and wroth that hir chyldirne*
 Then was she vexed and angry that her children
sholde nat rejoyse the contrey of Lyonesse, wherefore
 would not enjoy the country of Lioness, wherefore
this quene ordayned for to poyson yong
 this queen planned to poison young
Trystrams (MA 373,16–19)
 Tristram

- d. *Bot over this nou wolde I preie To wite what the*
 But next-to this now would I pray to know what the
branches are of Avarice, ... (CA 5: 1964–1966)
 subdivisions are of Avarice

In all the examples in (45), the subject of the matrix verb and the subject of the infinitive have the same referent. In other words, these constructions have a controlled PRO and not an arbitrary PRO as was the case with the object constructions after causatives and perception verbs. The constructions in (45) therefore resemble the infinitival constructions after auxiliary verbs. This also explains why there was no need for these constructions to disappear as was the case with the object constructions after causatives and perception verbs.³⁸

That the above “persuade”-verb constructions appear in (45) without a recipient is in itself remarkable. As I said above, with “persuade”-verbs the recipient must normally be present. We indeed do not find constructions of type (45) with the verbs *charge* and *warn* in our list. This list, however, is rather unrepresentative of prototypical “persuade”-verbs in that all the verbs in the list are selected for the very reason that they share a feature with the causative verbs discussed earlier, i. e., the use of a passive-infinitive construction. I will try to show that the “persuade”-verbs in the list follow the causatives in this respect because they already resemble the causatives in other ways. Before I proceed to discuss the similarities between these verbs and the causatives, I will take a more detailed look at the behaviour of the verb *command*.

Command is a perfect example of a “persuade”-verb developing more and more into a pure causative. In this it is not alone. In other languages,

too, we can see a similar development. A good example is Latin *iubeo*. From a verb meaning ‘to order’ in classical Latin, it came to be used as a pure causative in late Classical and especially in Medieval Latin. More or less the same has happened with OE *hatan* ‘to command’. At first it began to appear in constructions without a recipient, later it showed up in idiomatic phrases like *he hateþ gretan*, where the meaning of “ordering” is bleached to something like “he lets greet”.³⁹ OE *biddan* follows a similar development. *Command*, too, differs from the other “persuade”-verbs in our list in that it quite regularly occurs in object-constructions in Middle English where the non-lexical subject of the infinitive is not a co-referential PRO but an arbitrary PRO as in the causative constructions.⁴⁰ The *MED* gives as many as seven examples of this in its entry for *command*, the first one from the early fourteenth century, when the verb began to be current in Middle English. An example from the corpus is:

- (46) ... *therefore the lorde commaunded to sle hym, and for*
 ... therefore the lord commanded to kill him, and for
thys cause ys he slayne (MA 811,20–21)
 this cause is he slain
 ‘therefore the lord commanded him to be killed, and for this
 reason he was killed’

Just as with the causatives, these object-constructions became awkward within the late Middle English syntactic system. Unlike with the causatives, a *that*-clause could (and did) replace these ill-fitting constructions. Here again *command* proves itself to be not a proto-typical “persuade”-verb in that it occurs in Middle English in NP + *that*- as well as *that*-clauses (cf. condition [43 ii]; for the actual data, see the Appendix).

In spite of the possibility of a *that*-clause, we also regularly begin to find the passive-infinitive subject construction after *command*. The *MED* gives as many as six examples, the first one from the end of the fourteenth century, and therefore clearly later than the object constructions. I believe it is the (acquired) causative character of this “persuade”-verb that made this development possible. Some examples from the corpus are:

- (47) a. *And as for all oþer erondys that ye haue commandid*
 And as for all other errands that you have commanded
for to be do, þey shall be do als sone as þei
 to be done, they shall be done as soon as they
may be do. (PL 148,17–18)
 can be done

- b. *And whan he had used hit he ded of hys crowne and
 And when he had used it he did off his crown and
 commaunded the crowne to be sett on the
 commanded the crown to be set on the
 awter (MA 908,11 – 12)
 altar*

Another quite usual way to avoid the syntactical problem of the object construction in late Middle English was to put in the recipient even though the person remains unspecified in the further narrative and/or not particularly relevant to what the action focusses on:

- (48) *He [Sir Cadore] alyght off his horse and toke hym
 He alighted from his horse and took him
 in his armys and there commaunded knyghtes to kepe
 in his arms and there commanded knights to keep
 well the corse. Than the kynge craked grete wordys
 well the corpse. Then the king uttered great words
 on lowde and seyde, ... (MA 215,6 – 8)
 aloud and said, ...*

The *knyghtes* mentioned here are not further specified and also play no further role in the discourse. Thus, in *Malory*, we quite often find *command* combined with the general word *men* or *knights* as a recipient, while, for instance, in the older text the *Brut*, the equivalent of the verb *command* (*haten*) is never found with an unspecified recipient, the object construction being employed instead. A comparison of the Caligula manuscript with the less archaic Otho manuscript is interesting again here. In two instances, the Otho manuscript has replaced the object construction: once by inserting a recipient (1.4801), once by altering the construction (1.5405).

Before we leave *command*, one other interesting development must be noted. Out of the total of five cases of *command* + infinitive in the corpus, as many as three seem to avoid too stark a use of arbitrary PRO. Consider the examples in (49):

- (49) a. *Or elles that hir list comaunde To rede and
 Or else that her pleased [to] command to read and
 here of Troilus ... (CA 4: 2795 – 2796)
 hear of Troilus*

‘Or else [when it happens] that it pleases her to command someone to read [to her] about Troilus and to hear about Troilus’

- b. *the same Ser John, (...) wold haue on will mad*
 the same Sir John would have one will made
and wrete after þe effecte of the seid apoyntementes
 and written according to the said provisions
towching the fundacion of þe colege aswell as the
 touching the establishment of the college as well as the
seid other maters not declarid in his intent and will
 said other matters not declared in his intent and will
acordyng, comaundid to haue it so ingrosid and
 corresponding commanded to have it so engrossed and
wrete ... (PL 60,83 – 91)
 written

‘the same Sir John wished to have a will made and written according to the said provisions concerning the establishment of the college as well as the aforementioned other matters which were not declared in his will, [and he] commanded it to be so engrossed and written ...’

- c. *Than sir Trystrams commaunded to haue his horse*
 Then Sir Tristram commanded to have his horse
uppon the londe.
 upon the land

‘Then Sir Tristram commanded his horse to be brought upon the plain’

In the first example, the subject of the first infinitive is PRO_{arb}, but of the second it can only be a co-referential PRO. In the other two examples the verb *have* is used/inserted. This makes it possible to interpret the non-lexical subject of the infinitive as coreferential with the matrix subject. However, an interpretation with PRO_{arb} is also possible when we read *have* in (b) as meaning ‘to cause’ and in (c) as ‘to bring’.

When we look at the other “persuade”-verbs in the list, we note that they too share syntactic similarities with causative verbs. At the basis of this usually lies the fact that the verb semantically, at least in some of its connotations, partakes of the nature of a causative. Sometimes one finds examples of contexts where the verb (as with OE *hatan*) is used almost as a pure causative, as for instance in (50), with *ordain*. This example is taken from the *MED*:

- (50) *In the kyttynge ... beware of þe veyne þat norissheþ*
 In the cutting beware of the vein that feeds
ham aboute þe fote, for þat ordeineþ ofte grete
 those around the foot, for that causes often great
bledynge and grete perille (? c. 1425 Chauliac (2) 117/1)
 bleeding and great danger

In almost all cases the “double” nature of these verbs is clear from the fact that they appear with *that*-clauses (i. e., without a recipient) as well as with NP + *that*-clause complements (see Appendix). The only exceptions seem to be *require* and *warn*, which in the corpus only occur with NP + *that*-clauses. The first is probably due to an accidental gap in our data, since the *MED* quotes quite a few examples of *require* followed by *that*. The *MED* cannot yet be consulted on *warn*; the *OED* gives only one example of *warn* followed by a *that*-clause from 1440 (s. v. *warn* 4 b). Marginal cases one way or the other seem to be *ordain* and *charge*; the former occurring only once with a NP + *that*-clause, against sixteen with *that*, the latter occurring twice with a *that*-clause, as against thirty-four cases of NP + *that*. It is clear that *ordain* must be placed at the causative end of the scale, while *charge* lies towards the “persuade” end. The use of imperative constructions, too, is more natural with a “persuade”-verb than a causative. Again this shows that *charge*, *pray*, *require*, and *warn* are closer to “persuade”-verbs than to causatives.

As far as the animate vs. inanimate distinction is concerned (cf. condition [43 iii]), almost all the verbs are more definitely “persuade”-like. Only *ordain* occurs once⁴¹ in an inanimate subject construction in the passive, thus again showing its relative closeness to a causative:

- (51) *Also I wull that from the day and tyme that I am*
 Also I will that from the day and time that I am
beried vnto the ende of vij yeres than next folowyng
 buried until the end of seven years then next following
be ordeyned a taper of wexe of a li to brenne
 is ordained a candle of wax of one pound to burn
vpon my grave ... (PL 230,42–44)
 upon my grave
 ‘Also I will that orders are given for a candle of wax of one
 pound to burn upon my grave from the moment that I am
 buried until the end of seven years following my burial’

One example occurs after *command* too, but this seems highly dubious:

- (52) *Whan the recluse herde his name she had grete joy of*
 When the recluse heard his name she had great joy of
hym ... And than she commaunded the gatis to be
 him ... and then she commanded the gates to be
opyn (MA 905,10–13)
 open[ed?]

It is much more likely, given the context, that *opyn* is not an adjective but a past participle, which turns (52) into a passive-infinitive construction, where the subject, of course, is as a rule inanimate.

I would like to conclude this section on the “persuade”-verbs with a review of the main points and some brief remarks. What we have seen is that a number of “persuade”-verbs, which are not pure “persuade”-verbs but can be semantically and syntactically placed on a cline somewhere between pure “persuade”-verbs and causatives, follow the development of the causatives in allowing passive-infinitive subject constructions. In one or two cases (i. e., *command* and possibly *grant*) these may replace older object constructions (containing PRO_{arb}) just as was the case with causatives. In most cases, however, there were no object constructions to be replaced; these verbs probably followed the example of the causative verbs because they exhibited causative features in other parts of their system.

The appearance of passive-infinitive subject constructions after “persuade”-verbs is syntactically more remarkable and innovative than their appearance after causative verbs. After causatives, aci constructions were already common and the passive-infinitive construction simply constituted another type of aci construction not much different from the active-infinitive construction (i. e., the subject-type). After “persuade”-verbs, however, only control structures were current: true aci constructions did not occur there. Thus, we see an extension of the aci construction to a different class of verbs.

Finally, it is important to note, also in connection with the verbs to be discussed in the next section, that these new (passive infinitive) aci constructions occur in formal as well as in informal texts. The occurrences in *Malory* are all informal, as one would expect. Of the instances in the *Paston Letters*, five occur in formal documents and eight in informal letters.

2.4. The “learned” aci construction: “expect”-type verbs

It is now time to look at the spread of the so-called learned aci construction, the construction that is supposed to have arisen in late Middle English/early Modern English under the influence of Latin. I have again

gone through the corpus to establish the type of complement constructions (finite as well as non-finite) that occur after verbs that could be classified as typically “learned” aci verbs, i. e., the so-called *verba sentiendi et declarandi*. I have checked only those verbs that are contained in Visser’s list of learned aci verbs, and which, according to Visser, began to appear in aci constructions before or around the period over which our corpus extends.⁴² Full details are given in Appendix C.⁴³

No examples of the learned aci construction have been encountered in the *Brut*. In *Gower*, only one certain instance has been attested, after the verb *witen*:

- (53) ... *The mor me thinketh that I winne, And am the*
 ... The more me seems that I win, and am the
more glad withinne Of that I wot him sorwe
 more glad within of that I know him sorrow
endure (CA 2: 257–259)
 endure
 ‘The more it seems to me that I am winning, the more glad I
 am at heart because I know that he is suffering’

This is an interesting example. In Old English, *witan* is one of the few verbs of mental perception that allows an aci construction in original Old English (i. e., in English not directly influenced by Latin). In Fischer (1989: 199–202) I argued that the use of the aci after *witan* (and also after OE *findan* and a few other verbs) is to be accounted for by the fact that these verbs were really verbs of physical perception, which always allowed the “ordinary” aci behind them. This would mean that (53) is a relic from Old English and not to be counted as an example of the new learned construction. Notice also the use of the plain infinitive here – just as in Old English – whereas the learned construction as a rule has the *to*-infinitive.

The other aci examples in *Gower* (eight in all) are all ambiguous types. In each case, a different analysis is to be preferred. In the example with *deem* (54) – an example of a second passive – the infinitive must very likely be interpreted as tertiary, expressing purpose/result (for the use of the term, see Jespersen 1940: 277 ff.), especially since *Gower* only uses the verb *deem* in the full sense of ‘to judge’. The semantically weakened sense of ‘to think’ is not yet attested in *Gower*:

- (54) ... *Atteint thei were be the lawe And diemed forto*
 ... Convicted they were by the law and judged to

*honge and drawe, And brent and with the wynd
hang and draw and burned and by the wind
toblowe (CA 8: 1947–1949)*

blown-away

‘They were convicted by the law and were condemned to be
hanged, drawn and burned and blown away by the wind’

The seven remaining examples concern cases where the infinitive may also be a subjunctive form with the complementiser *that* left out. The intervening NP is a nominal phrase so that we cannot see whether it has nominative or oblique case:

(55) a. *And that I trowe be the skile, Whan ther is
And that I trust be the reason, when there is
lacke in hem above, The poeple is
fault in those above [the rulers], the people become
stranged to the love Of trouthe, in cause of
estranged to the love of truth, because of
ignorance (CA 5: 1888–1891)*

ignorance

b. ... *in here avys Thei wene it be a
... in their opinion they think it be a
Paradys (CA 1: 501–502)*

paradise

The reason why a subjunctive interpretation is preferable here is that with all the verbs in question (*suppose, trow, ween*) the construction with zero *that* is extremely frequent, while with two of the verbs (*suppose* and *trow*) an infinitive construction is not attested at all in the corpus. In the example with *trow*, moreover, the matrix verb is not really part of the clause but functions more as a kind of interjection.

In the *Paston Letters*, thirteen possible instances of *aci* constructions have been attested. Of these, five or possibly six should be discounted. One concerns a reflexive construction:

(56) ... *that namyth hym-self Paston and affermith hym
... that calls himself Paston and affirms himself
vntrewely to be my cousyn (PL 2,4–5)*
untruly to be my cousin

and five are of the type discussed in (55). One of these might be a true *aci* construction because the oblique form *yow* rather than *ye* has been used:

- (57) *Item, ye make yow sywerere than I deme yow*
 Item, you make yourself more-secure than I deem you
be, for I deme þat here frendes wyll nott be content
 be, for I deem that their friends will not be content
wyth Bedyngffeldys sywerté nore yowrys (PL 300,18–19)
 with Bedingfield's security nor yours

Yow is found for *ye* sporadically in the *Paston Letters*. According to Mustanoja (1960: 125), *ye* remains the prevailing form in the nominative until the middle of the sixteenth century; this letter is dated 1476.

The other seven, genuine, *aci* constructions are all, except two, found in formal, legal documents. According to Davis (1971: xxii, xxxv), these were not formulated by the persons concerned and were usually in the hands of professional clerks. In such cases, influence of Latin is to be expected, since these clerks were trained to write also in Latin (cf. Fisher 1977). Some examples:

- (58) a. ... *know ye me the seid John Paston, knyght,*
 ... know you me the said John Paston, knight,
feithfully to promytte and graunt by thiez presentes
 faithfully to promise and grant by the present
 ... (PL 260,13–14)
document
 '... trust me, John Paston, knight, to faithfully promise and
 grant by the present document ...'
- b. *Therefore the said reuerent fader relesseth and*
 Therefore the said reverent father surrenders and
quietclaymeth by thiez presentz to the said John
 renounces by the present document to the said John
Paston mmm marc. by reason of the bargayne
 Paston 4000 mark on account of the agreement
allegged to be made bitwene the said John Fastolf
 asserted to be made between the said John Fastolf
and the said John Paston, squyer. (PL 253,33–36)
 and the said John Paston, squire
- c. ... *where the seid Ser John, more largely*
 ... where the said Sir John, more comprehensively
expressyng the seid will and entent, deliuerid your seid
 expressing the said will and intent, delivered your said
besecher possession with his owne handes, declaryng to
 besecher possession with his own hands, declaring to

notabill personys there the same feffment to be mad
 notable persons there the same feoffment to be made
to the vse of the seid Ser John as for terme of his
 for the use of the said Sir John for the term of his
lif only, ... (PL 60,57–61)

life only

‘Where the aforementioned Sir John, more comprehensively specifying the before-mentioned will, delivered [it] into the possession of your petitioner personally, proclaiming to notable persons there the making of the same feoffment for the use of the aforementioned Sir John for the term of his life only’

The first instance where the *aci* occurs in informal language is with the verb *acknowledge*:

- (59) *Brodere, I recomawnde me to zow after all dew*
 Brother, I recommend me to you according to all due
recomendacions, &c. Az fore Hew Fennys obligacion,
 recommendations, etc. As for Hugh Fenn’s obligation,
3eluerton knowlacheyd it to be Sire John Fastolfe
 Yelverton acknowledged it to be Sir John Fastolf
is dede opynly in pe Eschekere, ... (PL 118,1–3)
 his[’s] deed openly in the Exchequer

The construction involves the copula *be* and is in fact an elaboration of a common construction after *acknowledge*, i. e., that with a double object or an object followed by an adjective or past participle (the latter also occurs in the *Letters*). Because of this the *aci* construction could presumably also occur in more informal texts.

The other instance where the *aci* occurs in an informal letter is with the verb *adventure*:

- (60) *... the weche xxⁱⁱ marke she hath delyuerd to me in*
 ... the which 20 marks she has delivered to me in
golde for you to haue at your comyng home, for she
 gold for you to have at your home-coming, for she
dare not aventure her money to be brought vp to
 dare not adventure her money to be brought up to
London for feere of robbery it is seide heere that
 London for fear of robbing, it is said here that

*there goothe many thefys be-twix this and
there go-about many thieves between this and
London, ... (PL 156,7–10)
London*

‘and these twenty marks she has given to me in gold for you to have when you come home, for she dare not risk having her money brought up to London for fear of robbery; it is said here that there are many thieves around between here and London’

It is interesting to note that this is a construction with a passive infinitive. Notice too that the meaning of *adventure* approaches that of a causative here: the verb could easily be replaced by *let* without much loss in the sense of the text. This probably accounts for the use of an aci construction in this instance.

The occurrence of the learned aci in *Malory* seems to be limited to eight cases at the most. Again, most of these have to be discounted for various reasons. Three involve the verb *dread*. They all contain a reflexive pronoun and an infinitive that must probably be interpreted as tertiary:

- (61) ... *for of your helpe I had grete mystir; for I drede
... for of your help I had great need, for I fear
me sore to passe this foreste. (MA 307,7–8)
[me] sorely to pass-through this forest*

Three examples (with *trow*, *understand* and *ween*) are again of the type illustrated in (55). That leaves us with just two examples:

- (62) a. ... *but they wepte to se and undirstonde so yonge a
... but they wept to see and understand so young a
knyght to juparté hymself for their
knight to jeopardize himself for their
ryght (MA 380,9–10)
right*
- b. ... *and in lyke wyse may ye do, and ye lyst, and
... and in like wise may you do, if you please, and
take the quene knyghtly away with you, if so be
take the queen knight-like away with you, if so be
that the kynge woll jounge her to be
that the king will judge her to be
brente (MA 1173: 3–6)
burnt*

‘... and you may do the same, if you wish, and take the queen with you, like a knight should, if it happens that the king will condemn her to be burnt’

In (62 a) the use of the aci may be explained by the fact that *understand* is preceded by a verb of physical perception which probably triggered the use of an aci construction. (62 b) can be explained in two possible ways. We may analyse the infinitive as tertiary, as we have done in (54), or we can ascribe the use of the passive infinitive in this aci construction to the clearly causative character of *judge*. Unlike *deem* in (54), *judge* can easily be replaced here by *cause* or *let*.

We may conclude, then, that there are two types of aci constructions after “expect”-verbs. There are, on the one hand, the five examples found in formal documents in the *Paston Letters*, written by clerks who were trained in Latin and French as well as English, and, on the other hand, five non-ambiguous examples found in informal language in all three texts of the corpus. The use of the aci in informal discourse can be linked to i) the influence of physical perception verbs (i. e., [53] and [62 a]), ii) the occurrence of many ambiguous constructions where the difference between a subjunctive and an infinitival form cannot always have been clear (i. e., [57]), iii) an elaboration of an already existing structure involving only minimal change (i. e., [59]), and iv) the influence of the causatives that had developed a passive-infinitive subject construction for intrasystemic syntactic reasons (i. e., [60] and very likely [62 b]).⁴⁴

3. Syntactic innovation: Borrowing and other factors

3.1. The aci construction in Middle English: Conclusion

We have followed the path of the aci construction in the history of English in some detail. The aci construction was native to Old English after perception verbs and causatives. Apart from the regular type of aci construction (what I have called the subject construction), these two classes of verbs also allowed a construction in which the accusative part of the aci (i. e., the matrix object that functioned simultaneously as infinitival subject) was missing, and in which only the object of the infinitive was present (I have termed these object constructions). Positionally, at least in the Middle English period, this infinitival object usually occupied the same place in the clause as the accusative subject.

Whereas in Old English both constructions occurred freely, this was no longer the case in Middle English. Due to the change in basic word order from SOV to SVO taking place in the late Old English/early Middle English period, the object construction – with V-NP_o-infinitive order – began to disappear.

This word-order change created, so to speak, a structural gap. Other ways had to be found to express the “old” object construction. In section 2.2., the strategies that were followed were explored. These strategies need not have been identical for the two classes of verbs involved. For the perception verbs, a possibility existed that was not available for the causatives, i. e., the use of a finite instead of a non-finite complement. Whether this strategy was indeed frequently reverted to is difficult to determine. The data in the corpus do not show a spectacular increase in finite clauses, although after *see* there is definitely a rise.⁴⁵ Also, the very small number of actual object constructions in the earliest texts may be an indication that the structural gap was not so large here. Another interfering factor for this strategy may have been the fact that the finite and non-finite constructions may not have been as nearly synonymous semantically as to make the change-over communicationally acceptable.⁴⁶

After causatives, the developments are clear. The strategy of replacement by a finite complement was ruled out due to their complete non-occurrence. The old object construction gradually disappeared and was at first replaced by a new object construction with V-infinitive-NP_o order. This strategy was probably the easiest option in that it involved very little change. After all, in most clause types the object already followed the finite verb, and even in infinitival complements extraposed objects were regular when they were clausal or involved a heavy NP. Still, the new V-infinitive-NP_o order proved not to be entirely satisfactory. It upset the balance of the syntactic system in other ways. First of all, syntactic subjects were becoming more and more obligatory, and, secondly, the order matrix verb - (bare) infinitive (most causatives took a bare infinitive at this stage) became more and more the special prerogative of auxiliary verbs. In this light, it is not surprising that *let* preserved the V-infinitive-NP_o object construction longer than any other causative because of all the causatives it was most like an auxiliary. Preservation was also made possible here by the fact that later on idiomatisation set in, presumably as a result of the isolated position that this construction had now begun to take.

The next strategy, therefore, veered towards the still current subject construction. This could be achieved in various ways depending on the

circumstances,⁴⁷ all of which have been attested in the corpus. i) The transitive infinitive became intransitive, resulting in the object becoming subject. ii) A (usually non-specific) subject was inserted. iii) The object was turned into a subject by the use of a passive-infinitive construction.

In this study, the main emphasis was on this last development. Once passive infinitives had become current with causatives, they also began to appear after verbs that belonged to a different class but which shared a number of features (this varied per verb) with the causatives. In this way “persuade”-verbs acquired the *aci* construction, a construction that had not been possible with them before. The earliest instances appear at the end of the fourteenth century, clearly later than the passive-infinitive construction after causatives. They occur in formal as well as informal style; in the corpus most are found in the informal texts.

This, then, was the situation at the time when “learned” *aci* constructions from Latin began to appear in formal, Latin-influenced texts. It is clear from the corpus that far fewer of these learned *aci* constructions are found and that they are still highly restricted in style; in the corpus they mainly occur in the writs, wills, indentures, etc., of the *Paston Letters*.

The question to be addressed now is what causatory factors are involved in the introduction of the new *aci* constructions after “persuade”-verbs, on the one hand, and after *verba sentiendi et declarandi*, on the other. The data (differences in style, frequency, and syntactic type) suggest that these two cases have to be treated separately. I have tried to show that the use of the *aci* construction after “persuade”-verbs is an extension of the passive-infinitive subject construction after causatives. The earlier appearance of this construction after causatives has been shown to be linked to the existence of a structural gap, which itself was the result of a change in the grammar elsewhere. It seems clear that the rise of the passive infinitive after causatives has to be ascribed to internal factors. The new *aci* construction after “persuade”-verbs is, therefore, partly due to analogy (also an internal factor) insofar as it follows the pattern of the causatives. Partly, it is also due to the the same factor that caused the new construction after causatives in that a few “persuade”-verbs also had old-type object constructions (i. e., *command* and *grant*) that had to be replaced. Influence of Latin syntax seems not so likely in this case, particularly since most instances of the construction occur in informal texts. Absolute proof is not possible, of course.

The situation is different with the *aci* constructions found after *verba sentiendi et declarandi*. Here the majority of the examples are found in highly formal documents where not just the *aci* but also other syntactic

features remind us of foreign (Latin and French) syntax.⁴⁸ There can be no doubt in this case that Latin had an influence on the use of the aci. However, Latin was not the only causatory factor. A few aci constructions in this type were also found in informal texts. We saw that in the case of *deem* (cf. [57]), for instance, other internal factors such as the loss of distinction between nominative and accusative case and between the present subjunctive and the infinitive played a role. Likewise in the case of *adventure* (cf. [60]), the factor of analogy (the pattern – a passive infinitive – resembles that set by the causatives) must have been present. In yet another case, with the verb *acknowledge* (cf. [62c]), the aci construction was a slight adaptation of an already existing structure.

It is possible to distinguish two separate developments here, that involve the same class of verbs, one of them native, and one of them foreign. However, this is probably too sharp a division. It is unlikely that the two developments did not influence one another.⁴⁹ When we take a closer look at the aci's used in the formal texts, we note that even these resemble the informal aci's in some respects. Four of the five aci's make use of a passive infinitive (the exception is *know* in [58a]), while the matrix verb has in all four cases a definite connotation of causation. Warner (1982: 147–157) noted too that the “learned” aci's appear especially in structures where the aci “has a ready analogy to some other structure which ‘excuses’ it” (p. 150), such as second passives, other movement structures, NP + to be + predicate etc. Warner, however, still sees Latin as “the external model” for this type of aci. On the basis of the data investigated here, I would like to suggest that the pattern of the causatives (i. e., the passive-infinitive subject construction) provided another (internal) model for the development of the learned aci's.⁵⁰

3.2. Some general conclusions

It is now time to take up some of the general issues mentioned in the introduction. In the light of the interpretation I have given of the rise and spread of the aci construction in English, I would like to reconsider what was said in section 1 about i) the type and diffusion of syntactic change, ii) Blatt's criteria intended to help settle a presumed case of syntactic borrowing, and iii) the permeability of the syntactic component.

(i) Although the spread of the aci construction to the *verba sentiendi et declarandi* has usually been ascribed to Latin and consequently seen as a change that was activated by learned reaction, it is clear that it does not follow the path described by Romaine, i. e., that this change tends to

“manifest itself first in the most salient environments” (cf. section 1.2.). It seems clear now that the new *aci* after “persuade”-verbs must be seen as a “natural” change. It “sneaked” through the language in that it is a more or less natural extension of the passive infinitive that came into use after causatives. The *aci* construction after *verba sentiendi et declarandi* joined this development from there, at the same time being reinforced by the use of it in formal texts on the basis of a Latin external model. But even these Latin *aci*’s mould themselves on the already established pattern, and thus the *aci* was able to establish itself firmly in the syntax of English, in contrast to constructions that were introduced purely for matters of prestige, which, as was stated in section 1.3., do not normally seem to be able to acquire a permanent position in the syntactic component.

It should also be noted that the diffusion of the change is gradual. Thus, in spite of the fact that this change (at least the first stages of it) could be called a “necessary” change in terms of Lightfoot (1979, 1981 a: 90), it is not one that takes place radically or all at once. Bennett (1981: 119) would describe the initial stages of this change as a strategic change. It is a change in which speakers switch from one strategy to another to express a particular meaning, in this case from the object construction to the passive-infinitive subject construction. Strategic changes are necessarily gradual according to Bennett (1981: 126) because:

Abrupt strategic change would involve a speech community’s switching “overnight” from one strategy for expressing some meaning to another. As communication between generations must be preserved, such a situation is out of the question.

In the further stage of its development, the necessary change became an optional one in the sense that it opened up possibilities for other verb categories to follow the same pattern. This trend was then reinforced by the external model provided by Latin so that what was merely optional became almost inevitable. In the words of Fischer – van der Leek (1981) the language learner will not only “choose the simplest possible grammar [which lies at the bottom of Lightfoot’s radical, necessary change], he will also tend to exhaust the possibilities offered to him”.

(ii) Looking at Blatt’s criteria again (cf. section 1.2.) the first and the third turned out to be definitely useful, but I have my qualms about the second. Blatt believed that foreign influence is more likely when a construction supposed to be of foreign origin has supplanted the indigenous one. Although the passive-infinitive *aci* construction after causatives has

indeed supplanted the native object construction, it is highly unlikely that Latin influence has to be assumed here. At the later stage, when there is indeed Latin influence – in the borrowing of the *aci* after *verba sentiendi et declarandi* – there is no question of supplanting; the finite complements they could have supplanted remain in use alongside the new non-finite ones.

(iii) Concerning the permeability of the syntactic component, we clearly have to make a distinction between surface-syntactic features close to the lexical level, and syntactic features that affect the basic structure of the language, involving such things as case, word order, government, etc. (cf. also Birnbaum 1984: 41). In the first case it is probably correct, as was stated by Danchev (1984), that the syntactic level is as susceptible (or almost as susceptible) to foreign influence as the lexical level. In the second case, however, as the instance of the spread of the *aci* has shown, foreign influence alone is unlikely to have any effect whatsoever. The introduction of the learned *aci* construction in English was favoured by all sorts of internal developments. It is not surprising, then, that this *aci* established itself in English, but not finally in, e. g., German or Dutch (for which a similar amount of Latin influence existed), where these favourable circumstances were not present.

Appendix A

Verb (cat. in Visser)	corpus	full verb	subject constr.		∅ inf	to inf	for to inf	ing	ob- ject con- str.	V + NP + inf	V + inf + NP		NP + V + inf		∅ inf	to inf	for to inf	pure inf	pass. inf subj. constr.	
			an.	in- an.							cl.	rest	pron	wh topic						
<i>bid</i> ² IV + VIII	Br	36	24		23	1			2	2					x				7	1
	CA	60	67		47	14	6		11	4		6		1	9	1	1			
	PL	5	24		23	1														
	MA	2	21		18	3														
<i>do</i> II	Br	376	7				x													
	CA	531	33	5	13	12	13		19	6	2	5	2	4	x					1
	PL	829	20		14	5	1		56	5	1	48		2	x					10
	MA ⁴	1446	7		1	6			6 ³			6			x					
<i>cause</i> II	CA	13	2			x			1			1					x		1	
	PL	8	58	3		58	3		1			1				x				16
	MA	16	35			x													1	3
<i>heten</i> VIII	Br	11	32		x				11	4		6		1	x					
	CA	1	all other instances of 'heten' in CA involve the meaning 'to be called'																	
<i>let</i> II + V	Br	9	33	15	x				96	23	4	50	19		x				9	1
	CA ⁴	20	24	37	60	1			32	7	2	16	1	6	x				2	6
	PL	11	213	13	225	1			9			9			x					42
	MA	23	216	13	x				149			25	119		5	x			26	19
<i>make</i> II	Br	122																		
	CA	503	93	13	62	27	17		3	3					x				1	2
	PL	574	36		10	26														3
	MA	906	119	3	23	96	3		13			1	12		5	8				19
<i>suffer</i> V	CA	42	13	2	7	7	1													1
	PL	—	13	1		x														2
	MA	55	76			x													2	9
<i>hear</i> I	Br	71	1		x				12	2	6		3	1	x					
	CA	286 ⁵	29	3	29	1		2	31	3	9	2	7	10	x					
	PL	41 ⁵	6		x				26	1	18	1		6	x					
	MA	158 ⁵	65	4	x				35			27		8	x					
<i>see</i> I	Br	49	9	(1)	x				1?						x					
	CA	390	46	29	67	1?		16	4						x					5
	PL	126	2		1			1												2
	MA	709	175	23	171	4		23												4

Notes to Appendix A

1. This category contains the following subtypes indicated by square brackets:

- [a] equivocal between a subject and an object construction, i.e., the verb may be transitive as well as intransitive; [b] equivocal between an imperative and a bare-infinitive subject construction; [c] hybrid of the type: *she hath do slain him, I have herd you seid* with a past participle instead of the expected infinitive; [d] equivocal between periphrastic and emphatic *do* and in some cases also causative *do* (if the latter, the construction would be an object construction); [e] equivocal between a bare-infinitive subject construction and a (*that*)-clause; [f] hybrid of the type: *he now late toke Roger Cherche* with a past tense form instead of the expected infinitive; [g] equivocal between a bare-infinitive object construction and a construction with a past participle.

Appendix A (continued)

∅ inf	to inf	for to inf	past par- tic.	verb + NP obj. + adj.	that cl.	NP + that cl.	(that) cl.	NP + (that) cl.	how cl.	NP + how cl.	wh-/ if cl.	NP + wh/ if cl.	pro- verb DO	hybrid/ equivocal ¹	sec- ond pass.	imper- ative
	x				28	22	10							1[a]		1
					2											
						6										
						1								3[b]		2
													26			
x					2								91	2[c]	1	
1	9												227	3[c]	1	
						1							189	41[d]		
				1	1											
	15	1	1	1	1	2										
	x					1		2								
					3	3										
x				1										9[a]		
x														7[a]		
41	1			1										4[f]		
														2[a, g]		
				24												
1		1	4	111	5?	2?								4[a]	4(1)	
	x		2	56												
	x		6	201	1?									4[g]	3	
x					2						1					
	x														1	
	x					1										
					4	13			1	3	1	1				
			1		2		2		13	4	16			5[c]		
			1						1		1					
					13		1		8		4			8[a]	1	
					6	1				2	2	2		1[a]		
3	2		20	39 (15) ^b	26		28	1	23	6	24	4		9[a]		
x			10	4 (1) ^b	24	1?	1		2		4					
	x		63	26	66	3	50			66		3		3[c, e]	1?	

Notes to Appendix A (continued)

- The count does not include *bid* in the sense of "to say one's prayers".
- All these examples are marked by an *extra* causative verb.
- Combinations of *let* and *do* are also found. In *Gower* there are fifteen examples of constructions with *let do*; in *Malory* there are three examples of constructions with *do let*.
- Instances of *to hear of* are not included. In *Gower* and the *Paston Letters* I have not counted the bare infinitive form here. This would have taken too much time since this form is also used for the personal pronoun *her* and the place adverb *here*.
- The instances in brackets represent examples with present participles instead of adjectives.

Appendix B (continued)

∅ inf	to inf	for to inf	past partic.	verb + NP obj. + adj.	that cl.	NP + that cl.	(that) cl.	NP + (that) cl.	how cl.	NP + how cl.	wh-/ if cl.	NP + wh/ if cl.	pro- verb DO	hybrid/ equivocal ¹	second pass.	imperative
						1			1		1	2				
					4				2	6	26	19				
	x									2	2	22				
					1	2			3	11	29	117				
						3										
	x					11	1							1[a]	5	(1)
					2	20								7[a, b]	1	1
					2	1										
		x			1	4								1[c]	3	
	x				8	3									4	
	x				13	18	1	4						1[d]	2	
					2	2						1			1	
					2	1	3									
	x				6	1								1[c]		
					1	1		1			1					
	x															
					7						2				1	
	x				5											
					4	1		1			1				6	
					29	33	8	1		1				8[a, e]		1
					9 ³	145	8	1						331[a, b, e, f]		2
					6 ³	44	3							97 [a, b, f]		2
	x					7								1[a]	2	
	x					18								43[a, b]	2	
						3				1						
	x					3									2	2
						10		13		1						1

Notes to Appendix B

- This category contains the following subtypes indicated by square brackets:
 - [a] equivocal between an imperative and a bare-infinitive subject construction;
 - [b] equivocal between an imperative, a bare-infinitive subject construction, and a (*that*)-clause;
 - [c] hybrid: *that*-clause and *to*-infinitive combined;
 - [d] hybrid: combination of the infinitival marker *to* and a finite verbal form;
 - [e] equivocal between an imperative and a bare-infinitive object construction;
 - [f] hybrid of the type: *I pray to Jesu preserve you and yours.*
- The count does not include *pray* in the sense of "to say one's prayers".
- The NP *God* or *to God* is frequently found as a kind of interjection between *pray* and the clause.

Appendix C

Verb (cat. in Visser)	cor- pus	no. (if lim.) ¹	type of inf.			predicate			clause					aci	type	instances found	
			∅	to	for to	adj.	p.p.	NP	that	(that)	if	how	wh-				
accord XI	CA			x					x				x	x			
	PL								x								
	MA			x					x								
adventure VI	CA	2		x	x												
	PL	1												1	p. inf. ²	156,8	
	MA	3		x													
affirm XI	CA								x								
	PL					x			x					1	refl.	2,4-5	
allege XI	CA																
	PL													2	p. inf. ²	252,20, 253,35	
assure XI	CA			x					x								
	MA			x					x								
avaunt XI	CA								x								
	PL	1															
believe IX	CA			1					x								
	PL								x								
	MA								x								
compre- hend IX	CA																
	PL																
condemn XI	PL	1															
confirm XI	CA	3															
	PL	1															
	MA	3							x								
cover VI	CA																
declare XI	CA											x	x				
	PL								x					1	p. inf. ²	60,59	

Notes to Appendix C

1. If no number is given in this category it is implied that the verb in question appears a fair number of times in each given corpus. When all the categories are left blank for a given verb, the verb appears with or without a NP object but never with any type of clausal (finite or non-finite) complement.
2. p. inf. = passive infinitive
3. ambig. = the construction is ambiguous. This means that the construction may be interpreted as an aci or otherwise; e. g., as a subjunctive with the complementiser *that* left out, as a tertiary infinitive, etc. (see section 2.4.).
4. Only with the adjective *lyvvyng*.
5. Only with *for NP*.
6. *Say* occurs in addition with clausal complements introduced by NP *that*, (*un*)to NP *that*, NP (*that*) and with indirect speech.

Appendix C (continued)

Verb (cat. in Visser)	cor- pus	no. (if lim.) ¹	type of inf.			predicate			clause					aci	type	instances found
			∅	to	for to	adj.	p.p.	NP	that	(that)	if	how	wh-			
<i>deem</i> XI	CA								x		x		x	1	ambig. ³	8: 1948
	PL			1			x		x	x			x	1	ambig. ³	300.18
	MA			x			x		x	x						
<i>deny</i> XI	PL	2														
<i>devise</i> XI	CA			x									x	x		
	PL															
	MA								x					x		
<i>dread</i> VII	CA								x							
	PL															
	MA			x					x	x				3	refl. p	142.33; 299.4; 307.8
<i>guess</i> IX	CA					x							x			
<i>hold</i> IX	CA					x	x	x								
	PL					x	x	x								
	MA					x	x	x	x					x		
<i>judge</i> IX	CA	2														
	PL	1														
	MA								x					1	p. inf. ²	1173,5
<i>know</i> IX	CA					x			x	x	x	x	x			
	PL					x	x	x	x	x	x	x	x	1		260.13
	MA					x ⁴		x ⁵	x	x		x	x			
<i>(ac)know- ledge</i> IX	PL	4		2				x				x		1		118.2
<i>pretend</i> XI	PL	3		2												
<i>prove</i> XI	CA					x			x	x			x			
	PL					x			x					1	ambig. ³	8.32
	MA			x		x			x	x			x			

Appendix C (continued)

Verb (cat. in Visser)	cor- pus	no. (if lim.) ¹	type of inf.			predicate			clause					aci	type	instances found
			∅	to	for to	adj.	p.p.	NP	that	(that)	if	how	wh-			
say XI ⁶	CA								x	x		x	x			
	PL			x					x	x	x		x	1	p. inf. ²	97,21
	MA			x					x	x		x	x			
suppose IX	CA								x	x			x	1	ambig. ³	8: 1236
	PL			x					x	x				2	ambig. ³	77,145; 273,9
	MA			x					x	x						
surmise IX	MA	1														
think IX	CA		x	x	x	x	x		x	x		x	x			
	PL			x	x	x	x		x	x		x	x			
	MA			x	x	x			x	x			x			
throw IX	CA								x	x				1	ambig. ³	5: 1888
	PL			x					x	x				1	ambig. ³	354 a.12
	MA								x	x				1	ambig. ³	279,3
trust IX	CA								x	x						
	PL								x	x						
	MA			x	x				x	x						
understand IX	CA								x	x		x	x			
	PL					x	x	x	x	x	x	x	x			
	MA								x	x		x	x	2	ambig. ³	380,9; 1212,20
ween IX	CA		x	x	x	x				x		x		5	ambig. ³	1: 502; 1603; 2607; 5: 439; 8: 1511
	PL		x	x					x	x						
	MA			x		x			x	x				1	ambig. ³	465,20
wit IX	CA				x	x			x	x	x	x	x	1		2: 259
	PL								x	x	x	x	x			
	MA						x		x	x		x	x			

Notes to Appendix C

1. If no number is given in this category it is implied that the verb in question appears a fair number of times in each given corpus. When all the categories are left blank for a given verb, the verb appears with or without a NP object but never with any type of clausal (finite or non-finite) complement.
2. p. inf. = passive infinitive
3. ambig. = the construction is ambiguous. This means that the construction may be interpreted as an aci or otherwise; e. g., as a subjunctive with the complementiser *that* left out, as a tertiary infinitive, etc. (see section 2.4.).
4. Only with the adjective *lyvyng*.
5. Only with *for NP*.
6. *Say* occurs in addition with clausal complements introduced by NP *that*, (*un*)to NP *that*, NP (*that*) and with indirect speech.

Notes

1. For divergent views on the introduction of the expanded form in Old English see, e. g., Nickel (1966) and Mitchell (1985: §§ 682–701); for divergent views on subjectless relatives, see Phillipps (1965), Erdmann (1980), and van der Auwera (1984).
2. There are a considerable number of studies on the type of contact that existed between English and these languages. E. g., for Latin, Blatt (1957); for Celtic, Poussa (in press); for Scandinavian, Poussa (1982) (also for French) and Hines (forthcoming); for French, Berndt (1965); and see also general histories of the language, especially Leith (1983). The measure of length and intensity of contact is different for each language but the linguistic efficacy of the contact is never disputed except in the case of Celtic. Only recently new evidence has emerged, provided mainly by archeologists, place-name scholars and historians, that the contact was more intense than hitherto usually assumed; cf. Poussa (1990).
3. The oral contacts between the Anglo-Saxons on the one hand and the Celts and the Vikings on the other probably led to a process of pidginisation, in which it is even more difficult to unravel the separate strands and to establish what influenced what. Whether the contact between the Normans and the English also involved pidginisation is a more disputed point. What is certain is that in the latter case a great deal, if not most, of the influence was indeed cultural, unlike in the case of the Celtic and Scandinavian contacts.
4. The one exception concerns the change from impersonal to personal constructions in Middle English. Many explanatory studies of this change have appeared which do not involve recourse to foreign influence, see, e. g., McCawley (1976); Fischer – van der Leek (1983, 1987); Seeffranz-Montag (1983); Anderson (1986); etc.
5. Cf. Krickau (1877: 4, 34), Jespersen (1905: 127), Callaway (1913), Bock (1931: 217–226), Sørensen (1957: 138–140), Mustanoja (1960: 526–527), Scheler (1961: 92 ff.), Lightfoot (1981 a), etc. Some dissenting voices are Zeitlin (1908) and possibly Visser (1963–1973). For a discussion see Fischer (1989).
6. This distinction (i. e., between “ordinary” and “learned” aci) is also made by Bock (1931: 220): the aci’s after causatives and perception verbs constitute a class separate from the class in which he includes the aci after verbs of saying and thinking (his classes II and III respectively). Jespersen (1940: 277 ff.) does not distinguish these two types, but places them both in one group (i. e., his type I) to set them off from the “persuade”-type constructions; he analyses the former all as NP_s-V-(NP_o-inf) constructions and the latter as NP_s-V-NP_o- (PRO-inf) – PRO being the non-lexical subject of the infinitive, co-referential with NP_o. It should be noted that also in most standard generative accounts, no distinction is made between the types illustrated in (1) and (2). As in Jespersen, (1) and (2) are set off against the “persuade” type of constructions;

the former fall under the heading of exceptional case-marking or S-bar-deletion verbs, while the latter are termed object-control verbs (cf. Chomsky 1981). In much of the older literature all three types of structures are generally referred to as *aci* constructions.

7. These texts were made available by the Oxford University Computing Service. I would like to thank Professor Norman Davis for giving me permission to use the transcript of his edition of the *Paston Letters*. I also wish to thank Iskandar Serail and Pieter Masereeuw of the Department of “ α -Informatica” of the University of Amsterdam for converting these tapes so that they could be read by the Query programme (see below).
8. This statement needs to be qualified somewhat. In most cases I have been able to trace all the different forms of a lexical item, helped by the elaborate glossaries provided in the editions of Macauley (for *Gower*) and Madden (1847) (for the *Brut*). In the case of the *Paston Letters*, this was not so easy; first of all because there is as yet no glossary available, and secondly, as is to be expected in a collection of private letters, because the spelling is at times highly idiosyncratic. However, in spite of the fact that I may well have overlooked a few items here and there, I do not think that it in any way impairs the overall picture that I will present below.
9. To work out the factor score for L1, I have used the genres “Professional Letters” and “Official Documents”, which come closest to this aspect of the *Paston Letters*. The genre “Official Documents” comprises fifty percent in cluster 2, thirty percent in 6, and twenty percent in 8. I have taken the mean factor score for these three clusters. The same has been done with the genre of “Professional Letters”, which includes forty percent to cluster 2, and thirty percent to 6. The other thirty percent come under cluster 3, which is accounted for in L2. The mean of these two factor scores is the one presented under L1. To work out the mean factor score for L2, the factor score for cluster 3 is weighted double against the factor score for cluster 7 because 3 also contains the genre “Professional Letters”.
10. All information about the type and frequency of complement structures of *aci* verbs in the corpus will be found in the Appendices.
11. The verb *pray* may look like an exception; it has a very high occurrence with *that-*, *NP + that-*, and (*that*)-clauses compared to the other texts, but then the verb *pray* is overall more frequent in the *Paston Letters*, due, no doubt, to the interactive nature of this genre.
12. References to the texts of the corpus are as follows: Layamon’s *Brut* will be referred to as Br, followed by the line number(s); *Gower’s Confessio Amantis* will be given as CA, followed by the book number and the line number(s); the *Paston Letters* will be PL, followed by the number of the letter and the line number(s); Malory’s *Morte Darthur* will be MA, followed by the page and the line number(s). The spelling of the texts is closely adhered to, except in the *Brut*: every <: > has been replaced by <; > for the sake of convenience.

13. Visser is not very consistent in his classifications. He places the verb *let*, for instance, in both class II and class V, reflecting the development of *let* from an “allow” verb to an almost pure causative, but he does not do the same for the three verbs mentioned above even though they are also clearly used as causatives. Moreover, his classification is not very precise. He characterises class IV (verbs of inducing) for instance as follows: “Although these verbs are also verbs of causation, they have not been discussed in section 2068 [i. e., in class II], since in them the idea of causation has a connotation of a more strenuous putting forth of power, physical or mental, towards the reaching of an end” (Visser: 2270).
14. There are only three exceptions to the third distinction. One occurs in *Gower* (5: 4024) and two in the *Paston Letters* (416,21–22 and 141,4–5). The example from *Gower* ... *Hir char sche let awai to gon*, ... is difficult to analyse. It may mean, “she let her chariot go away”, but equally possible is: “she left her chariot to go away”, which would explain the presence of *to*. If *let* is used as a causative, the use of the directional adverb may have prompted the *to*- rather than the bare infinitive. Of the two occurrences in the *Paston Letters*, the first concerns a construction with two infinitival complements where only the second one is accompanied by *to*. This is a well-known phenomenon in Middle English: there seems to be a tendency for increased infinitive marking when the infinitive becomes separated from the verb that governs it (for a full discussion see Fischer in press). This might also explain the *to*-infinitive in Letter 141, where the subject of the infinitive, placed between *let* and the infinitive, is of a compound nature and consequently rather long. Moreover, this *to* was only “crowded in later” according to the note in Davis’ edition.
15. Cf. Bock (1931). Callaway (1913) shows that in early Old English even a tertiary infinitive (i. e., an infinitive not directly dependent on the matrix verb, usually expressing strong purpose) could be expressed by the bare form of the infinitive.
16. Cf., e. g., van Kemenade (1987: 39 ff.).
17. *Spille* can be an intransitive as well as a transitive verb in *Gower*. If transitive, it may also be an example of construction-type (ii), the object construction. I will come back to these cases below.
18. For the view that Old English is basically a SOV language in spite of the regular appearance of SVO and other orders on the surface, see Hiltunen (1983), Koopman (1983, 1985), van Kemenade (1987) and others (see also note 21).
19. In quite a few other cases, the text in the Otho manuscript is missing or has otherwise been altered.
20. The only other instances where preverbal placement of the pronoun occurs in the corpus outside the *Brut* is in *Gower* after the verbs *do* and *hear*. *Do*: it is difficult to decide whether the two cases found here are instances of

cliticisation (the pronoun is otherwise found between the matrix verb and the infinitive). In (5: 862), the pronoun could also be topicalised, while in (7: 1783) *do* may have been used as a periphrastic verb rather than a causative. After *hear*, preverbal placement of the pronoun occurs seven times but only in the phrases ... *it herde seyn*/... *it herde tellen*. Perhaps these instances should be seen as fossils rather than active cases of cliticisation (see also the discussion of “idiomatisation” on p. 49).

21. There seems to be general agreement that Middle English is a SVO language. Even if Old English was not basically a SOV language, as some linguists believe, the existing Old English texts make clear that in infinitival constructions – with which we are concerned here – the object would regularly precede the verb on which it was dependent, even when it was nominal.
22. The verb *do* occurs as a causative only in V-NP_s-infinitive constructions in the *Brut*, the verb *make* does not yet occur as a causative “auxiliary” in this text. I have only attested one example of a V-NP_o-infinitive construction after *see* and this one is highly dubious because the infinitive is probably intransitive (Br 2332).
23. There is one dubious case in *Malory* on p. 701,8:

and ellis shall there no knyght se that lettir opyn
and else shall there no knight see that letter open

It is more likely that *opyn* must here be interpreted as a past participle, and the construction therefore as a passive-infinitive subject construction, because of the total lack of V-NP_o-infinitive constructions after *see* in *Malory*.

24. The examples in question are:
 - (i) *Awey, thou blake ymage, Which ... makst al the worldes*
Away, you black image, which ... makest all the world's
lyht deface ... (CA 4: 2842–2844)
light disfigure
 - (ii) *God bad the rede See divide* (CA 5: 1661)
God bade the Red Sea divide
25. After *let*, nine were found in the *Brut*, seven in *Gower*, two in *Malory*; after *hear*, eight in *Malory*; after *make*, four in *Gower*; after *bid*, one in the *Brut*; after *see*, one in the *Brut* and nine in *Gower*.
26. The exception is the modal verb *willen*, but this is in many ways still used as a full verb.
27. In the *Brut* and *Gower*, the infinitive following *let* can be any verb. Only a few verbs occur more than once after *let*, such as *gliden* and *blawen* in the *Brut*, *make* and *sende* in *Gower*. There is clearly no fixed pattern here.
28. This links up with other syntactic developments in Middle English, especially the increasing obligatoriness of a subject in Middle English as compared to Old English (for this development see, e. g., Fischer – van der Leek 1983, 1987).

29. *Do* still has a fair number of object constructions with V-infinitive-NP_o order in the *Paston Letters*. We cannot speak of idiomatisation here because *do* occurs with all kinds of infinitives. At the same time, we see an increase in passive-infinitive *do* constructions in the *Paston Letters*, but this is not as spectacular as with *let*. The reason for the preservation of the V-infinitive-NP_o order must be linked with the rise of periphrastic *do*. It has to be remembered that, as a causative, *do* was already fighting a losing battle against periphrastic *do*. Causative *do* + infinitive + NP_o could not go on existing: this order became reserved for periphrastic *do* (at least in positive clauses). At the same time, however, the occurrence of this particular construction with periphrastic *do* may have preserved this same order somewhat longer for causative *do*.
30. In *Malory*, *do* is already used as a periphrastic verb. As a causative it has come to the end of the road. It still occurs seven times in the subject construction where it is sufficiently different from periphrastic *do* (i. e., it has *do* + NP_s + infinitive rather than *do* + infinitive order, and it is also marked off by the use of the *to-* rather than the bare infinitive in six of the seven cases). In the object construction causative *do* no longer occurs by itself (it would be indistinguishable from periphrastic *do*). In all six attested cases it is accompanied by another causative such as *make* or *let*.
31. The two bare infinitives from the *Paston Letters* (77,83 and 204,20) are ambiguous in that the infinitives could also be subjunctives with the complementiser *that* left out. However, since *that* is never, except once, left out after *see* in true finite complements in the *Letters*, it is likely that these two cases concern infinitives rather than subjunctives.
32. That simultaneity is no longer a necessity is probably related to the syntactic break that occurs between the matrix verb and its object as soon as a passive construction is used. Whereas in the active construction the NP object is as much an argument of the matrix perception verb (its object) as it is of the infinitive (its subject), in the passive construction it becomes closely linked only to the infinitive (see also the discussion in section 2.0.).
33. There seems to be one exception to this rule in *Gower*, but it is likely that in this case *see* is construed with an object NP that is itself accompanied by a *to*-infinitive which has the function of a relative clause:
- Thus for I se no medicine To make an ende of mi*
 Thus, for I see no medicine to put an end to my
querele, My deth schal be in stede of
 complaint, my death shall be instead of
hele. (CA 4: 3566–3568)
 health
34. This presumably means that the eight ambiguous cases that have been found in *Malory* after *hear* (i. e., ambiguous between a subject and an object construction – see note 25) must be interpreted as subject rather than object

- constructions, because object constructions, as we have just seen, seem to have become entirely restricted to *hear say* + clause.
35. We have seen that in the case of *let* “idiomatisation” made it possible to preserve the object construction (i. e., the new V-infinitive-NP_o order) somewhat longer. Most of these idiomatic combinations disappeared in the course of the Modern English period with a few exceptions like *let go* and *let slip*.
 36. E. g., for the construction “it is to be praised” from earlier “it is to praise”, Latin never employed a passive infinitive but always a gerundive. Also the passive infinitive that begins to occur in early Middle English dependent on nouns has no Latin equivalent. I am grateful to Louk Meier of the Medieval Latin Department of the University of Amsterdam for providing me with the necessary information on these constructions.
 37. The fourth criterion, the possibility of *there*-insertion with verbs like *see*, but not with *persuade*, is not relevant for the period under discussion.
 38. I described these reasons in section 2.2.1.4. Even though there was no need for the object construction to disappear after “persuade”-verbs because, like auxiliaries, they have controlled infinitival PRO, the developments in Modern English show that after many “persuade”-verbs this construction did in fact disappear. Thus, it no longer occurs, according to the *Advanced Learner’s Dictionary*, after *grant*, *ordain*, and *pray* (of the verbs that occur in our list). It is still current after *desire* and *require*, but note that these verbs are semantically very close to modal auxiliaries expressing “will” and “need” respectively. It seems, then, that the prototypical controlled infinitival PRO construction (i. e., the one that occurs with auxiliaries) has been and still is monitoring the formation of infinitival constructions — without a lexical subject — with other verbs.
 39. For more details and evidence concerning the causative nature of OE *hatan* see Royster (1918).
 40. As I said above, none of the “persuade”-verbs in the list (apart from *command*, discussed separately here) appear in a PRO_{arb} construction. There is, however, one other exception and that is the verb *grant*. Of the fourteen times that it occurs in an object- or “pure” infinitive-construction (i. e., no NP involved at all), there are two examples, both in the *Paston Letters*, where *grant* occurs or may occur with PRO_{arb}. The first instance is certain:

And at euyñ a sertyn man suppyd wyth me and
And in the-evening a certain man supped with me and
tolde me þat þe patent grantyt to closse but a
told me that the patent granted to enclose only a
perch on bred, and that I had clossyd more
perch [c. 5¹/₂ yards] in width, and that I had enclosed more
þan þe grant of þe patent is, as men
than the grant of the patent is, as people

seyd (PL 23,9–11)

said

The other instance is not so clear,

and þis day we haue grant to haue þe good owthe of
 and this day we have granted to have the goods out of
Barmunsey (PL 86,13)
 Barmunsey

From the context it seems that *grant* here means “agree” rather than “permit”, which would make PRO, the subject of the infinitive *haue*, co-referential. On the other hand, the context does not completely rule out the sense of “permit”, which would turn the infinitival construction into a PRO_{arb} construction.

41. There is one other, more dubious, instance in *Malory*:

And bycause that she demed that sir Launcelot loved quene
 And because she deemed that Sir Lancelot loved queen
Gwenyver paramour and she hym agayne, therefore dame
 Guinevere sexually and she him in-return, therefore Dame
Morgan ordayned that shyld to put sir Launcelot to a
 Morgan planned that shield to put Sir Lancelot to a
rebuke ... (MA 555,5–8)
 rebuke

For *that shyld* one should really read “Sir Trystram (bearing the shield)”, cf. p. 554,11 ff.

42. The category of *verba sentiendi et declarandi* comprises the following four classes in Visser, all of which, if chronologically relevant, have been checked in the corpus: VI, verbs of wishing, etc. (pp. 2298–2300); VII, verbs of liking, etc. (pp. 2300–2302); IX, verbs of mental perception (pp. 2307–2318); XI, verbs of saying and declaring (pp. 2323–2336).
43. On this occasion, to save time and space, I have only indicated the type of complementation structures that these verbs appear in. It did not seem necessary to record the number of instances of each type as I have done with the causatives, the perception verbs and “persuade”-verbs, since we are now interested only in the presence of *aci* constructions, not in how they developed. There is no evidence that the *aci* construction after *verba sentiendi et declarandi* developed as a result of a structural need as was to a greater or lesser extent the case with the other verbs.
44. It is possible that even with some of the learned *aci* constructions the connotation of causation may have played a role. Note that causation is not wholly absent in examples (58 b) and (58 c), and also in letters 97,21 and 252,20.
45. The number of occurrences for the *Paston Letters* must be discounted for the reasons discussed in section 2.2.1.
46. For the semantic differences between finite and non-finite perception verb complements in present-day English, see especially van der Leek – Jong (1982).

47. Style does not seem to be an important criterion here. All three strategies are found in both formal and informal texts.
48. These are, e. g., length and highly complex structure of the sentences; the clear preference for hypotaxis rather than parataxis; the absence of anacolutha; the liberal use of absolute constructions, and of infinitival constructions in the place of relative clauses; the very explicit anaphoric references (*the seid*), etc.
49. This is also stressed by Mithun (this volume), who shows that internal and external factors are difficult to disentangle because "syntactic change is so often the result of their interaction".
50. He has not considered separately the use of *to be* as an auxiliary of the passive.

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External triggers and internal guidance in syntactic development: Coordinating conjunction

Marianne Mithun

Causes of linguistic change have traditionally been classified into two types: internal and external. Frequently cited internal causes of change include such factors as speakers' preferences for simple and transparent systems, which can prompt learners to remodel apparently irregular or opaque paradigms. The most commonly cited external cause of change is language contact. While the distinction between internal and external causation may be clear-cut in some cases, the separation of these factors is not always straightforward or even desirable, particularly in the area of syntactic change.

Much syntactic development is driven by an interplay between internal and external factors. Grammaticization may seem to reflect a purely internal process: the cognitive routinization of patterns of expression. Yet structures are not grammaticized randomly. Speakers automate those structures they use the most often. Similarly, syntactic borrowing may seem to represent a purely externally caused development: it is dependent on external contact with other languages, under appropriate conditions of relative prestige and bilingualism. Yet aspects of the internal structure of the borrowing language can affect the facility with which a prospective loan is integrated.

Internal and external factors can be difficult to untangle because syntactic change is so often the result of their interaction. For the same reason, examining the effects of either in isolation can be a mistake if we are to make progress in understanding the causes of syntactic change. In what follows, this interaction will be illustrated with the reconstruction of a basic syntactic construction, coordination.

1. The mystery

The Iroquoian language family is indigenous to Eastern North America. Several languages spoken at the time of European contact have disappeared without textual documentation, but relations among the better known languages are usually represented schematically as in Figure 1.

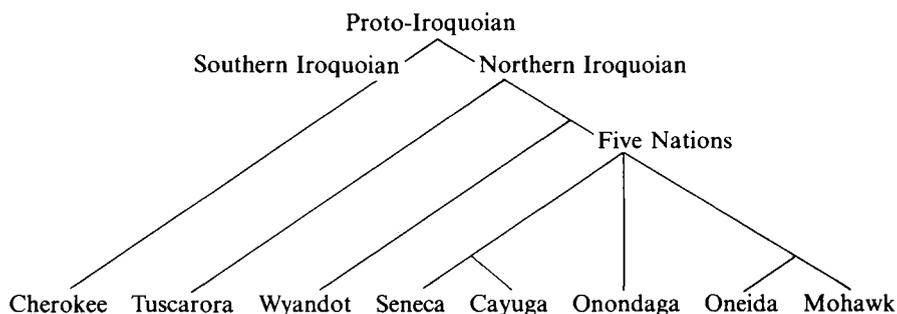


Figure 1. The Iroquoian language family

(A diagram such as Figure 1 of course indicates the relative chronology of successive splits but does not capture subsequent contacts.)

The languages are not mutually intelligible, but they are quite similar in their morphology and syntax. They are highly polysynthetic, with elaborate sets of prefixes and suffixes, as well as noun incorporation, although incorporation is no longer productive in Cherokee. All Iroquoian verbs are finite and contain obligatory pronominal prefixes referring to their core arguments. In part because their morphology is so elaborate, their syntax is in many ways comparatively simple. Verbs frequently function as complete clauses in themselves.

The languages differ strikingly, however, in a basic syntactic construction: coordination. Conjunctions are not cognate across the family. Coordinate constructions are not even structurally equivalent: in some languages, conjunctions precede the final constituent, while in others, they follow. Coordination is also not grammaticized to the same extent in the languages: in some, full-fledged conjunctions appear systematically in coordinate structures, while in others they are marginal. How could languages that are otherwise so similar differ so radically in one of the most fundamental of all syntactic constructions? The circumstances behind this diversity are best understood when internal and external factors are considered together.

2. Coordination in Iroquoian

The first step in understanding the modern diversity is an investigation of its antecedents in the parent language. Several kinds of evidence indicate that syntactic coordination may not have been fully grammaticized in Proto-Iroquoian. No coordinating conjunction can be reconstructed for the family as a whole, nor even for any of the subgroups. As noted above, the conjunctions in the modern languages are not generally cognate: compare Mohawk *tanu*, Oneida *okhna?* or *okhale?*, Onondaga *ohni?*, Cayuga *hni?*, Seneca *kho*, Tuscarora *tisnə?*, and Cherokee *ale* or *-hno*, all meaning ‘and’. Furthermore, most of the languages still exhibit some coordination by intonational linking alone, although the prevalence of this device in natural speech varies from one language to the next. Finally, historical documentation of some of the languages suggests that their current coordinating constructions are recent developments.

2.1. Mohawk

In modern Mohawk, a language spoken primarily in Quebec, Ontario, and New York State, syntactic coordination is usually signaled by the general conjunction *tanu(?)* ‘and’ before the final coordinate constituent. Like English ‘and’, *tanu(?)* can appear between all constituents. The conjunction can be seen between coordinate clauses in the passage in (1) from a Mohawk narrative. The translation is from the same speaker’s later retelling in English.

(1) Mohawk (Margaret Edwards, p. c.)¹

tsi tawakhá:lehte? héy

when I holler

‘When I holler “hey!”,

atehsanitskotá khwahte? tanu tshí:ká olokwáhsa?

you will jump up and this chain

atehsyé na,

you will grab

you jump up and grab that chain,

ya?táhsani?tsyúhkwhakwe? tanu ateshshu watihátho?.

you will jump up there and you will boat pull

you jump up there and pull the boat.’

Tanu is also used to conjoin nominals, as in (2).

- (2) Mohawk (Margaret Edwards, p. c.)

Sok wa?tkuhsátho? nar ... rúrate?k_l?okù:ʔa tanu
so they cried really they are siblings and

lo?nistáha.

his mother

'So then his mother *and* his sisters really cried.'

Although modern Mohawk speakers use *tanu* much like English 'and', the particle does not appear in every compound structure. The passage in (3), without conjunctions, occurred later in the story cited in (1).

- (3) Mohawk (Margaret Edwards, p. c.)

Sok wa?thohá: lehte? "hey"

then he hollered

'So then he hollered "Hey!",

tahayé:na? olokwáhsa?

he grabbed chain

(*and*) he grabbed the chain,

ya?thani?tsyúhkwhakwe? sha?tekanyatali:h_l

he jumped away half of the river

(*and*) jumped into the middle of the river.'

When she retold the story in English, the speaker supplied English conjunctions between the clauses. The same speaker conjoined the Mohawk nominals in (4) with intonation alone.

- (4) Mohawk (Margaret Edwards, p. c.)

Kyótku yúkwala?se?okù:ʔa loti?nistáha tahonúhwétha?.

always we are cousins their mother they overnight

'Our cousins (*and*) their mother always used to spend the night.'

Coordinate constructions with *tanu* are relatively well established in modern Mohawk, but historical records suggest that this may be a surprisingly recent innovation in the language.

Much of the earliest documentation of Mohawk consists of word lists or liturgical materials translated into Mohawk by French priests. At the beginning of the eighteenth century, however, English-speaking mission-

aries began to write Mohawk and taught a number of Mohawk people as well. One native document that survives from this period is a collection of formal ceremonies, speeches, and songs, believed to have been written in the second half of the eighteenth century by a Mohawk chief, David of Schoharie (Hale 1883; Michelson — Natawe — Norton — Norton 1980). The manuscript contains some coordinate clauses conjoined by juxtaposition alone.

- (5) Mohawk (David of Schoharie, in Michelson et al. 1980: 32.39)

Onenh kady watyakwaghsiharako
ó:ná ká:ti? wa?tyakwahsihará:ko?
 now therefore did we be blocked undo
 ‘Therefore now we unblocked

waahkwadweyendoh tsisaronkatah
wa?akwateweyá: tʰu? tsihahrukà:tha?
 did we keep where you understand language
 cause do
 (*and*) preserved your hearing’

The document also contains some connective particles. Many sentences begin with the particle *onenh* (modern *ó:ná* ‘now, then, at this time, already’).

- (6) Mohawk (David of Schoharie, in Hale 1883: 128.29)

Onenh jatthondek sewarihwisaanonghkwe Kayarenhkowah.
now you listen you all work completed great league
 ‘Now listen, ye who established the Great League.

Onenh wakarighwakayonne.
now the matter has become old
 Now it has become old.’

Oná sometimes appears at the beginning of conjoined clauses as well.

- (7) Mohawk (David of Schoharie, in Hale 1883: 126.26)

Endewaghneghdotako skarenhhesekowah,
 we will pull up a pine tree it is a large tree
 ‘We will pull up a pine tree — a lofty tree —

enwadonghwenjadethare eghyendewasenghte
 it will earth pierce we will log drop
 (and) will make a hole through the earth-crust, (and) will drop

tyoghnewatenghjihonh kathonghdeh thienkakhawe;
 there current is swift where it will carry it away
 this thing into a swift current which will carry it

onenh denghnon dentidewaghneghdoten
now afterward we will have stood the pine
 out of sight,

onenh denghnon yaghnonwendonh thiyaensayeken
now afterward never will they see again

nonkwateresera
 our grandchildren
 and then never will our grandchildren see it again.'

Although *óná* appears between clauses, it serves more as a temporal adverbial than as a coordinate conjunction. It functions the same way in the modern language, appearing at the beginning of clauses indicating the sequentiality or simultaneity of events.

Óná does appear between nominals in the eighteenth-century manuscript. One passage was translated by Hale as follows: 'Now, then, thou wert the principal of this Confederacy, Dekanawidah, with the joint principal, his son, Odadsheghte; and then again his uncle, Wathadodarho; and also again his son, Akahenyonh; and again his uncle, Kanyadariyu; and then again his cousin, Shadekaronyes; and then in later times additions were made to the great edifice' (Hale 1883: 127–129). Note the particles between the nominals in the excerpt in (8).

(8) Mohawk (David of Schoharie, in Hale 1883: 126.28)

onenh nene yeshodonyh Wathadodarho;
then the one his uncle (name)
 '(and) then again his uncle, Wathadodarho;

onenh nene yeshohowah akahenyonh;
then the one his son (name)
 (and) also again his son, Akahenyonh;

onare nene yeshodonyh Kanyadariyu;
then again the one his uncle (name)

(and) again his uncle, Kanyadariu;

onenh nene yeshonarase Shadekaronyes;

then the one his cousin (name)

(and) then again his cousin, Shadekaronyes;

onenh nene onghwa kehhaghsaonhah

than the one now on top

(and) then in later times

yejodenaghstahhere kanaghsdajikowah.

they added framepoles great framework

additions were made to the great edifice.'

The role of this particle here is actually to set off individuals in turn, men who succeeded each other in office. As before, the particle is serving as a sequential discourse adverbial but not necessarily as a syntactic conjunction.

Two other particles appear between clauses in the eighteenth-century manuscript. One is *ok*, sometimes preceded by the definite marker *ne*.

(9) Mohawk (David of Schoharie, in Michelson et al. 1980: 27.8)

Daghsatkaghtoghseronne ratiyanarenyon

tahsatkathohserù:ne? ratiyanarùnyu

there did you look repeatedly along they track on top

severally

'You were seeing here and there the footprints

onkwaghsotsherashonkenhha;

ùkwashotsherashùkùha

our be a grandparent many deceased

of our ancestors;

neok detkanoron ne shekonh

ne ok tetkanó:ru ne shé:kù

the only mutually there is dear is the still

(and) people are sorrowful as long as

ayuyenkwaroghtake jiratighrotonghwakwe.

ayoyù?kwaró:take? tsi ratihrotùhkwakwe?

should it smoke stand continue where they used to smoke

the smoke continues to rise.'

The other is *ò:ni?*, spelled *ony*. In (10) *ony* appears at the beginning of each successive clause in a series.

- (10) Mohawk (David of Schoharie, in Michelson et al. 1980: 28.13)

Kenyutnyonkwaratonnyon,
ká:ʔá yohnywarutúnyu
 here it pricker attached severally
 ‘Here there are prickly bushes,
ne ony kenyotdakarahun,
ne ò:ni ká:ʔá yottakaráwá
 the also here it self protrudes
 and here also (branches) are sticking out,
ne ony kenkontifaghsoton.
ne ò:ni ká:ʔá yaʔtekutiʔfahsótú
 the also here over there they skirt stand severally
 and there the branches are reaching to the ground.’

In (11) *ò:ni?* precedes successive nominals. The passage begins: ‘Everyday you are surprised at those who were once great.’

- (11) Mohawk (David of Schoharie, in Michelson et al. 1980: 33.45)

Onghwenjakonh niyeskakhags;
úhwátsyá:ku nyeskáhas
 it earth in there away back one has
 ‘Into the earth they are being taken again;
ken-ony rodighskénrakeghdethaghkwe,
káʔ ò:niʔ rotihskáʔrakehtéhahkweʔ
 here also they carry over the shoulder used to
 also those who were warriors,
ken-ony sanheghtyensera, ken-ony saderesera.
káʔ ò:niʔ sanhehtyá:seraʔ káʔ ò:niʔ saterè:seraʔ
 here also your woman here also you grandchild have
 and also your woman, and also your grandchildren.’

The same two particles, *n-ok* and *ò:ni?* also appear in sources from the first half of the nineteenth century. An extensive French – Mohawk manuscript dictionary dated 1826 lists only two translations of French ‘et’: *nok* –, *nok òni* (Marcoux ms: 158). Both appear in an 1866 grammatical description of Mohawk by another missionary, Père Jean André

Cuoq. Under “conjunctions” he lists *nok* ‘et’, and *oni* ‘aussi’. His dictionary contains the same particles (1882: 28, 33, 48). (The initial *n-* of *nok* is the contracted form of the definite marker *ne*.)

In 1896–1897, J. N. B. Hewitt of the Smithsonian Institution recorded a Mohawk version of a cosmology legend from Seth Newhouse on the Grand River reserve (Six Nations) in Ontario. This is formal oratory, and Hewitt transcribed it from dictation, so it is not precisely equivalent to spontaneous colloquial speech of the time, but Hewitt knew the Northern Iroquoian languages well and introduced less distortion than many others might have. The text contains both of the particles used by David of Schoharie, Marcoux, and Cuoq.

The particle *nok* often begins sentences and paragraphs, and is variously translated ‘then’, ‘but’, or ‘and’. (*Ok* is translated ‘just’ or ‘only’.) A young woman underwent many trials. At nightfall, she was told to lie on a mat at the foot of a chief, which she did. ‘They did not lie together; they only placed their feet together.’ The sentence in (12) follows as a new paragraph in the text and translation.

(12) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 271)

No'k^c ne' neñ' ca'or'heⁿ'ne' neñ
But the now it became daylight now
wa^hiatkets'ko[?]
 they two raised selves
 ‘*And* when morning dawned, they two then arose.’

The particle relates a new episode to the previous one semantically, but it does not conjoin clauses syntactically. The two sentences remain completely separate structurally (and intonationally).

The particle *ok* is still used in modern Mohawk, with the same discourse-adverbial function. If one asks a friend how he or she is feeling, the friend replies, then asks: *Ok ní:se??* ‘And you?’. A modern speaker told a children’s story about three little pigs. One pig spoke French, and said “oui oui”.

(13) Mohawk (Leatrice Beauvais, p. c.)

Ok ne shayà:ta tyorhà:sha? né: rahrúkha?
and the one body English it is he speaks
 ‘*And* one spoke English.

Rá:tu nè:ʔe “oiŋk oiŋk”.
 he says it is

He said “oink oink”.

Ok *ne kɔʔ nihrà:ʔa ʊkwehʊwehnéha né: rahrúkhaʔ.*
and the just he is small real-people-ish it is he speaks
 And the little one spoke Indian.

Ráxtu sheʔs nè:ʔe “kwí:k kwí:k”.
 he says then it is
 He said “kwí:k kwí:k”.

Ok could often be translated ‘et’ or ‘and’, but it actually functions more as a discourse adverbial than as a conjunction; it relates contrasting elements semantically, but it does not specify the internal syntactic structure of sentences. Note the period intonation (low falling tone followed by pause) separating the sentences.

The particle *ò:niʔ* used by David of Schoharie, Marcoux, and Cuoq, also appears in the cosmology legend in contexts where it could be interpreted as either ‘also’ or ‘and’. One passage was translated by Hewitt as follows: ‘And when she had finished shelling the corn, she hulled it, parboiling the corn in the water. And when the corn was parboiled, she then poured the grains into a mortar.’ It continues:

(14) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 271)

neñ’ ia’eciaca’totā’koʔ neñ’ ó’ni wa’et’he’te’.
 now she it pestle took now *also* she it pounded
 ‘She then got the pestle, and pounded the corn to meal.’

The particle *ò:niʔ* could be interpreted as a link between the two clauses here, like the English ‘and’ of the translation, but in fact it functions more like English ‘also’ or ‘too’, adding the pounding with the other processes involved in preparing the corn: shelling, hulling, parboiling, etc. *O:niʔ* still appears in modern Mohawk meaning ‘also, too’. One often hears, for example: *?i: ò:niʔ* ‘me too’. The particle functions adverbially as a discourse marker, but not as a syntactic conjunction. In fact, it often cooccurs with *tanʊ(?)* ‘and’.

(15) Mohawk (Sonny Edwards, p. c.)

Rʊnateryátareʔ tsi nʊ: nihʊnéhthahkweʔ
 they knew to where there they used to go
 ‘They knew where to go

tsi rütó:ratskwe? a:ki:ru runitsyató:ratskwe?
 so they used to hunt I should say they used to hunt fish
 to hunt, I should say to fish,

tanu? okaryo?tatshù:?a ni: ò:ni?
 and all kinds of game really also
 and get all kinds of game as well.'

The combination *nok o'ni* listed by Marcoux also occurs in Hewitt's cosmology text, often at the beginning of sentences. The sentence in (16) appears late in a paragraph translated by Hewitt as follows: 'Hence she was able with fortitude to suffer the burns without flinching, when the mush spattered on her while she was cooking. If she had flinched when the drops of hot mush fell on her, he would have said to her: "I do not believe that it is true that it is thy wish that thou and I should marry".' The text continues:

(16) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 274)

No'k^c o'niⁿ ne' dji' wa'oñta'kats'tate' ...?
 and also the where she herself nerved to endure it
 'Besides this she bore with fortitude the pain (at the time when
 the two dogs licked the mush from her body)'

The particles, translated here 'besides', link this statement to an idea several sentences earlier: 'she was able with fortitude to suffer the burns without flinching'. The link is semantic but not syntactic.

The modern particle *tanu* 'and' does not appear as a coordinating conjunction in the eighteenth and early nineteenth-century manuscripts. Its ancestor does occur in the eighteenth-century manuscript, however, in the passage cited above in (7), part of which is repeated here.

(17) Mohawk (David of Schoharie, in Hale 1883: 126.26)

onenh denghnon yaghnonwendonh thiyaensayeken
 now afterward never they see again
nonkwatesera.
 our grandchildren
 and then never will our grandchildren see it again.'

The meaning of the particle here corresponds to that of its Oneida cognate *tahnü* 'then, next, after that'. The Mohawk particle appears with the same meaning in Marcoux's 1826 dictionary under 'ensuite'. It is listed

in 1866 by Cuoq, but with a somewhat different meaning: *tenhnon*, *tanon* ‘mais’. In his 1882 dictionary he gives *tennon* vel *tanon* ‘et aussi; mais’. (The sequence *on* represents the vowel [ʊ].)

The particle appears again, spelled *tä^hnon^ʷ*, throughout the 1896 cosmology text. Hewitt translated it as ‘moreover’, ‘besides’, or ‘and’. It often appears near the beginning of independent sentences, relating them to material earlier in the discourse. At one point, a son had just told his mother that he was going to die. Hewitt’s free translation runs: “My breathing will cease; besides that, my flesh will become cold, and then, also the joints of my bones will become stiff. And when I cease breathing thou must close my eyes, using thy hands. At that time thou wilt weep, even as it itself will move thee [that is, thou wilt instinctively weep]. Besides that, the others, severally, who are in the lodge and who have their eyes fixed on me when I die, all these, I say, will be affected in the same manner. Ye will weep and your minds will be grieved.” Notwithstanding this explanation, his mother did not understand anything he had said to her.’ The text continues:

(18) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 259)

Neñ^ʷ tä^hno^{nʷ} seⁿ ha^ʷ i^ʷsi^ʷ noñ^ʷwe^ʷ dji
 now besides somewhat farther yonder the place where
na^ʷho^ʷteⁿ wa^ʷshako^ʷhro^ʷri^ʷ.
 the kind of thing he it told her
 ‘And now, besides this, he told her still something more.’

The particle links the information semantically to material several sentences earlier, but it does not coordinate it syntactically.

In many passages in the cosmology legend, *tä^hnon^ʷ* does link adjacent clauses. This is presumably the route by which it came to be reinterpreted as a conjunction. Either the meaning ‘moreover’ or ‘and’ would fit in a sentence like that in (19).

(19) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 257)

No^k hā^ʷkare^ʷ neñ^ʷ ia^ʷakote^ʷniseri^ʷhe^ʷse^ʷ neñ^ʷ
 but after a time now her day arrived for her now
 ‘At last the day of her confinement came,
wa^ʷakoksa^ʷtāieñt^ʷta^ʷne^ʷ, tä^hnon^ʷ
 she became possessed of a child and

iakoñ'kwe^c ne' eksa'a^c.
 she a man being (is) the she a child
 (and) she gave birth to a child, *and* the child was a girl.'

Within the same text, there is evidence that *tä'hnon'* was beginning to appear between elements that were syntactically as well as semantically linked. Note the particle between the conjoined nominals in (20).

(20) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 267–268)

Wa^c'ta³ na³karoñto'teⁿ³ ne' dji'
 maple such it tree kind the where

teieia^c'hiäk'tha³,
 one uses it to stream cross

'Maple is the kind of log that is used at the crossing,

no^k^c o^cho^c'sera³ tä'hnoⁿ³' skaroñtakas'ta^c na³karoñto'teⁿ³
 but basswood *and* ironwood such it tree kind
 and the log is supported by clumps of young saplings of
 basswood

oteroñtoñni³'a^c iotho^c'kotoñnioⁿ³ tedjia'roⁿ³ noñka'ti^c
 it sapling it clump stands both sides of it
and ironwood, respectively, on either side of the stream.'

Syntactic coordination thus appears to have become grammaticized only within the last century in Mohawk. The particles that appear between coordinate constituents in the eighteenth and early nineteenth century, *ó'na*, *nok*, and *ó:ni³*, probably functioned then as they do today, as adverbials relating material semantically to the rest of the discourse, but not as coordinate conjunctions specifying the internal syntactic structure of sentences. All appear at the beginning of single dependent sentences as often as they do with conjoined clauses or other constituents. It is perhaps significant that Cuoq noted in his grammar, "Il n'y a pas un grand nombre de conjonctions en Iroquois. Certains adverbes en font quelquefois l'office" (Cuoq 1866: 121).

The ancestor of the modern conjunction *tanu* functioned first as a clause-initial temporal adverbial meaning 'after that' or 'next'. Its Oneida cognate *tahnū:* still retains this function. In the late nineteenth century, Mohawk *tanu* evolved beyond its temporal sequential meaning to link successive thoughts, much like 'moreover' or sometimes 'but'. It is only within the past century that it has developed its modern grammatical

function as a coordinating conjunction. It now appears systematically between coordinate clauses and major constituents, although it is not fully obligatory. Mohawk *tanu* links not only successive events but parallel constituents, whose order could be reversed with no change in sense. Its Oneida cognate never appears in such contexts. As might be expected, the grammaticization of this particle as a conjunction has been accompanied by phonological reduction: the *h* and final stress have been lost. Most modern speakers do not use the full form *tahnúʔ*, although some older speakers and those from more remote areas do remember hearing it.

2.2. Oneida

In modern Oneida, a language spoken principally in Ontario and Wisconsin, a variety of particles function as conjunctions. As in Mohawk, clauses are sometimes linked by the temporal adverbial *ó:ná* ‘now, then, at this time’, but the particles usually cited by speakers as translations of English ‘and’ are *okhnaʔ* and *okhaleʔ*.

The particle *okhnaʔ* links clauses describing sequential events.

- (21) Oneida (Melissa Cornelius, in Abbott 1980: 70)

Tho nyohtyháti kwah tsiʔ níká yahá:laweʔ
 there how it goes just while of it away did he arrive
 ‘It goes on this way – he gets there

okhnaʔ yahátsyáhteʔ ohne:kánuš khaleʔ onúʔohkwisá.
and so away did he dip for water and grits
and dips for water and grits.’

Okhnaʔ now functions as a conjunction, but its use in discourse suggests that it may have originated as an adverbial relating events in discourse. It often appears at the beginning of new sentences, meaning ‘next’, ‘then’, or ‘so’. The sentence in (22) was part of a tale in which a fox suggested to a bear that they take along a sleeping horse so they could suck her milk whenever they got hungry. The fox said, “I will splice your tails together and tie them up; I’ll make them good and tight. And I’ll get behind and push.”

- (22) Oneida (Isaac J. Webster to Guy Elm, in Lounsbury 1953: 104)

Okhna? *kwi: ne?n ohkwali wahathu:táte.*
And so then the bear he consented
 ‘And so the bear consented.’

A second particle (*o*)*khale?* (often without *o-*) conjoins constituents of all kinds. In (23) it conjoins both clauses and nominals.

(23) Oneida (Melissa Cornelius, in Abbott 1980: 69)

Nale? tho yahá:lawe? kayhuhatáti
the again there away did he arrive it river go along
 ‘Again he got to a creek

okhale? yahá:syáhte? ohne:kánus okhale? onu?ohkwisí
and away did he dip water and grits
and he dipped for water and grits’

The etymology of this particle is transparent. It is a compound of the particle *ok*, cognate with Mohawk *ok*, plus a particle *ale?*, which in most of the Northern Iroquoian languages, including Oneida, still means ‘again’, as can be seen at the beginning of the sentence (23) above.

Okhale?, like *okhna?*, appears frequently at the beginning of new sentences, relating new material semantically to the discourse. A young man had prepared for a race. When he arrived at the appointed spot, he looked around, but saw no competitor. The text continues:

(24) Oneida (Melissa Cornelius, in Abbott 1980: 69)

Okhale? oná ehtá:ke yahatkátho? wahatye:lá.ne?
and then down away did he look did he confront
 ‘Then he looked down and noticed

kaya?kwáhele? tho laya?tatáti ...
it monster there he body go along
 a monster there with a long body.’

Although *okhna?* and *okhale?* are now well established as conjunctions in Oneida, they are still not obligatory in coordinate structures. Speakers often comment that ‘and’ occurs much more frequently in English than these particles occur in Oneida (Clifford Abbott, p.c.). Sentences consisting of clauses linked by intonation alone are not uncommon, as in (25).

(25) Oneida (Georgina Nicholas, in Michelson 1981: 18.34)

Tayehala:kó: thiká teyushalanye? tákhwa?
 she unhung that one scrubs with it
 'She took down the washboard

tayutáhsawá? wa?tyushalánye?
 she started she scrubbed
 (*and*) started scrubbing the clothes.'

Nominals are sometimes linked by intonation alone as well, although the use of *okhale?* is slightly preferred (Clifford Abbott, p. c.).

Additional evidence that the grammaticization of syntactic coordination may be relatively recent in Oneida is provided by earlier records of the language. Early documentation of Oneida is limited, but the small amount that exists does not contain the modern Oneida conjunctions. In 1789, Jacob Reed, an Oneida, wrote some letters to his minister, Samuel Kirkland. They contain some coordinate clauses linked only by juxtaposition. The passage in (26), with no Oneida conjunction, was translated by a modern speaker, Richard Chrisjohn, into a compound sentence in English.

(26) Oneida (Jacob Reed, in Campisi — Chrisjohn 1980: 42.13)

<i>oyawesne</i>	<i>kati</i>	<i>Rage</i>	<i>agwegh</i>	<i>askennen</i>
<i>oyá:</i>	<i>wésne?</i>	<i>kati?</i>	<i>Lake</i>	<i>akwéh</i>
another	person	just	Father	everything
'Father, tell the other person you went with, the Governor,				
<i>hahetsrighwatonghse</i>	<i>ne</i>	<i>Governer</i>	<i>tokeasge</i>	
<i>ghetsli: watuhase?</i>	<i>ne:</i>	<i>to:káske</i>		
you lay out the words for them	it is		it is true	
that everything is all right (<i>and</i>) what I say is true.'				

The connective particles that do appear between coordinate structures are the same ones that appeared in the early Mohawk documents: *nok* and *oni*.

(27) Oneida (Jacob Reed, in Campisi — Chrisjohn 1980: 41.2)

Waghyonghyadonse skennen thigon thigonke
wa?kuhya:túse? ská:ná? thí:ká thiká:ke
 I wrote to you all right that there
 'I am writing to you that everything is all right (with me)

nok oni *ne* *agwhatsira*.
 nok ò:ni *né:* *akhwa:tsíla?*.
and also this my family
and my family.'

Mr. Reed was fluent not only in Oneida, but in English and French as well; he was also literate in both Oneida and English, and perhaps French. By the time he learned to write, the French and English missionary traditions for writing Mohawk were well established. The French had established orthographic conventions that included the use of *r* for the liquid which today varies among Mohawk dialects between a retroflex and lateral. Oneida shows only [l], but the letters contain both *l* and *r*. The French used the digraph *en* for Mohawk [ʎ] and *on* for Mohawk [ʊ]. Mr. Reed's Oneida letters contain the same conventions, with occasional instances of *eng* or *ea* for [ʎ], and *ong* for [ʊ]. These symbols suggest the influence of the Mohawk orthographic tradition, so that is not clear to what extent the letters represent the Oneida oral style of the period. It is interesting, however, that no modern Oneida conjunctions appear in the letter.

A letter written in 1829 by Daniel Bread, an Oneida Chief at Green Bay, to Reverend Eleazer Williams, also lacks the modern conjunctions. Since neither punctuation nor capital letters are used, it is not always clear which clauses were conjoined and which were separate sentences. There is clearly some coordination by juxtaposition alone, however. The particles that do link coordinate clauses and nominals are not the modern *okhna?* or *okhale?*, but rather the same ones that appeared in the earlier letter: *ok*, *oni*, and the combination *ok oni*.

The particle *ok* most often introduces new sentences in this 1829 document. It appears to relate new statements to previous discussion semantically, but not necessarily syntactically. The sentence in (28) followed a passage describing a discussion with Peter, who said, 'It's his fault that the words can't be straightened out — he's only after his own pleasure.'

- (28) Oneida (Daniel Bread, 1829, in Abbott ms)
 Ok *hagwa ia honahote tehinaktotani*
 Ok *akwah yah oh nahote? tehinaktotani*
 just not at all did I take him seriously
 'I didn't take him seriously at all.'

Ok does appear at the beginning of conjoined clauses in the letter, sometimes meaning 'and', sometimes 'but'.

- (29) Oneida (Daniel Bread, 1829, in Abbott ms)

honkiatorene ne saiatonsra
ukya?to:lane? ne sahyatuhslis?
 it found me the your letter
 'Your letter found me

ok wakatshinnonitsi sonktokense ne hanatakariasne
ok wakatsanuniri: tsi? sukto:kase? ne anatakalyasne
 I am glad that to find out the in Washington
and I am glad to find out how it is going in Washington

tsi honen nitiotyeren ne hongwariwa
tsi? onA nityotye:lA ne ukwalirwa?
 that now what goes on the our business
 with our business.'

The letter also contains a clear compound nominal conjoined with *ok*. After discussing other matters, Mr. Bread switches to a new topic.

- (30) Oneida (Daniel Bread, 1829, in Abbott ms)

Ok oia tsi nihotiiatawenhon kogwes ok sawatits
ok oya tsi? nihotiya?tawA:u Kokwes ok Sawat:is
 other what happened to them (name) *and* Baptist

wathontrihotarho
wa?thutlihotalho?
 they quarreled
 'What happened to the others is that Kokwes *and* Baptist quarreled.'

As in Mohawk, the particle *oni* appears in independent sentences. It also appears at the beginning of conjoined clauses, as in (31).

- (31) Oneida (Daniel Bread, 1829, in Abbott ms)

Onen aia thowen garagwen oni heso wahwnowentanyon
onA yawe?towa:nA kalakwA oni e:so wahunowAhtanyo?
 now a lot removed *also* a lot they spread rumors
 'A lot gets taken out of context *and* a lot of rumors are spread.'

The combination *ok oni* also occurs, usually at the beginning of new sentences. Describing his visit to Oneida Castle in New York State, Mr.

Bread wrote that things were depressing there, but it was none of his business. Then bringing up a new matter, he wrote:

(32) Oneida (Daniel Bread, 1829, in Abbott ms)

Ok oni ne hatennatshera ia honahote
 ok uni? ne atana:tsla? yah oh nahohte?
 also the provisions nothing
 'About the provisions, they have not

thatehotiareteton iatyongwaiatiste ne Green Bay.
 tha?tehotiya?tolehtu ya?tyukwaya:tiste? ne
 did they pay attention we are left alone the
 paid any attention (*and*) we are left alone at Green Bay.'

This letter, like that written earlier by Mr. Reed, is full of Mohawk spelling conventions. Note the use of *r* and of the digraphs *en* for [ʌ] and *on* for [ʊ]. It is thus not entirely clear to what extent the particles *ok* and *oni* reflect Oneida oral style of the time and to what extent they reflect Mohawk literary conventions. Eleazer Williams was an Episcopal minister who had produced hymnals in Mohawk that were used by the Oneidas. Modern Oneida speakers comment that the early letters sound like Mohawk. In any case, the modern Oneida conjunctions *okhna?* and *okhale?* are conspicuously absent.

In 1939, a group of Oneida people working with Floyd Lounsbury on an International Phonetic Alphabet project wrote down approximately 800 Oneida texts. The particles *okhna?* and *okhale?* appear essentially in their modern forms in these documents, sometimes functioning as coordinating conjunctions between clauses and nominals. It thus appears that the modern Oneida coordinating construction was grammaticized some time between 1829 and 1939.

2.3. Onondaga

In modern Onondaga, a language spoken in central New York State and Ontario, the most common device for coordinating clauses is simple juxtaposition with linked intonation. As an Onondaga man told his grandson how to make a snowsnake, he used the compound command in (33), with intonational but no grammatical marking of the relation between the clauses.

- (33) Onondaga (Harry Webster, in Woodbury – Webster 1980 a: 135)

tásha thoké ohwáhta? oʔé:na?
 you hand over there it maple it stick
 ‘Hand me that maple stick

təhskahæ:k tsha? nəkyé:æ? əkhwɛʔká:hsè:nya?
 will you eyes put on that so will I do will I stick make
 (*and*) keep watching the way I’ll do it, dressing up the stick.’

Nominals are also combined with intonation alone. The sentence in (34) was part of a discussion of an upcoming snowsnake match.

- (34) Onondaga (Jessie Pierce, from Wallace Chafe p. c.)

təhatin əhæʔsɛʔ tehotiʔtaækeh kaye:í
 they will oppose each other mudhouse four

nihotinɔskeh.
 houses

‘The Mudhouse (*and*) Four Houses teams will play each other.’

As in Mohawk and Oneida, events are sometimes introduced with the particle *onɛ* ‘then, now, at this time’, but this particle functions more as a temporal adverbial than as a coordinating conjunction.

The particle *ohniʔ*, cognate with Mohawk *ò:niʔ* and Oneida *oniʔ* ‘also’, also serves as a discourse adverbial in Onondaga. It occurs in independent clauses, relating them to earlier information. During one conversation, a speaker was lamenting the fact that in her community, young people are no longer as strong in their traditional beliefs as they once were. The particle *ohniʔ* began successive new sentences.

- (35) Onondaga (Jessie Pierce, from Wallace Chafe p. c.)

Ohniʔ neʔstɛʔ yateʔtsitwayɛté ih naʔ ohniʔ
also no more do we know CONTR also
 ‘And we don’t know

neʔ tshaʔ otsistanohkwaɛny ɔʔ yateʔtsitwayɛté ih.
 the how stars mean we know stars
 the meaning of the stars anymore.

Naʔ ohniʔ tshaʔ niyót tshaʔ káæhkwa:ʔ
 CONTR *too how so it is how sun/moon*

We also don't know the meaning

yate?tsitwayęteih tsha? niyohtihná? ne onis?ah.
 we know stars how so it used to be the long ago
 of the sun like we used to.'

During the same conversation, this speaker had said that when she was small, they used to plant onions, and she would pull a lot of weeds. In the next sentence, the particle *ohni?* modifies the nominal for 'beans'.

(36) Onondaga (Jessie Pierce, from Wallace Chafe p. c.)

osahe?tá? óhni? ęhó?nya? ne? onę heękahé?k.
 beans too I will pick the when it will be time
 'I'd pick beans, too, when the time came.'

Ohni? appears in coordinate structures as well. In (37) it links clauses.

(37) Onondaga (Jessie Pierce, from Wallace Chafe p. c.)

aka:há?s tsha?nikę: nitwakenóh
 as I remember so much as I have lived
 'As far back as I remember

tyotkót tekęnohkwa?hkwa?hęk
 always I was picking up potatoes
 I was always gathering potatoes

ęwakn ęnóhkq:ti? ohni? ne? onę ęyakway ęthwahq?.
 I will throw potatoes too the when we will plant things
 and planting potatoes when we were doing our planting.'

Ohni? can also link nominals. The sentence in (38) was part of a discussion of Longhouse ceremonies. Note that the coordinate nominals are the same ones that were linked with intonation alone in (34) above.

(38) Onondaga (Josephine Hill, from Wallace Chafe p. c.)

na? óhkę? ha?tęshq tyéstha?
 CONTR now they will all mix themselves again
 'Then the Four Houses and the Mudhouses

ne? kayeih hotinęskéh tehoti?taękék ohni?
 the four houses mudhouse also
 will all come together again.'

Although *ohni*? is not obligatory with coordinate constituents, sentences like (38) indicate that its function has moved beyond that of English ‘also’ or Mohawk *ò:ni*?. The second nominal ‘mudhouses’ was not added to the sentence as a second thought.

Historical documents suggest that *ohni*? has not always functioned as a syntactic conjunction in Onondaga. An anonymous French manuscript dictionary from the late seventeenth century, published by Shea in 1860, makes no mention of the particle at all, although the dictionary is copious, containing 3,500–4,000 entries. French ‘et’ is translated 8ng8a [ɔgwa]. French ‘aussi’ is translated with the same particle.

From 1744 to 1784, David Zeisberger, a Moravian missionary, worked among the Onondaga. He produced both a grammar and dictionary of the language. In his grammar (published 1888) under the title “conjunctions”, he lists the same particle given in the seventeenth-century manuscript: *úngwa* ‘and, too’. In his dictionary (published 1887) under ‘and’, he lists *unqua* and *óchni*. Under ‘also’, he lists *unqua*, *ochni*, and *ohne*.

In 1889, J. N. B. Hewitt recorded an Onondaga version of the Iroquoian cosmology from John Buck on the Grand River reserve in Ontario. In this text, clauses are most often coordinated by juxtaposition alone.

(39) Onondaga (John Buck, 1889, in Hewitt 1903: 193.8–9)

*Wa*²*wa*^c*deñ*²*dia*² *wa*²*gana*²*djiodā*²*gwa*² *ne*²’ *odjida*²*ge*
she started forward she kettle took up the it fire on
‘She went forward, (*and*), taking off the pot from the fire,

*gana*²*djiot* *o*²*ge*ⁿ’*hā*² *wa*²’*ok* *tca*²’
it kettle stands it ashes she it immersed the where

io^c*hnegadai*^c’*heñ*^c.

it water is hot

put ashes into the hot water.’

Other kinds of constituents are also linked by juxtaposition alone. Note the coordinate locatives in (40).

(40) Onondaga (John Buck, 1889, in Hewitt 1903: 194.7–9)

Onoñda^c’*hādie*², *ge*ⁿ’*hwadénio*ⁿ’,
it mountain rises extending along it stream stands forth sev
‘There was a mountain range, visible river courses, (*and*)

*dega*²*daetsi*^c’*hā*^c’*die*² *ne*²’*tho*^c *wa*²*hadonngo*^c’*da*².
it clay tall extends along there he it passed

a high clay bank, near which he passed.'

The particle *ohni?* does appear in this text, most often between coordinate nominals.

(41) Onondaga (John Buck, 1889, in Hewitt 1903: 183.1)

Wa³o^heⁿˀnha³, wa³oñtgat^hhwa³ ne³ˀtho geñda^gä³
 it became day she it saw there it lay
 'The next day came, (and) she looked (and) saw lying there

ne³ˀ skeññoñdoⁿˀˀˀ odjis^gda³ o^hˀni³ ne³ˀtho^h
 the deer it fire also there
 a deer, also fire (and)

gagoⁿˀhetchäge^hheñ³, oieñ^gda³ o^hˀni³ o^hˀsotcio^gda³
 it brands lay heaped it fuel also it heap stands
 firebrands, (and) also a heap of wood,

ne³ˀtho^h ge^hhä.
 there one it has brought
 all of which had been brought thither.'

At the time the cosmology text was dictated, *ohni?* was already beginning to function more as a conjunction than as simply 'also'. It is clear from the verb in (42), which contains a dual agent pronoun, that the second nominal 'Flint' could not possibly be an added thought.

(42) Onondaga (John Buck, 1889, in Hewitt 1903: 196.8)

Tho^hge^h o^hneⁿ wa³hiiatdo^gga³
 at that now they two noticed
 'At that time they,

ne³ˀ ho^hsoda^hha^h ne³ˀ O^hha^äˀ o^hˀni³
 the his grandmother the it Flint also
 his grandmother and Flint,

ne³ˀ tca³ˀ sāioñnatga³deⁿˀha³ ne³ˀ
 the where again they became numerous the
 also noticed that the animals again

ho^hsoda^hha^h.
 they are animal
 became numerous.'

On occasion, clauses are also conjoined with *ohni?*.

- (43) Onondaga (John Buck, 1889, in Hewitt 1903: 151.6)

Tho^cge^c oⁿneⁿ deⁿsiiia^chia³k,
 at that (time) now thou stream wilt cross
eⁿsadoñgo^cda³ o^cni³.
 thou wilt pass on *also*
 ‘Then thou wilt cross the river, and also pass on.’

The grammaticization of coordinate conjunction had thus begun by the end of the nineteenth century. The particle *ohni?*, originally ‘also’, has been extended beyond its additive meaning to link parallel, unordered constituents. Several facts suggest that the modern structure may not be very old, however. A seventeenth-century dictionary shows a completely different particle, *okwah*, as the equivalent of ‘also, and’, and the same particle appears in a late eighteenth century dictionary. In modern Onondaga, clauses are still most often conjoined by simple juxtaposition with appropriate intonation, although the particle *ohni?* sometimes follows the second clause. *Ohni?* does occur somewhat more often with coordinate nominals, but it is by no means obligatory there either.

2.4. Cayuga

Modern Cayuga, now spoken primarily on the Grand River in Ontario, contains a general coordinating conjunction *hni?* that follows the final coordinate constituent. A man described his friend’s wife with the coordinate clauses in (44).

- (44) Cayuga (Reginald Henry, p. c.)

Ek^sa³kó:wah, kokhwayętei³phi³ hni³ ne³.
 she is pretty she knows how to cook *and* it is
 ‘She’s pretty, *and* she knows how to cook, too.’

Hni? also appears systematically after coordinate nominals. Asked what the family would plant in their garden this year, a speaker replied:

- (45) Cayuga (Reginal Henry, p. c.)

A:yé:³ akwé:³ onęh³é³ osahe³tá³ ohon³atá³phi³ hni³
 seems we think corn bean potato guess *too*
 ‘I guess we think corn, beans, and potatoes.’

As in most of the other languages, the conjunction does not appear in every coordinate structure. Coordinate clauses are often linked by intonation alone. The compound sentence below was part of a Cayuga telephone conversation.

(46) Cayuga (Reginald Henry, p. c.)

ętshé? ki? kyé:ʔ waʔtsi ętshá wįhtahk.
 you will come just later you will bring it along
 ‘Come on over after awhile (*and*) bring it along’

The source of Cayuga *hniʔ* is transparent: it is cognate with the Mohawk, Oneida, and Onondaga particles meaning ‘also’. It still has this meaning in Cayuga as well. After admiring a dog, a visitor asked his host whether he had any other pets. The reply was:

(47) Cayuga (Reginald Henry, p. c.)

ęh ęʔ. Takú:s ki? hni? akhnáhskwæʔ.
 yes cat just *too* I pet have
 ‘Yes. I have a cat, too.’

Hniʔ indicates the relevance of this answer to the question here, but it does not conjoin the noun or clause to it syntactically.

It is clear, however, that the function of *hniʔ* in Cayuga has expanded beyond its original status as an adverbial. It now appears in contexts where it cannot be simply interpreted as ‘also’. One man asked another the names of his daughters as they watched them play.

(48) Cayuga (James Skye, p. c.)

Laurie, Susie, Cecelia hniʔ.
 ‘Laurie, Susie, *and* Cecelia.’

Little early textual documentation exists of Cayuga, but in 1912 Mary Sky Gibson, a Cayuga speaker, dictated an account of the life of her husband John to Alexander Goldenweiser. The particle *hniʔ* was already used as a grammatical conjunction in this document, but it was not obligatory, either between clauses or conjoined nominals. The second nominal in the sentence below could not have been an after-thought, since the preceding verb already contained a plural pronoun.

- (49) Cayuga (Mary Sky Gibson, 1912, in Goldenweiser ms: 2)

thó ekai?tró:tak khnó:ha? ha?ní hni?.
 there they will live my mother my father *too*
 'That is where my mother and father would live.'

A short time later in the text, the same compound nominal appears with no overt conjunction.

- (50) Cayuga (Mary Sky Gibson, in Goldenweiser ms: 11)

thó ki ne khnó:ha ha?ní? etkayató:wi?t.
 there these the my mother my father they will decide
 'At that time my mother (*and*) my father would decide.'

Syntactic coordination is now well established in Cayuga, but both modern usage and historical records suggest that this development may be relatively recent. The overt marking of coordination is still optional in the language, especially between clauses, and the diachronic source of the conjunction is still transparent in the particle meaning 'also', which retains its original meaning in the language. Furthermore, the textual material we do have from 1912 indicates that overt marking of coordination of nominals has become more systematic in just this past century.

2.5. Seneca

Modern Seneca, now spoken primarily in western New York State, also contains a grammaticized coordinating conjunction, but it is unrelated to any of those discussed so far. The particle *kho* follows the last of a series of coordinate constituents of any kind. In (51) it follows the second of two coordinate clauses.

- (51) Seneca (Mithun – Peterson 1980: 114)

I:? ekhe:ké? etkhé yawi? khoh.
 I I will find her I will bring her *too*
 'I will find her and bring her here.'

In (52) *kho* follows the last of three coordinate nominals.

- (52) Seneca (Myrtle Peterson, p. c.)

æhkwa? owisæ:thá? owé:nqe'sho?ø? kho éhsni:nq:nq?.
 bread butter sweets *too* you will buy
 'Buy bread, butter, and sweets.'

Several facts suggest that the grammaticization of this conjunction may be relatively recent. It is still by no means obligatory, especially with coordinate clauses. The sentence in (53), for example, part of a legend, contains intonationally linked clauses but no overt conjunction.

(53) Seneca (Myrtle Peterson, p. c.)

tawátkesko? né o'nya?
it raised up the finger
'The finger rose up

o'wáhtsatε? kæitakø:
it pointed in the tree
(and) pointed into the tree.'

The source of the conjunction is still present in modern Seneca. It still functions as an adverbial meaning 'too', or 'also'. A speaker began an anecdote about a train ride saying that long ago, when trains first became common, they used to haul everything. He continued:

(54) Seneca (Chafe – Jones 1980: 143)

Nε:kε: nae? kho næ: na:ti:nyø'øh.
this again and CONTRASTIVE Whitemen
'And this again was from the Whitemen.'

Kho does not signal syntactic coordination with any other constituent here, but simply a semantic link to an idea outside of the text.

Seneca is the only modern Iroquoian language with the particle *kho*, but a probable cognate can be found among the more distantly related Siouan languages. The Siouan languages display a diversity in their coordinating conjunctions similar to that among the Iroquoian languages. Lakhota and (Santee) Dakota, mutually intelligible dialects, contain several conjunctions with such meanings as 'and then', 'and so', etc. Their most basic conjunction is not even cognate between the two dialects: compare Lakhota *na* with Dakota *k'a* 'and'. They do share a particle *k^ho* however, which means 'too' or 'also'.

(55) Lakhota (Stanley Redbird, p. c.)

k^hó a'úwo
too bring IMPERATIVE
'Bring it along (too)!'

- (56) Dakota (Martha St. John, p. c.)

heč^hiwat^hayə keápč^ha k^ho oyákapče
 this I think they said *too* they tell

‘I think that’s what they said, *too*, that’s the way they tell.’

There may be another cognate among the distantly related Caddoan languages. These languages exhibit the same diversity among their conjunctions as the Iroquoian and Siouan languages. In Caddo, coordination is most often accomplished by a discourse particle *t’ana?* meaning ‘and also, too, another, again’. Another particle, *kuh*, appears more rarely, usually between lexicalized combinations of conjoined nominals. (Caddo *u* corresponds to Iroquoian *o*.)

- (57) Caddo (Sadie Bedoka Weller to Wallace Chafe, p. c.)

nátti? ?ina? ku ?a?ah pihtahyúznah.
 there mother *and* father died

‘Mother *and* father both died there.’

If this form is indeed cognate, it represents a convergent development with Seneca *kho:*, the grammaticization of a coordinating conjunction from an adverbial meaning ‘too’. The other Caddo conjunction, as well as the unrelated Onondaga and Cayuga conjunctions, confirm that such a development is not uncommon.

The Seneca conjunction *kho* is well established in the modern language. The particle itself is quite old, but its grammaticization as a syntactic marker may be relatively recent. Its source is still transparent: it still functions in the language as an adverbial meaning ‘also’. It appears systematically with coordinate nominals, but it is not at all obligatory with coordinate clauses.

2.6. Huron-Wyandot

Wyandot was spoken until the middle of this century in Oklahoma. Although no speakers of Wyandot remain, a body of forty texts recorded early in the century provides documentation of Wyandot narrative. The most common device for conjoining clauses or other major constituents in these texts is juxtaposition alone.

- (58) Wyandot (Catherine Johnson, in Barbeau 1960: 107)

aha'jú' du'skenótq' ahaécra'
 he kills the deer he it skins
 'He kills (*and*) skins the deer'

- (59) Wyandot (Catherine Johnson, in Barbeau 1960: 178)

né' harayó'cé' ha'yú' di yaá'tayè' n'tsi'
 now he them slay he killed the her body is old
 'At this time he killed the old woman

²a'cé'²k imèn'ó' deyayoméa.
 three of them the her daughter
 (*and*) three of her daughters.'

On occasion, the particle *né* 'now, at this time' appears before the second of two clauses, but as in the other languages, it does not function exactly as a coordinate conjunction. It frequently begins new paragraphs. The passage below began: 'While the cannibal was out,

- (60) Wyandot (Catherine Johnson, in Barbeau 1960: 78.1 – 14)

né watitè'²t
now they pound corn
 they pounded corn

né' a²awatidá²tarò²tonó²
now they bread make several
 and made loaves of bread.

né' tatò'crayé' a²ayarè' du'dá²²tara²
now basket into she (it) puts the bread
 Then the old woman the bread in a basket

nè' uné'²u'ti' dae² dekwayuwá²né'
now she her combs the one the she is large
 and combed her eldest daughter's hair.'

Two other particles occur on occasion with coordinate constituents in the texts. One tale opens with coordinate nominals.

- (61) Wyandot (Star Young, in Barbeau 1960: 112.11 – 18)

ahátijà²²ka² ahatijátra²ke²
 they went out hunting they (with them) went
 'A crowd of people started off for a hunt.'

"de hudú³mĕ^ε tú[·]di³ "de yàwí³nq^ε ejateyĕ³áha.
 the his mother also the she is pretty his sister
 Among them were a young man, his mother, and his sister.'

The particle *tú[·]di³* 'also', sometimes spelled *tù[·]"di³*, appears to be a compound of the particle *tu* 'there, that' plus the expected Wyandot reflex *"di³* of the Northern Iroquoian **ohni³* 'also'. Its use as a discourse adverbial, linking ideas semantically to previous ideas is clear. One legend describes twin brothers, one good, one bad. The good twin created everything on earth, all living beings and also the people. His brother then came forward and said,

- (62) Wyandot (Catherine Johnson, in Barbeau 1960: 62.20–24)
- tudi³ ñĕ³ ndi³ ekeá³tó³"ga³ dayomĕ^ε
 there too now I I body make the they people
 "I too will make some people."

A second particle, *neça³*, a combination of *nĕ* 'now' plus some particle *ša³*, appears on a few occasions, linking clauses or nominals.

- (63) Wyandot (Catherine Johnson, in Barbeau 1960: 65.18–31)
- tú^ε iyĕ³trq³ de hudú³mĕ^ε de ròmĕ³ĕ^εti³
 there she sits the his mother the he person is young
 'As he found his mother
- neça³ diwì³nq^ε hq̄³te³yĕ³áha^ε
 and there two they are young women they siblings are
 and three [sic] sisters there
- tú[·]"di³ atiyé³ro³ tu dĕ³ca³ahaá³kq³
 also they sat there in he her brought
 together, he brought the young woman in.'

The Wyandot are descendants of a group of Huron plus remnants of neighboring nations all defeated by the Iroquois in Ontario in 1649. The Huron language is no longer spoken, although French missionaries living among the Huron during the seventeenth and eighteenth centuries left good lexical and grammatical documentation of their language. Texts from that period consist primarily of missionary translations of liturgical materials, however, so it is difficult to determine the exact usage of particles by native speakers of the time. Still, even the translations contain some coordination by juxtaposition alone.

A variety of particles also occur with coordinate constituents in the Huron translations, among them *din(de)*, translated ‘et, ou, que si’; *ichien*, translated ‘qui, et, aussi’; *chia*, translated ‘et’; and *itondi*, translated ‘aussi’. These last two are presumably the ancestors of Wyandot *ca*’ ([ša’]) and *tùⁿdi*’. Both can be seen in a prayer which closes as follows: ‘Jesus our Lord of God the Son, for this thou wilt exhort thy Father, for he does not refuse thee anything.’

(64) Huron (Le Jeune, 1636, in Thwaites: 10.72–73)

chia desa ɖarie Jesus ond8e de chikhonc8an,
aussi vous Marie de Iesus le Mère qui estes Vierge,
 ‘And you also Mary, of Jesus the Mother who art Virgin,

ondayee itondi chihon. to haya8an.
cela aussi dis ainsi soit-il
 that also say. So be it.’

Both particles apparently functioned primarily as adverbials.

Overall, the use of overtly marked coordination is rare in the Wyandot texts. Most often, coordinate structures are associated by juxtaposition alone. Temporal simultaneity or sequence is sometimes indicated by *nε* ‘now’. Other particles that occur between coordinate constituents do not seem firmly established in the grammar as conjunctions. They are not obligatory, and in fact are rare. They retain their additive meanings ‘also’, ‘too’, and usually function as discourse adverbials rather than as markers of sentence-internal syntactic structure, probably much as they did in the seventeenth century.

2.7. Tuscarora

Tuscarora, now spoken in western New York State and in Ontario, contains a well grammaticized conjunction *tisnε?* that appears in all genres of connected speech. It functions essentially like English ‘and’. It connects both clauses and constituents of all kinds, usually appearing before the final conjunct, but optionally between all. Note its use between clauses in the speech below. During the preaching of the new doctrine of the prophet Handsome Lake, listeners are admonished to abstain from intoxicating drink, because:

(65) Tuscarora (Elton Greene, p. c.)

háne? əwa?náha?t nəkatshəha ?ri?θrə:?
 that it will cause it will break up homes
 'It will break up homes,

tisnə? hane? əwa?néha?t ha? ə:kweh nəye?tikərá hri?
 and that it will cause that person one will mind break
 and break people's hearts,

tisnə? hane? əwa?néha?t ha? kayəkə?tihθ?ah
 and that it will cause that little ones
 and cause the children

kwè:mi? tikawəni:yu?, ə:weh nyəkayeskahəhte:t
 much they wander anywhere they will run
 to wander.'

The same speaker opened a tale by recounting what he had read in the Bible. Note the use of the conjunction between coordinate nominals.

(66) Tuscarora (Elton Greene, p. c.)

urihwaká:yə? rayá:θə Abraham,
 matter is old he is called
 'In olden times, there was a man called Abraham,

rutyá:kə Sarah yeyá:θə
 he is married she is called
 his wife, called Sarah,

tisnə? hé?u?y ... kyè:nizkə Hagar yeyá:θəh.
 and another this she is called
 and another woman called Hagar.'

Like those in the other languages, the Tuscarora conjunction is not obligatory between all linked clauses. The clauses in (67) were linked intonationally, but not joined overtly by a conjunction.

(67) Tuscarora (Elton Greene, p. c.)

θahrətihre?tshə?ni? θahrayé:kə? θahra?né:ku?.
 he backed up again he went back out he ran away again
 'He backed up, went out, (and) ran away.'

Although *tisnə?* is now well established as a conjunction, its modern shape may be recent. The earliest textual material we have in Tuscarora

was recorded in the late nineteenth and early twentieth century by J. N. B. Hewitt, who transcribed the Mohawk, Onondaga, and Seneca cosmology texts cited earlier. Hewitt, whose mother was Tuscarora, was born in 1858 near the Tuscarora community in New York State. His first language was English, but he learned Tuscarora as a young teenager. Although the conjunction appears as systematically in the texts collected by Hewitt as it does in modern Tuscarora, it was recorded with a slightly different form: *ti'-sen?*. Unfortunately, it is not possible to know what kind of variation there may have been at the time in form or usage, since Hewitt generally regularized his transcriptions. The difference in form is intriguing, however.

The earlier Tuscarora conjunction, probably *tisq?*, appears to have developed from a compound. Tuscarora *t* is the reflex of Proto-Northern-Iroquoian **n* before oral vowels, so the first member of the compound would correspond to the Proto-Northern-Iroquoian sequence **ni*. This syllable could be cognate with Huron *"di?* and ultimately related to the Five Nations **ohni?* 'also'. The second syllable appears to correspond to Oneida particle *sá?* 'too' and perhaps Huron *ichien* 'aussi, donc'. With grammaticization, the modern Tuscarora conjunction has undergone phonological reduction so that it no longer bears stress.

2.8. Cherokee

The sole surviving member of the Southern branch of the Iroquoian family is Cherokee, now spoken primarily in Oklahoma and North Carolina. Modern Oklahoma Cherokee contains two basic coordinating conjunctions, a particle *a²le* and an enclitic *-hno*. Both can link clauses or major constituents of any kind. The particle *a²le* appears between coordinate constituents, while the enclitic follows the first word of the second constituent. (Vowels are automatically nasalized phrase-finally.) (68) and (69) contain coordinate clauses.

(68) Cherokee (Pulte 1975: 354–355)

u²do²hí²yu⁴hnv³ wu²³yo³hle³ a²le u¹ni²go²he³ ga²nv³gv⁴.
 sure enough and he shot it and they saw it falling
 'And sure enough he shot it and they saw it fall to the ground.'

(69) Cherokee (Pulte 1975: 354)

u¹na³ne²lu²³gi³²se do²ju²wa³i²hlv³ di³dla,
 they raced bushes toward
 'They raced toward the bushes'

nə^{2ʔ}v²³hni³ge⁴hnv wu²³ni³luh²ja u'ni²go²he³ so²³gwɨ³li
 closer *and* when they arrived they saw horse
and when they got closer they saw a horse (lying there).'

(70) and (71) contain coordinate nominals.

(70) Cherokee (Pulte 1975: 343)

ə²sgə²ya ə²le ə²ge²³hya a'ni²wo³ni²ha.
 man *and* woman are speaking
 'A man *and* a woman are speaking.'

(71) Cherokee (Pulte 1975: 343)

ə²sgə²ya ə²ge²³hya³hno a'ni²wo³ni²ha.
 man woman *and* are speaking
 'A man *and* a woman are speaking.'

According to Pulte (1975: 343), *ə²le* "is used in relatively formal speech styles in Cherokee and in written style. ... In most spoken styles, *ə²le* is not used." The enclitic appears instead. (Another particle, *no'le*, also functions as a conjunction. It is a compound of a particle *na'* 'then' [perhaps cognate with Proto-Northern-Iroquoian **ó:nɛ*] and *ə²le*.)

A special kind of historical documentation exists of Cherokee: manuscripts written in the Cherokee syllabary by Cherokee speakers themselves. For the most part, these Cherokee writers spoke no English. Some North Carolina manuscripts from the mid-nineteenth century show slight variation in the use of conjunctions.

In 1859, the clerk I:noli opened an accusation of theft with the sentence in (72). The three verbs 'where she did walk', 'she did come to me', and 'she did say' are juxtaposed with no overt conjunction.

(72) Cherokee (I:noli, 1859, in Kilpatrick – Kilpatrick 1966: 67)

hi²a²hno: wini a:hni tsedó:hvgí
 this, and Wini here where she did walk
agilú²tshe:lv:gi
 she did come to me
 'When Wini was here, she came to me

nigvwe:sgv:gi e:ni agino:sgi ade:lv udv:hnv:gi
 she did say E:ni she stole from me money she did state
 (*and*) said: "E:ni stole, money from me," she stated.'

The sentence in (73) contains juxtaposed coordinate nominals.

- (73) Cherokee (Da:sgigidir:hi, 1861, in Kilpatrick – Kilpatrick 1966: 103)

a:zni ghwal'yi du:do:rv digo:we:li:sgi a:gwo:hly
 here Qualla-place named it clerk, I I was sitting
 'Tsa:ni (and) Tse:si came to me at Qualla,
u:nilu'tsv:gi na:sgi tsa:ni tse:si
 they did come that Tsa:ni Tse:si
 where I am the clerk.'

In general, however, both *a²le* and *-hno* were used systematically in the documents. Note the use of *a²le* between clauses in (74).

- (74) Cherokee (Sdhi:wi, in Kilpatrick – Kilpatrick 1966: 21)

na:gwo ino:li wigan'v:di ges'e:sdi
 now Ino:li over here to send it (flex) one it will be
 'Now, Ino:li, it will be sent over there to Fishinghawk Place,
ale ghanitsuzhwá:yagwó hi?lu'tsv na:sgi tsago:li:ye:di
and fishinghawk-place when you come that to read, you
and when you come, you will read it.'

The conjunction appears between coordinate nominals in (73).

- (75) Cherokee (Sdhi:wi, 1853, in Kilpatrick – Kilpatrick 1966: 20)

hi?a'sgini tsa:li udho:hl(a)sv ale
 this, in particular Tsa:li he borrowed it *and*
 'Upon what Tsa:li borrowed *and* upon
gvwayohu:sé:lv uni:tsadhv uni:hne'gwo:tsv
 been lost by him, they many they increased
 what he lost the interest he is to pay has greatly increased.'

In 1854, Ino:li wrote a letter that contained both coordinate nominals and coordinate verbs, each compound conjoined by the enclitic.

- (76) Cherokee (Ino:li, 1854, in Kilpatrick – Kilpatrick 1966: 24–25)

sdhi:wi dila:sge:sgi dighuyi:sgi hno: na:sgi
 Sdhi:wi dila:sge:sgi dighuyi:sgi *and* that
 'Sdhi:wi, Dila:sge:sgi, *and* Di:ghuyi:sgi,

udo:hiyú:hi hi:tsihné:tshe ginú:d(v)di da:nigv:wahl(o)da
 truly this you (pl) spoke one-fourth they priced them
 it is true that you have set the fee at \$ 0.25.' ...

dagwade:hyo?nǎ:i da:gwo:hwe:la:nǎ:hno
 there I taught there I wrote, *and*
 'I taught *and* I wrote.'

The two coordinating conjunctions of modern Cherokee were thus used systematically as early as the mid-nineteenth century by Cherokee writers. Their etymologies may be retrievable. *ǎ²le*, now translated variously 'and', 'or', and 'almost' matches the Northern Iroquoian particle **ǎ:re?* 'again' in form. This is the same particle that was exploited in Oneida for the coordinating conjunction *ok-ǎle?* > *okhale?* 'and'. The source of the Cherokee enclitic *-hno* is not clear, but its heavy use at the beginning of new sentences in the modern language, as in (66) above, suggests that it may have originated as a discourse connector, like its equivalents among the Northern Iroquoian languages.

3. Unraveling the mystery

Although the modern Iroquoian languages share nearly all of their grammar, they differ strikingly in one of the most basic of all syntactic constructions: coordination. The conjunctions themselves differ in form: Mohawk *tanu*, Oneida *okhale?*, Onondaga *ohni?*, Cayuga *hni?*, Seneca *kho*, Tuscarora *tisnǎ?*, and Cherokee *ǎ²le* or *-hno*. The constructions also differ in structure: in some of the languages the conjunction precedes the final constituent, while in others it follows. Finally, the coordinating constructions are grammaticized to different degrees in different languages. In some, they are solidly grammaticized: coordinate structures are systematically conjoined by a conjunction that serves only that purpose. In others, overt marking of coordination is rarer and the markers retain their functions as adverbials, relating ideas semantically rather than conjoining constituents syntactically. This surprising situation is the result of both language-internal and language-external factors.

No basic coordinating construction can be reconstructed for Proto-Iroquoian. Coordinate constituents were probably linked primarily by means of juxtaposition with appropriate intonation, a possibility that remains in all of the modern languages. Presumably various adverbials with such meanings as 'then', 'so', 'next', 'moreover', 'besides', 'also', 'too', etc. could modify conjoined clauses and phrases, as they do today,

but they were optional. The modern languages do not exhibit cognate conjunctions because there was no grammaticized conjunction in the parent language for them to inherit jointly.

The lack of a grammaticized conjunction in Proto-Iroquoian may be related to language-external conditions of use. An examination of coordination cross-linguistically indicates that the absence of conjunctions is not unusual, particularly among languages without a literary tradition (Mithun 1989). Spoken language has the benefit of intonation to indicate links among elements, a resource only weakly reflected by punctuation in written language. Speakers must produce speech in a steady stream, without an indefinite amount of time to plan intricate syntactic constructions, while writers have the luxury of time to construct elaborate syntactic structures (Chafe 1985). For this reason, overt identification of relationships among clauses and constituents can be more important to readers making their way through elaborate prose than to listeners decoding spontaneous speech.

Coordinate structures of different kinds, furthermore, do not appear with equal frequency in spoken language. Coordinate clauses occur frequently, but coordinate nominals are surprisingly rare in spontaneous speech. This may have an effect on the motivation for grammaticizing overt coordinate conjunction. Coordinate clauses are often used to express consecutive events. Their relationship is easily expressed by juxtaposition in the order of occurrence, accompanied by appropriate intonation and occasional temporal adverbials like 'then' or 'at the same time'. By contrast, speakers seldom introduce multiple new referents into a discourse simultaneously. New entities are typically introduced one at a time, in separate intonation units or clauses, then subsequently identified by pronouns, demonstratives, or, in Iroquoian, by incorporated nouns. Coordinate nominals are used on occasion to identify conceptual units like 'bow and arrow', but such phrases are surprisingly rare. Series of nominals sometimes appear in lists, often separated by pauses ('They saw fish, deer, everything they needed to survive'), but juxtaposition, perhaps accompanied by an adverbial such as 'also', can be sufficient to identify such a set. Overall, compound noun phrases do not occur sufficiently frequently in spontaneous spoken language, especially in Iroquoian, to provide very strong motivation for the grammaticization of a special construction.

Yet most of the modern Iroquoian languages have grammaticized conjunctions. Adverbs that until recently served to relate new information semantically to the rest of the discourse have evolved into conjunctions

that specify the internal syntactic structure of sentences. The sequential ('then') or additive ('moreover, also') features of their meaning have receded so that the particles can now link inherently unordered, parallel entities. Since these developments represent separate innovations in each language, the forms do not necessarily match across the family.

The grammaticization of these conjunctions seems to have been prompted by a combination of external and internal factors. It apparently occurred around the same time in most of the languages, the late nineteenth or early twentieth century. This was a period when bilingualism in French or English was becoming generalized.² Among the modern languages cited in earlier sections, Wyandot exhibits the least formal marking of coordination. The Wyandot texts were recorded in 1911–12 from speakers born between 1838 and 1859, two of whom spoke little or no English. In all of the other languages, the external influence of bilingualism appears to have triggered the development of conjunctions, although of course it was not necessary that every speaker be bilingual in order for the construction to enter the languages.

At the same time, the internal structure of each language played a role in facilitating the borrowing. The absence of a grammaticized conjunction provided a niche in each for the newly interpreted markers to fill. Internal factors played a further role in shaping the new coordinating constructions. The usual position of the particular adverbial exploited in each language for a conjunction affected the configuration of the new structure. In Mohawk, for example, an adverbial meaning 'then' was selected, a particle that had formerly appeared near the beginning of clauses. The new Mohawk conjunction now appears in the same position, at the beginning of the final coordinate constituent. In Cayuga, an adverbial meaning 'too' was selected, a particle that generally follows the constituent it modifies in that language. The new Cayuga conjunction now appears in a similar position, following the final constituent in coordinate structures.

External factors have further affected the extent to which the new constructions have become established within the languages. Speakers' attitudes toward their European neighbors have made a discernible difference. Coordination by intonation alone is still especially prevalent in Onondaga, and the conservatism of the Onondaga with respect to outside influence is well known. Conjunctions are noticeably more frequent in Mohawk, especially that spoken at Caughnawaga. These people have a long history of functioning enthusiastically and successfully in both their own culture and that of their non-Indian neighbors.

The strikingly different patterns of syntactic coordination in the modern Iroquoian languages are thus the result of a complex set of interacting factors, both internal and external. Internally, each contained an available niche for such a structure, since none originally contained coordinating constructions. This may have been due in part to the external circumstance that none had a strong literary tradition. The sudden grammaticalization of coordination appears to have been triggered by another external factor: language contact. The shape of the new construction in each language depended on an internal factor: the particular particle exploited as the source of the new marker. Finally, the external factor of social attitudes continues to affect the degree to which the construction has been solidified.

Notes

1. I am especially grateful to the following speakers who generously contributed their expertise in their languages: Mrs. Leatrice Beauvais, of Caughnawaga, Quebec, for Mohawk; Mrs. Margaret Edwards of Ahkwesahsne, New York, for Mohawk; Mr. Sonny Edwards of Ahkwesahsne, New York, for Mohawk; the late Mr. Elton Greene, of Lewiston, New York, for Tuscarora; Mr. Reginald Henry, of Six Nations, Ontario, for Cayuga; Mrs. Myrtle Peterson, of Allegany, New York, for Seneca; Mr. Stanley Redbird, of Rosebud, South Dakota, for Lakota; Mr. James Skye, of Six Nations, Ontario, for Cayuga; Mrs. Martha St. John, of Sisseton, South Dakota, for Dakota.
2. The earliest documented systematic use of conjunctions in Mohawk, Onondaga, Seneca, and Tuscarora, is in the texts recorded by J. N. B. Hewitt. It is possible that these documents represent the very beginning of the grammaticalization of the construction. Because all material had to be dictated slowly enough to be written by hand, phrase-by-phrase, speakers may well have used more linking particles than they did in normal speech. We also know that Hewitt, whose first language was English, who knew Latin and Greek, and who valued formal literary style highly, spent considerable time polishing the texts after they were transcribed. He may have systematized the use of conjunctions somewhat in the process.

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***Do* and *tun*: A semantics and varieties based approach to syntactic change**

Dieter Stein

0. This paper looks at the interplay of internal and external forces in the development of English *do*. It will concentrate on that part of its development which took place roughly from 1500 to 1700 and which resulted in, amongst other things, the appearance of obligatory *do* in questions and negation. But it will also include the development, during that period, of declarative *do* and *do* in dialects. It will essentially present data and argumentation taken from the wider context of a study of syntactic change (Stein 1990) and also of related morphological change, but it will concentrate on a limited set of data and also have a different focus on some of the data and issues. Because of this selectivity with respect to the master study, it is inevitable that there will be many loose ends where the reader would wish to have more of the evidence presented. This simply cannot be helped without overextending the scope of this paper. Finally, with respect to identifying external or internal forces, the policy will be to analyze the process as the data are presented. It will become clear that different aspects of the process described see the operation of different types of external and internal factors. It should be clear from the outset that this is not a paper advocating a monoculture of one or the other factor; it tries to unravel their dialectic.

1. Although the primary topic is the history of English *do*, emphasis will also be laid on the comparison of English *do* with its German cognate *tun*. Although there are certainly differences between German and English in, e. g., the surface explicitness or word order, there is no reason to assume that in the area relevant here there are differences that would make a comparison meaningless. The main difference between German and English is the existence in English only of a grammaticalized *do* in questions and negation, as well as the existence of a stressed *do* in English:

(1) *I do like it*

contradicting a suggestion that I might not like it. Semantically, this is an epistemically contrastive *do*. Obviously, some sort of process must have taken place in English that has not occurred in German. Therefore, whatever factor(s) is/are identified as having been at work in English should a priori be assumed not to have been at work in German.

Historically the developments of *do* and *tun* show some interesting parallels and divergences.

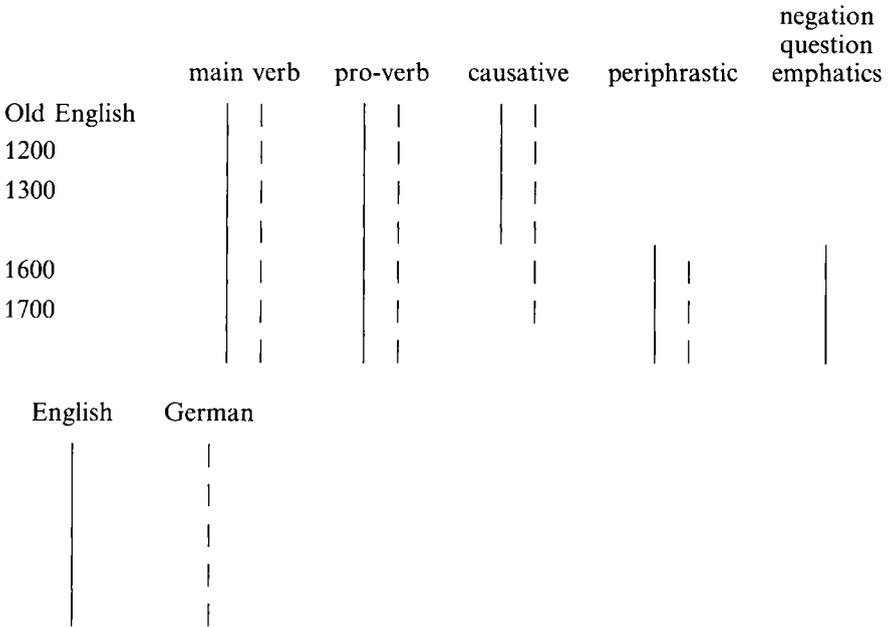


Figure 1. Presence of *do/tun*-uses in English and German

Since main verb uses, proverbial and question, negation and emphatic (henceforth questions, negation, emphatic *do*) uses are self-evident, here are two examples of causative uses:

- (2) *thanne he dide the clerk of the council seek it (Paston Letters, no 432)*
- (3) *I tun evr wirdikeit ze wizzen (from Weiss 1956:117)*

The parallels are:

- availability of causal *do*
- availability of proverbial *do*

(4) *I like New Brunswick. So do I. (Ich tu es auch.)*

– availability of main verb use

(5) *I do the deed. (Ich tu die Tat.)*

Major parallels exist also on the varieties level. Both languages have a great variety of uses which have traditionally been very resistant to all attempts to describe their meaning, except the clearly habitual ones, although their existence has not been in doubt. The normal reaction has been that there is no meaning at all and that *do/tun* forms are a mere syntactic alternative. These uses will simply be called “dialectal” ones, such as exist in varieties which are not standard languages. Such dialectal uses existed in southern German and English up to – say – 1700 in historical and modern English and German dialects and, one echelon higher up, in “educated” spoken standard in southern German and predominantly British English (Nevalainen – Rissanen 1985). Their distribution especially in spoken Modern American English (airline-stewardess’ speak: *We do now land in San Francisco*) makes it seem likely that this latter non-dialectal Modern English spoken use is at least to some extent politeness-induced.

This rough overview of the historical and modern English and German situation raises three questions:

1. Why does English have *do* in questions, in negation, and in emphatics and not German?
2. What is the structure or semantics of the dialectal uses (the historical ones and the present-day ones)?
3. Why do German and English dialects have *do/tun* and why do the written standard languages not have them, or why have they not adopted or dropped them?

The answer to questions (2) and (3) will make reference to semantics and varieties. It is obvious that formal syntactic theories such as that of Lightfoot (1979) are a priori unable to account for the varietal facts mentioned in questions (2) and (3), even if they do mention the occurrences of *do* in dialects (Hausmann 1974). With reference to the first question, an important a-priori argument against the traditional word-order argumentation as espoused by Ellegård (1953) and later workers in the field up to recent publications (e. g., Tieken 1987) has been formulated by Ard (1982: 458):

So the “structural demands” of present-day English are really an after-the-fact explanation. That is, the structural requirements for *do*-support arose

after and in consequence of the decreasing popularity and possibility of alternative constructions. As long as these alternative constructions were possible, then there was no requirement for a morpheme like *do* to “bear” the tense. Thus, these structural demands cannot serve as an explanation of why *do* became obligatory in negatives and most questions.

Furthermore, the problem is not to explain the origin of *do* in negatives and questions, Ellegård (1953) and Visser (1969) agree in that the auxiliary *do* originated in much the same way in all sentence types, declarative and interrogative, affirmative and negative. The problem rather is to explain why *do* became popular in negatives and questions and less popular in affirmative declarative sentences.

The statement in the above citation highlights the central problems to be addressed here. It will be argued here that, with respect to question (1), especially as formulated in the passage quoted from Ard (1982), the evidence to be presented points in the direction of a mixture of internal and external factors.

2.1. To start with question (1): which were the factors that caused English to have *do* in questions, negation, and emphatic or stressed use and which cannot be identified for German?

A first important datum is the very suddenness of the process that ended in the restructuring that associated *do* with questions, negation, and emphatic *do*. It was a gradual, one-dimensional process that eventually resulted in a grammaticalization, but, as the following data will show, it was more in the nature of a sudden event between 1550 and 1600, with negation following around 1650–1700. This suddenness alone is another fact that makes for rough riding for any syntactic-based theory. As figure 1 shows, *do* and *tun* had been in the language since Old English and Old High German, with the periphrastic (causative and non-causative periphrastic) uses surfacing in the thirteenth century in English and in the twelfth century in German (Denison 1985; Weiss 1956). Without going into details here, the late Middle Ages see a dramatic rise of the use of both *do* and *tun* in the non-causative periphrastic uses (Weiss 1956: 180: a “pathological” increase). The rise is observed later in English than in German (Erben 1969: 46). It has essentially taken place in all syntactic contexts, although led in English by negative questions.

If German and English developed in different directions from 1600 onwards, the obvious procedure to embark on is to look more closely at the data from that period to see whether a variational pattern is discernible or evolving which contains the special directionality of the English development. With this aim in mind it comes as a happy coincidence of

Occurrence of Periphrastic Do 1400 – 1700

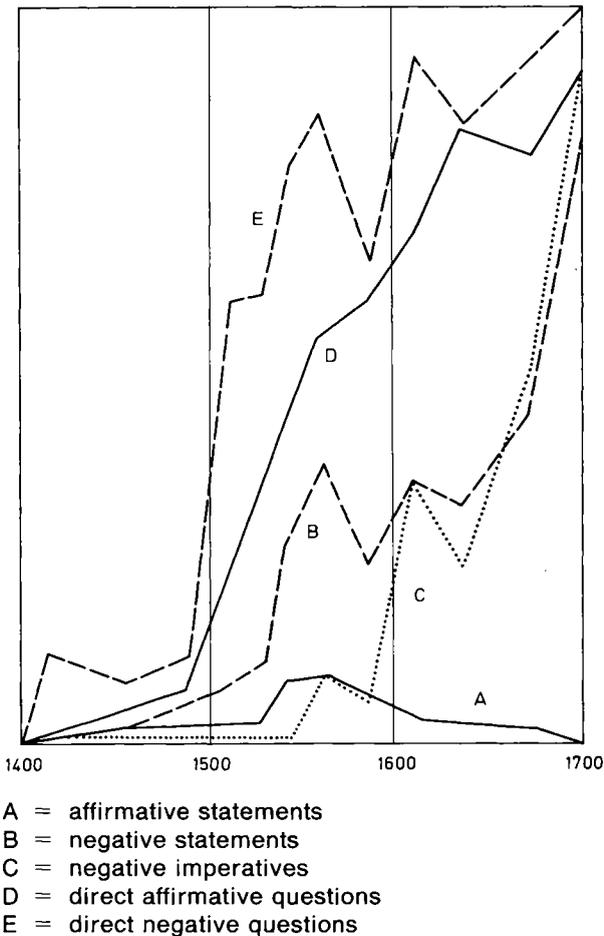


Figure 2. Frequency (%) of *do*-forms in different sentence types, according to Ellegård's diagram (1953: 162) in the version adopted by Mustanoja (1960: 608)

literary history to have available from 1600 onwards a number of dramatic texts with absolute numbers of occurrences which allow the necessary subcategorizations for a variational analysis. The essential difference to Ellegård's study (1953) lies in the utilization, in dramatic corpora, of major numbers of second-person contexts, a category that will be shown to be the most important one in the development to be described.

Ellegård included hardly any dramatic corpora at all on the grounds that “poetic” language might have “poetic” or “literary” qualities that could render the result of the analysis invalid. I have shown (Stein 1985) that the process that leads to the grammaticalization of *do* with questions, negation, and emphatic *do* is not differentiated by genre such as between verse and prose. By contrast, the rise in all syntactic categories is a stylistically induced matter (Stein 1990).

2.2. The most suitable initial corpus for the study of subcategorical differentiation of periphrasis frequency is the Shakespeare corpus, extending from ca. 1590 to 1611, in which some 20,000 verb phrases were subcategorized by person/tense categories and the percentage of periphrastic forms calculated. The following subcategories and abbreviations are used in figures 3 and 4:

<i>dst</i> :	second person singular preterite in co-occurrence with the personal pronoun <i>thou</i>
<i>d</i> :	all other preterite forms, often with subdivision into verbs with strong or weak preterization
<i>st</i> :	second person indicative in co-occurrence with the personal pronoun <i>thou</i>
<i>you</i> + 0:	the present indicative unmarked for person, in co-occurrence with the personal pronoun <i>you</i>
non- <i>you</i> + 0:	all other such indicative forms except third person indicative present
<i>s</i> :	third person indicative present

Figure 3 subcategorizes the data for the preterite in the Shakespearean corpora into person-marked second person (*thou receivd'st* vs. *thou didst receive*), non-person-marked second person (*you received* vs. *you did receive*). In addition, there is subcategorization by weak or strong verbs and by sentence type. Figures 3 and 4 show some key findings which must be the starting point for a historical hypothesis. Periphrasis frequency correlates with the size of the consonant cluster. With a word-final structure *d* + *st*, periphrasis is already categorical in Shakespeare with both question types. The second important finding is that *you* follows *thou* in *wh*-questions. This correlation of *do*-frequency with consonantal cluster size and the closeness of *you* and *thou* is illustrated in figure 4 with data for the two question types lumped together. It can be seen that in both present and past the *do*-periphrasis is led by categories with consonantal clusters in the finite form. In the present this is *st*, with a clear advantage (three times as many periphrases, not shown here) for a

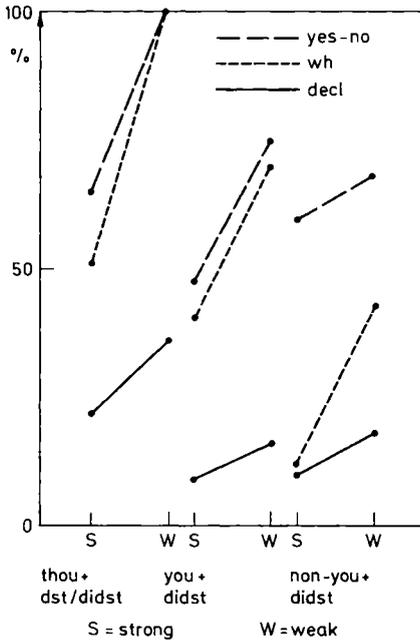


Figure 3. Periphrasis frequencies in the Shakespeare corpus preterite

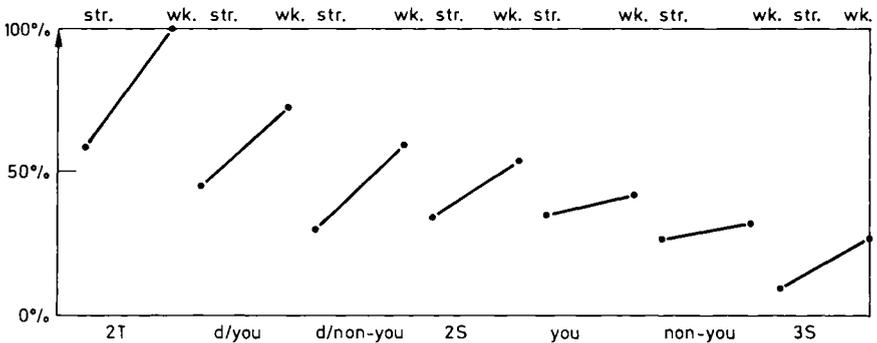


Figure 4. Periphrasis frequency for weak and strong verbs, all person categories of present and past, composite values for both question types

structure consonant + *st* over vowel + *st*. Again, in the present, *you* follows *thou*, the semantically similar context. It should be emphasized that this parallelism of *thou* and *you* in syntactic behavior can be demonstrated in a variety of ways, independently for present and past, and not only for the Shakespeare corpus.

The obvious hypothesis to derive from the data is that a structure of *do/tun* periphrasis happened to be frequent – for other reasons – in the language(s) in the late sixteenth century and was used for all kinds of purposes (see below). It was also increasingly employed to avoid the phonotactically undesirable word-final consonantal cluster that arose in the use of the second person pronoun *thou* (*thou* + verb + *st*). The reason why the development in the preterites was faster is the additional *d* as the exponent of the preterite. Weak verbs always have more periphrases (see figure 4). This original use of *do* as a syntactic avoidance strategy was extended to semantically similar *you*, which is shown by the statistical behavior of that person category intermediate between *thou* and all other person categories. This generalization to semantically similar, but no longer motivated, *you* contexts meant that the great majority of spoken tokens were realized in periphrastic form; which is exactly the point at which grammaticalization and syntactic re-analysis take place: questions in the second person are taken to be associated with *do*. At the same time, this association provides the necessary quantitative momentum for a generalization of *do* to other tense-person categories.

Another important aspect of the internal variational structure provided in figure 3 can be seen in the different behavior of the individual syntactic contexts. While all sentence types are susceptible to the phonotactic factor, there is a distinctly graded sensitivity to the phonotactic factor from *yes–no* questions with highest sensitivity via intermediate *wh*-questions to declarative sentences, which are least sensitive. This finding is recapitulated in another area where undesired inflectional forms and *do*-periphrasis are involved (Stein 1987). The critical role of *wh*-questions is seen in figure 3, which shows the Shakespearean corpus-internal rise in periphrasis frequency with *do* in the *you* contexts: the process *in vivo* which leads to a state of affairs in which most questions are realized by *do*.

2.3. That the empirical findings presented in the previous section are not confined to the Shakespearean corpus becomes clear from a look at figures 5 and 6. These graphs give periphrasis frequencies for a number of earlier and later corpora, which are here represented by numbers only.

The corpora range from ca. 1590 to 1700. Corpus 10, for instance, is Shakespeare, the latest corpus is the Restoration playwright Congreve (1693–1700). To give an example of how figure 6 should be read, corpus 13 (Dekker, 1600–1657) has 80% of all eligible verb phrases realized by *do* in the second-person marked preterite (*thou did'st come* vs. *thou camest*), 55% of all person-marked weak preterites (*received* vs. *did receive*) in all person categories, 15% for the strong preterites (*came* vs. *did come*), 55% in the person-marked present (*thou dost come* vs. *thou come'st*), 30% in the second person present (*you do come* vs. *you come*), and 10% in the third singular (*he does come* vs. *he comes*).

Figures 5 and 6 demonstrate that the prediction derived from the analysis of the Shakespearean data is indeed borne out diachronically by showing

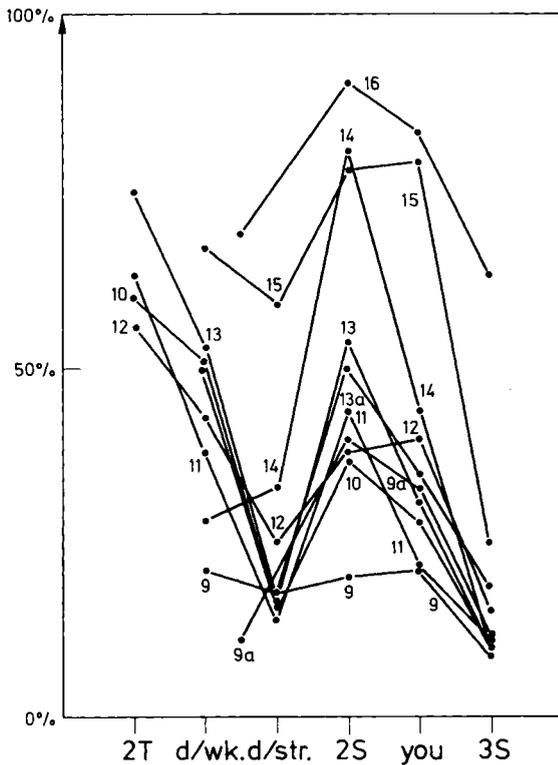


Figure 5. Periphrasis frequency, *Wh*-questions, later texts

so that figures for this category tend to become statistically unreliable with greater deviation in both directions.

It will also be noticed that the index numbers of corpora do not start before nine. To cut a long tale ruthlessly short, the earlier corpora either do not show the subcategorically differentiated pattern or show a development that is related to the process discussed here.

It should be pointed out that the findings presented in figures 5 and 6 present fascinating data for classical issues in variation theory, such as the preservation of relativities between categories while the pattern as a whole moves towards 100%. Is one to suppose that these statistical relativities are being stored and that some sort of subcategorically differentiated statistical book-keeping is taking place? Or is some kind of storage by a psychological correlate to implicational scaling involved?

Another question concerns the very notion of syntactic change: from what quantitative or qualitative point onwards can one speak of syntactic change if the value of a category moves higher from one corpus to a chronologically later one? (Diachrony is not always in step with chronology!) From what percentage onwards? Or does the answer have to be: from the point when a first restructuring is hypothesized to have happened (questions + second person *do*)?

2.4. Summing up, the reason why English has a grammaticalized *do* in questions, negation, and emphatic *do* is a grammaticalized or syntacticized preference to use *do* as an avoidance strategy, which was generalized to *you* early on and whose syntactic distribution was determined by a syntactically graded sensitivity to phonotactic undesirability of word-final clusters. This synchronic pattern of stronger and weaker periphrasis as represented in figure 7 determines at the same time diachronic sequencing. The further away a context or category is located from the center, the later it will reach obligatoriness with periphrasis. Figure 7 requires more comment in two respects. Negatives and emphatics will be taken up below. In addition, there is an internal differentiation of progressiveness within *wh*-questions, such that, e. g., locative questions are diachronically much faster (and consistently so over several corpora) than direct object questions. Without going into more detail here, it will simply be stated that semantic similarity (peripherality or centrality to the proposition) seems to be a determinant of the internal structure in the area of *wh*-questions.

What, then, were the factors that steered this process in English and which we must suppose not to have been at work in German? There is

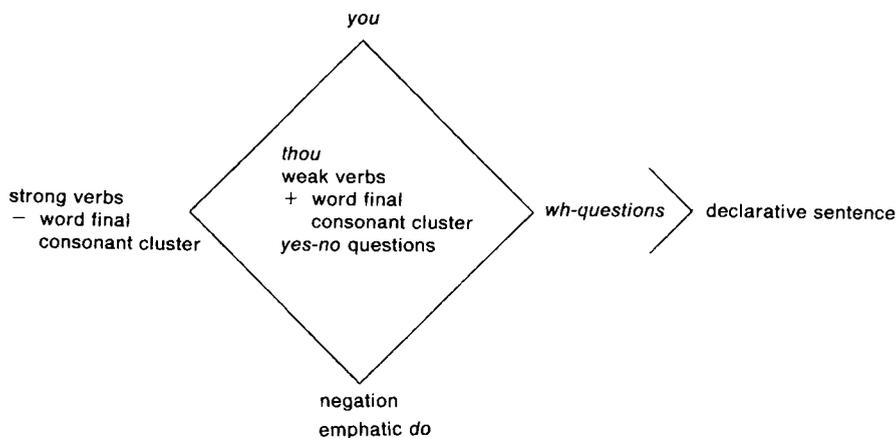


Figure 7. Center, periphery and directionality of *do* spread in questions

first of all the phonotactic factor, i. e., the undesired inflectional *st*. While in both English and German the development goes in the same direction of weakening and loss of endings, the process is, and has always been, much more advanced in English, presumably aided by repeated language contact. German, by contrast, retains much more of its inflectional morphology. Thus, there is an internal factor present in English that was not operative to such an extent in German.

The second factor concerns the social prerequisite for the generalization of *do* as an avoidance strategy from *thou* to *you*. The prerequisite for treating two pronominal contexts alike is that the social contrast between them must have been levelled. As is well known from the sociolinguistic history of English, this is what happened in the sixteenth century, connected with the rise of the middle class and with everyone wanting the “better” pronoun *you*. This eventually led to *thou* acquiring a marked and even stigmatized status. Neither of these factors, the external social and the internal linguistic, phonological one, was present in German. Both factors coalesced in triggering a rapid development in the shape of a grammaticalization of *do* with questions, negation, and emphatic *do* around 1600. Another precondition was, of course, the availability of *do* (and, for that matter, *tun*) with a purportedly meaningless use structure that was fertile ground for such a catastrophe, i. e., the fast grammaticalization of *do* in questions within 50 years.

3. Before embarking on a treatment of the structure of these uses, a brief comment on negation and emphatics is necessary. By “emphatics” an epistemic contrastive use is meant, as in:

(6) *I am going.*

as against an implicit or explicit suggestion that I might not be going, i. e., the truth of the proposition is at stake. The rise of *do* in negatives (in the latter half of the seventeenth century) and in emphatics is obviously not directly related to the processes involved in causing the grammaticalization of *do*. They attain a quantitative level of use (80%) that is near-categorical about eighty years later. If there is a separate motivation for the rise of *do* in negations and emphatics, that motivation must again be present in English and not in German, since German did not develop comparable uses with *tun*. The clue seems to lie in the fact that negation and emphatic *do* share with *yes–no* questions a focus on epistemic meaning. In all these uses *do* appears in a structure whose semantics topicalizes the truth of the proposition. The appearance of *do* in negation and emphatic *do* is simply an extension of the basic meaning of *do* – epistemic contrastiveness – into another area, possibly triggered by a varieties factor. A meaning like epistemic contrastiveness is congenial to the meanings expressed in linearized writing, where truths are juxtaposed, such as was the case in the emerging seventeenth-century written-English standard with the stylistic ideal of a mathematical, logical and “plain” progression of ideas. It can be argued that the rise of this variety may have been instrumental in triggering a small extension (a “motivated extension” in Lakoff’s [1972] terminology) of a pre-existing basic meaning. It is a significant fact that the same varieties condition did not lead to this result in German: in that language the basic epistemic contrastive meaning had not come about as a result of a catastrophic grammaticalization.

4.1. If *do* could be used in an “empty” function to syntactically bypass undesired consonantal clusters, then *do* must have had a very fuzzy semantics. In fact, in what follows it will be argued that the very nature and structure of dialectal (see section 1) *do* uses are the reason why these uses disappeared from, or did not surface in, the standard languages. It might be thought that the grammaticalized questions, negation, and emphatic *do* uses might, by way of some sort of reciprocity, have caused the disappearance of the dialectal uses from “the language”. But then, the dialectal uses did also disappear from German, where no question,

negation, and emphatic *do* uses exist. So some other reason might have been at work. In addition, the phrasing “disappear from the language” is incorrect, since the dialectal uses did not disappear from the language as an ensemble of varieties at all, but, rather, did not surface in the variety that is termed “written standard” in both languages. With regard to modern dialectal sub-standard uses this applies to German as well as to English, although it applies to British English more than to American English. The newly emerging written standard did not incorporate the dialectal uses. The reason for this has to do with the structure and semantics of these uses in the sixteenth century (and earlier), which are of the same non-epistemic type.

The thrust of most attempts to describe the Renaissance dialectal uses in English (to my knowledge none yet exists in German) has been that *do* does not have any meaning at all (e. g., Ellegård 1953: 209: “It was completely synonymous with the simple verb form”). To the extent that there have been attempts at classification, these have been based on formal syntactic criteria (e. g. Trnka 1930), describing uses formally in terms of the position of *do* relative to other elements of the sentence. By contrast, it can be shown that there were not only semantically truly empty uses, but also clearly “semantic” functions. The latter emerge to the eyes of the analyst only if the view is not narrowed to propositional meanings as the result of a typical written-language bias, and if the specific pragmatic-based, extremely polysemous and non-obligatory meaning and use structure of particles and discourse markers is kept in mind as a possibility.

The following discussion will of necessity be extremely simplified and exemplification will have to be restricted to a bare illustrative minimum.

4.2. To start with “semantic” uses, consider the following example: there is one layer of uses from the earliest occurrences onwards in which *do* functions as a marker of discourse prominence, or of discourse “peak”.

(7)

¶ A AUTEM MORT. Cap. 18.

THese Autem Mortes be married wemen, as there be but a few. For Autem in their Language is a Church; so she is a wyfe married at the Church, and they be as chaste as a Cowe I haue, *that* goeth to Bull euery moone, with what Bull she careth not. These walke most times from their husbands companie a moneth and more to gether, being asociate with another as honest as her selfe. These wyll pylfar clothes of hedges: some of them go

with children of ten or xii. yeares of age ; yf tyme and place serue for their purpose, they wyll send them into some house, at the window, to steale and robbe, which they call in their language, Milling of the ken ; and wil go *with* wallets on their shoulders, and slates at their backes. There is one of these Autem Mortes, she is now a widow, of fyfty yeres old ; her name is Alice Milson : she goeth about with a couple of great boyes, the yongest of them is fast vpon xx. yeares of age ; and these two *do* lye with her euery night, and she lyeth in the middes : she sayth that they be her children, that beteled be babes borne of such abhominable bellye.

Example (7) comes from a contemporary account of criminal practices in Harman, *A Caveat or Warening* (1567). The only instance of *do* occurs at the end of the description, in a passage which describes what the author wants us to see as the most scandalous aspect of the whole text. Very often this type is the only occurrence in texts or passages, frequently of narrative nature, such as Tyndale's Bible (1525). Another prominent type of use is represented in examples (8), (9) and (10).

- (8) *for with great admiration we do there seem to behold* (Day, *The English Secreterie* [1586: 44])
 (9) *I did long since perceiue* (ibid., p. 48)
 (10) *In faith, my lord did quit him so courageously as I wist man do* (Paston no. 65)

What these occurrences have in common is that they express surprise that the proposition expressed should be true. They go beyond mere truth in that they express a subjective feeling or evaluation. In example (10), for example, the author expresses his subjective reaction and his surprise that "my lord did quit him" and that he "quit" him in such a courageous way. In this type of use, *do* is tied to the expression of evaluation or surprise in the face of some aspect of the proposition. The co-occurrence of adverbial expressions of degree with *do*, as in examples (8) to (10), corroborates this interpretation.

Traditional word-order hypotheses have made much of this co-occurrence with adverbials. However, this correlation has to be explained in semantic terms. It should also be pointed out that the rise in *do* frequency cannot be due to formal, positional factors, since in the sixteenth century

the total number of cases with adverbs is fewer than 50%, and earlier, in the fourteenth and fifteenth centuries, e. g. in the *Book of London English* (1384–1425) or the *Paston Letters* (1422–1509), is hardly more than 10%. It must also be stressed that the numerical increase of *do* in the sixteenth century took place in all syntactic contexts, including declarative sentences (three times the number). The fact that the rise appears only small in figure 2 is an artefact of text selection and of great differences of frequencies in stylistic text types (see below). The argument applies analogously to inversion, which, like left-shifting, is generally associated with attention-seeking and emotional expression. The occurrence of *do* with both structures is a consequence not of syntactically motivated preferences, but of the converging semantics of adverbials, inversion and *do*. There is no doubt that the existence of a pattern *AUX* + verb provided a pre-existing pattern, but the internal evolutionary pattern provides no evidence that this was also the sufficient condition.

The uses discussed up to now, as a marker of discourse prominence and of intensity, have in common that they are both expressions of subjective reactions to states of the world which are somehow unexpected, i. e., are in contrast to expectations. This is where the semantic bridge to epistemic contrastivity is to be found. If we look at example (11)

- (11) *Ei tust du nicht deine Kappe anziehen?*
‘Aren’t you going to put on your cap?’

from spoken dialectal, south-western German, the use of *tun* here is of the same semantic type in that it is an expression of surprise. As another marker of intensity it contains the exclamative marker *Ei*. This example is adduced in order to show that present-day dialectal uses are essentially the same as those in sixteenth-century English.

- (12) (At the end of a longer oral narrative as the climax:) *Geht der doch hin und tut ihm eine runterhauen*. Literally: ‘He goes there and does slap his face’; paraphrase: ‘You will never believe what he did; he goes up to him and slaps him in the face.’

Example (12) shows that, as in Early Modern English, peak marking and intensity uses often coincide. The example also contains a use of *doch* that shows interesting parallels with English *do*. Both the German particle and the English auxiliary show uses as markers of epistemic contrastivity and, at the same time, of subjectivity. Again, it is very suggestive to see common semantic ground in the feature “contrastivity” and to account

for the polysemy by appealing to Lakoff's (1972) concept of "motivated extension".

There is a class of occurrences in modern German dialects which at first sight does not seem to be relatable at all to the uses discussed up to now.

- (13) *Morgens tun wir zuerst die Kartoffeln schälen, dann tun wir in die Kirche gehen ...*
 'In the morning we always start by peeling the potatoes, then we go to church ...'
- (14) *Da tuet er geschwin logu, und da tuet er obna d schieber etue und unna btue de tir.*
 (Dann schaut er [der Bäcker] geschwind [in den Backofen hinein], und dann öffnet er oben die Schieber und schließt unten die Türe.)
 'Then he [the baker] quickly looks [into the oven] and then he does on the upper side open the damper and at the lower side close the door.'

These examples show aspectual uses of *tun* in south-western German (13) and northern Italian German (Monte Rosa Dutch) (14). *Tun* is used here in an habitual aspectual sense in the same way as the modern south-western English uses (Ihalainen 1976). It has, however, been pointed out (Labov 1984) that there seems to be a close connection between markers of aspect and intensity, in that the same expressions tend to have both meanings. It is surprising, though, that there are virtually no clearly habitual occurrences of *do* in the large number of Early Modern texts that were investigated. This may well be connected with the lowly social status of this aspectual marker (Poussa 1982) that did not surface in writing.

A similar "primitive" connotation seems to apply to the irrealis use of *do* and *tun*.

- (15) *Ich tät ihn holen gehen.*
 'I did [= would] go and fetch him.'
- (16) *I dead schreim.*
 'I did (= would) write.'
- (17) *Daaden S' mia den Wagen wegschiabn?*
 'Would you help me to move the car?'

Examples (16) and (17) from Bavarian are taken from Eroms (1984: 128), example (15) comes from south-western German. This type of usage is

also observed in Early Modern English. In this semantic area, too, dialectal uses are the same in Early Modern English as in Modern German and English dialects.

The empty uses of *do* are best represented by the following examples:

- (18) *And surely in my judgement he reaped the right reward of his doating desire, for there only grafts of grief must need grow, where such raw conceit doth set and such rank consent doth sow.* (*Petite Palace*, ed. Gollancz I, 122)
- (19) *Doth wit rest in strange words, or else standeth it in wholesome manner.* (Wilson, *Art of Rhetorique*, 164)

In example (18) the last clause (“... *where* ...”) is a prototypical example of a stylistic ideal of courtly high literature (Euphuistic writing) that dominated large areas of English writing in the sixteenth century. An important aspect of that ideal was rhythm, the desire to achieve a proper balance of stressed and unstressed syllables. Empty *do* was an ideal instrument to achieve this desired rhythmical structure. This rhythmical use went together with emphatic expression, as discussed earlier under the heading of intensity, and accounts for the majority of occurrences of *do* in the sixteenth century, in particular for much of the dramatic increase of *do* in the sixteenth century. Texts differ vastly (between 50 and 1%) depending on whether or not they are Euphuistic in stylistic character or not. One of the classical pieces of Euphuistic writing – *Pettie's Petite Palace* – in fact contains so many occurrences of *do* that Ellegård (1953) actually gave up counting them. *Do*, at the end of the sixteenth century, was, amongst other things, a style marker of a certain type of courtly literature.

Eine andere Haupteigentümlichkeit ist die Emphase, vor allem durch Inversion aller Art erzeugt: “A founder it had, whom, for mine own part, I think incomparably the wisest man that ever the French Church did enjoy, since the hour it enjoyed him” (Hooker, auch dieser Satz ist stark pleonastisch). Emphase wird auch durch charakteristische Partikel und Kurzsätze erzeugt, z. B. “faith”, “pray”, “by my troth”, “I assure you”, auch durch Superlative, Ausrufe usw. Aber die langen Perioden sind schon in diesem Stadium der englischen Prosa bis zu einem gewissen Grade organisiert durch schematische Strukturen, nämlich Parallelismen, Antithesen, Zwei- und Dreigliederfiguren, oft mit Alliteration. (Borinski – Uhlig 1975: 78)
[Another main characteristic is the expression of emphasis which is mainly produced by all kinds of inversion ... [this sentence too is heavily pleonastic]. Emphasis is also produced by characteristic particles and short phrases ... and by superlatives, exclamations, etc. The long periods, however, are already at this stage of English prose to a certain extent organised by

schematic structures such as parallelism, antitheses, two- and three-member-figures, often with alliteration.]

This passage characterizes the main traits of sixteenth-century style, which were also part of Euphuism. Example (20) gives a typical example of this type of literature.

- (20) *Nay, there was never bloody tiger that did so terribly tear the little lamb, as this tyrant did furiously fare with fair Philomela.* (*Petite Palace*, ed. Gollancz I, 60)

Another typical feature is the appearance of *do* (as in example 19) in rhetorical questions, most of which are also negated. This accounts for the early high values for negated questions in figure 2, a feature that is induced not syntactically, but rhetorically.

Another pervasive feature of sixteenth-century literature, also quoted in the above citations, is antithesis, where *do* helps create a formal correspondence between the clause members. Finally, *do* is used to “sort out” the syntax of very complex, Latinate sentences by authors such as Thomas More and other religious writers:

- (21) *But the heretics misconstruing the scriptures of God, by their false doctrine and erroneous opinions and pestilent heresies doth sle (slay) the souls of the Christian people.* (Fisher, *Sermon*, 3)

Do has here what may well be called a “signpost” function, signalling to the reader the final advent of the verb.

There is, then, in the sixteenth century a complex of empty uses which can easily be shown by “contrastive” evidence from different styles and from stylistically different passages within the same text to be a consequence of exigencies of stylistic ideals or constraints. As these ideals collapsed, so did the figures for *do*. It is clear that this type of empty use is dependent on the particular exigencies of stylistic ideals at a particular time.

There are, however, empty uses which are not dependent on stylistic factors, but are simply devices to shift the desired lexical item into sentence-final focus position. Since Nevalainen – Rissanen (1985) have demonstrated this for standard colloquial (predominantly British) English, exemplification can be confined to two dialectal examples from south-western and Bavarian German.

- (22) *Dads es heid no fuaßboischbuin? – Schbuids es heid no Fuaßboi?*
(Eroms 1984: 130)
‘Will you play soccer today?’

- (23) *Er tut nicht singen, er tut springen.*
 ‘What he does is not sing, but jump.’

Looking back at the use structure of *do* in the sixteenth century and in a dialectal situation generally, it is plausible that this type of loose and fuzzy use structure was a fertile ground for the phonotactically induced use to develop and eventually to be “derailed” into a grammaticalization.

It can only be pointed out in passing that in German dialects there are at least two other comparable processes, where phonological preferences are allowed free play in a dialectal situation, with no normative pressures to inhibit the operation of such “natural” forces (Rohdenburg 1986), and where this has led to a similar grammaticalization of phonologically determined syntactic preferences involving *tun*.

There also seems to be a range of empty uses which depend on the structural and stylistic make-up of a language at a given moment. As for the range of semantic values, there seems to be a closely related, recurrent ambit of meanings, centered around a core notion (“idealized cognitive model” in Lakoff’s [1972] terminology) of contrastivity that are activated under dialectal variational conditions. Although the first impression, especially after purely syntactic analysis (see Hausmann 1974, who mentions, but does not discuss, the dialectal uses), might be that anything goes, it is clear that *do* and *tun* display recurrent and semantically related meanings – under the right varietal conditions.

As a final note to end this section, one may wonder why *tun* occurs much more frequently in German dialects than *do* in English ones. *Do* in English seems generally much more frequent even in its proverbial and main verb uses. Two reasons may be cited here. The stronger and longer feudal heritage of Germany, making for stronger local feelings, may well be an “external” factor. An “internal” one was certainly the greater dialectal differentiation of Germanic tribes on the continent compared with the relative homogeneity of the Anglo-Saxon invaders of England.

To come to the third central question: why were the dialectal uses not taken over into the written standards? The possible suggestion that speakers cannot have both sets of forms in their competence is contravened by speakers of British English who have both grammaticalized questions, negation, and emphatic *do* and dialectal uses in their competence. Since the latter have not emerged in both English and German standards, the factor responsible must reside in the nature of the varieties themselves. The functions of the emerging written standard as “intellectualized” varieties have typically to do with the expression of epistemic

meanings. Conversely, the expression of subjective meanings, such as intensity and emotion, is typically banned from being expressed in written language. An expression like ... *quit him so courageously as I wist man do* as in example (10) is not prototypically written language, and certainly not part of the linguistic decorum of the scientific-minded, neo-classical, and Augustan prose of the seventeenth and eighteenth centuries. The banning of expressions of subjectivity from the official language was a hallmark of normative linguistic efforts of that age. It went against the grain of efforts that strove for “mathematical plainness” of style. If we had to sum up the transition from the sixteenth to the seventeenth and eighteenth centuries it would have to be called the transition from rhetoric (with its exalted emphatic styles) to logic.

The next important aspect in accounting for the non-appearance of the dialectal uses in the written standards of the time is connected with the fuzzy use structure itself, with empty and semantic uses co-existing in the language. This went against the grain of the neo-classical sense of order (as it seems to have to do with modern analysts’ written language bias). The seemingly ruleless vagaries of *do* (and *tun*) could not be tolerated in an age that wanted to see rules and order. Dr. Johnson’s (1755) expressed aim with his *A dictionary of the English language* was to “fix” the language, i. e., to establish firm correspondences between meaning and form.

The effect of a third factor is difficult to gauge, but the history of the German particles suggests that generally the “oral feel” of dialectal *do* and *tun* may also have been an influence. The particles with their largely pragmatic, context-dependent and non-autonomous semantics are not thought to befit written language in German (see Schlieben-Lange 1987). The fact that German particles overlap considerably in their meaning with *do* suggests that this decorum factor may well have been at work too.

It seems, then, that the combined effects of these three factors must have worked together in eliminating *do* and *tun* from the emerging written standards, to the extent that these meanings were not of an epistemic nature congenial to the functions and decorum of written standards, such as emphatic *do* was.

5. To what extent has that segment of a larger evolution that I have dealt with in this paper been determined by internal or external processes? To start with, any hypothesis that would try to account for the section of *do* development discussed here by means of one type of factor only –

be it social, social-historical, natural, or deep-syntactic – must appear foolhardy. This can only be done at the questionable cost of abstracting from palpably visible data in the texts. In fact, it seems that the closer one looks at the data actually occurring in the texts, the more one is forced to consider a range of different types of factors. It also seems impossible, at least from Middle English onwards, to try to account for any change at all without considering the massive effects of stylistics, literacy, the neo-classical puristic efforts, and the ideologies of the emerging written standards, at least if what we are discussing is “the language” as an ensemble of varieties with different inherent tendencies. It seems that there is no other way to account for the fate of dialectal *do* uses. Even that part of the development which seems purely internally determined – the grammaticalization of *do* in question and negation – has a social component in that the generalization from *thou* to *you* needs a social development. English would not have had its question, negation, and emphatic *do* uses without this prerequisite of a social development, which did not take place in a comparable metropolitan way in German as in English. As to those “internal” forces, they can be equally well termed “natural” in that they are broader than linguistic tendencies (generalization, similarity, phonetic awkwardness). So what does that leave by way of truly internal linguistic factors? It seems that the only candidate is the availability of a pattern *AUX* + verb. In the face of the evidence presented here it is difficult to claim that the mere availability of a pattern could have “caused” – in any reasonable sense of causation – the grammaticalization. But it could not have happened if the pattern had not existed.

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Sentence connection as an expression of medieval principles of representation*

Anne Betten

1. Theoretical framework

The history of the syntax of a language is closely connected with the development of its prose style and its textual types. This is especially true in the fields of sentence connectives and sentence complexity. Recent text-linguistics and text-syntax research has described alternatives such as asyndetic paratactical ordering, syndetic connecting (by means of conjunctions and other connectors), or sentence subordination (by means of subordinating particles) not so much as varying syntactic capabilities, but rather as an expression of varying intentions of representation. This research was initially carried out on contemporary texts, but has recently also been applied to older texts. Several investigations, thematically closely related, but originating quite independently of one another, are to be compared in the following study. In doing this, I am mainly concerned with phenomena of the text-syntax of German, however reference will be made to similar results found in Old Saxon and Old English.

At a first glance, this approach seems not to be immediately concerned with the external and internal factors of language change. I will concentrate rather on how the writer's intention influences the choice of syntactical alternatives. Sometimes what was regarded as the result of syntactical change may turn out to have been a stylistic option. This must be explained by means of pragmatic and discourse analysis. I shall return to these considerations at the end of the paper.

* I thank Terence Wilbur and Colin Hall for translating this paper.

2. Text-linguistic analyses of the use of connectors in medieval texts

2.1 Text-linguistic and pragmatic approaches to historical syntax

What might be called a “pragmatic historical linguistic program of investigation” has been postulated for some years now by an increasing number of historical linguists. Cherubim (1984: 810) declares that the process of working from the present-day language back to earlier stages, which is to be justified mainly in terms of the history of science, simply is *the* method:

Eine pragmatische Sprachgeschichte ist sich demgegenüber bewußt, daß ihre Begriffe oder Beschreibungskategorien stets von der Erfahrung mit der sprachlichen Gegenwart bestimmt oder dort verankert sind. Ihre Perspektive wird daher prinzipiell rekonstruktiv, d. h. rückwärtsgewandt sein, auch wenn sie Entwicklungen in der Zeitrichtung verfolgt.

[A pragmatic history of language is quite conscious of the fact that its concepts or descriptive categories are always determined by and anchored in experience of the linguistic present. Its perspective is mainly reconstructive, i. e., facing backwards, even if it follows developments in their chronological order.]

Likewise Schlieben-Lange (1983: 30) declared:

Die ersten Arbeiten, die sich mit den bisher vernachlässigten Aspekten einer “Sprachgeschichte”, nämlich der Geschichte von Texttypen und der Geschichte des Sprechens, beschäftigen, sind häufig gar nicht historische Arbeiten im eigentlichen Sinn, sondern eher *kontrastive* ... Das primäre Interesse besteht vielmehr darin, den heutigen Traditionen des Sprechens ältere gegenüberzustellen und zunächst einmal festzustellen, daß sie anders waren, in einem zweiten Schritt auch danach zu fragen, in welchem Ausmaße und in welcher Hinsicht sie anders waren.

[The first studies which are concerned with the previously neglected aspects of a “language history”, namely the history of text types and the history of speaking, are frequently not at all historical studies in the real sense of the word but are contrastive in nature. ... Their primary goal is to compare present-day traditions of speaking with older traditions, first of all simply to demonstrate that they were different and secondly to investigate to what extent and in which ways they were different.]

What is said here is especially valid for the transferral of text-linguistic methods to historical texts. Up to the end of the 1970s the various procedures of text-linguistics almost exclusively took their examples from contemporary texts – insofar as we do not want to see Weinrich’s *Relieftheorie* (1964) and its application to the developmental history of

the German subordinate clause by Fleischmann (1973) in connection with text-linguistic ideas. In the following presentation I would like to show with examples from the area of sentence connectives what possibilities of textualization result by this means alone, i. e., how, by means of various textualizing strategies, identical contents – for instance in the case of translated texts – are prepared and offered to the recipient in varying manners in order to determine the way they are to be received.

2.2 Preferred connectors in medieval texts and their textual functions

Nowadays, connectives are often called “junctors”. De Beaugrande and Dressler (1981) treat them as one of the means of cohesion, defined as the manner in which the components of the surface text, i. e., the words as we actually hear or see them, are joined to one another (1981: 3–4). The use of junctives (con-, dis-, contra-, sub-junctions) as explicit signals is (with the exception of disjunction) rarely obligatory since the text-users can recognize relations such as additivity, causality, and others by applying their knowledge of the world (1981: 80). Nevertheless, by their use of junctives, text producers can control how the textual relations are reconstructed by the recipients: From this point of view, junction shows how the communicative interaction (and not only the obligatory grammatical rules) helps to determine the syntactic reconstitution made use of by the communicative partners (1981: 81).

In recent years there have been several attempts to apply to texts of older stages of the language such observations about sentence and text conjunctions as can be grasped with the methods of text-syntax. Solid conclusions may be attained from the comparison with the norms of the present-day language. Wolf (1978, 1979) treated the realm of junctives in a contrastive analysis that examined the conjoining of sentences by means of sequential conjunctions and adverbs that join sentences of the same order. First of all he differentiated three classes of functions in Middle High German (MHG):

1. connectors that only have a sequential function (MHG *und, ouch*);
2. connectors that signal logical relations (MHG *wande, darumbe, alsus*);
3. connectors that serve the situative ordering of the following sentence, e. g., in regard to locality, temporality and modality (MHG *dan, dar nâch, sît, davor, noch, sus*).

The functional classes hold true for Middle High as well as for New High German, but they are, in part, represented by other forms. The four most

frequent connectors, *dô*, *dâ*, *nû* and *sô*, are nevertheless not placed in these classes. Wolf shows that in Middle High German they have two important functions that pertain to one another, namely that of connecting and, additionally, of indicating special sentence and speech types. They provide the hearer with hints as to what speech types he is to expect: *dô*, *dâ*, and *nû* signal narrative enunciations and *nû* and *sô* performative enunciations. Therefore he calls these four connectors illocutive connectors. Wolf (1979) examines the frequency of use of the connectors in the *Nibelungenlied* in comparison with Gottfried von Straßburg's *Tristan*, Hartmann von Aue's *Iwein*, and Wolfram von Eschenbach's *Parzival*. The great number of occurrences of *dô* and *dâ* in the *Nibelungenlied* is especially striking, while the courtly epics on the other hand are much more tentative in their use of these connective devices. Wolf compares these findings with oral narrative texts of the present. These likewise usually show a high frequency of *und*, *da*, *und da*, *und dann*. The principal function of these is obviously to indicate the progress of the narrative:

- (1) a. ... und da ist hier eine alte Frau gekommen ins Haus ... und Sibylle war nich da. Werner war nich da. und da hat man mich runtergeklingelt. und ich mußte hingehen ... und ich habe immer ja ja gesagt. und dann hat se mir die Namen gezeigt, die sie schon kannte ... und da hab ich gesagt ja ich werd s weitergeben ... (From *Texte gesprochener deutscher Standardsprache I*, 1971: 79–80 [shortened])
- b. *Als meine Mutter eines Tages sagte, ich sollte im Keller gehn da ging ich auch im Keller. Da hörte — als ich im Keller war, hörte ich ein Einmachglas fallen. Ich erschrak mich und dachte es wär ein Gespenst. Da lief ich schnell zur Mutter hoch. Ich erzählte die Mutter das und die Mutter wollte sich überzeugen und ging selbst in Keller. Da sah sie das Kellerfenster offen stehn. Sie hatte grade noch gesehn daß die Katze von Nachbars Haus hier im Keller war. Da sah ich auch das Einmachglas. Und da wußte ich daß es kein Gespenst war.* (From Wacker-nagel-Jolles 1973: 171–172)

Wolf draws the conclusion that orally constituted narrative texts are characterized by an inclination toward a very definite type of textualization: the connectors would have the task of signaling this very special type of speech constellation [*Redekonstellationstyp*] and the corresponding textual type. He concludes from this that the *Nibelungenlied*, with its

frequent use of *dô*, is much more firmly based upon traditional oral text constitution than the courtly epics, which, despite the fact that they were presented orally, presuppose literacy. This would not mean that the *Nibelungenlied* had not already been fixed in writing, but would indicate a different attitude on the part of the narrator toward the text.

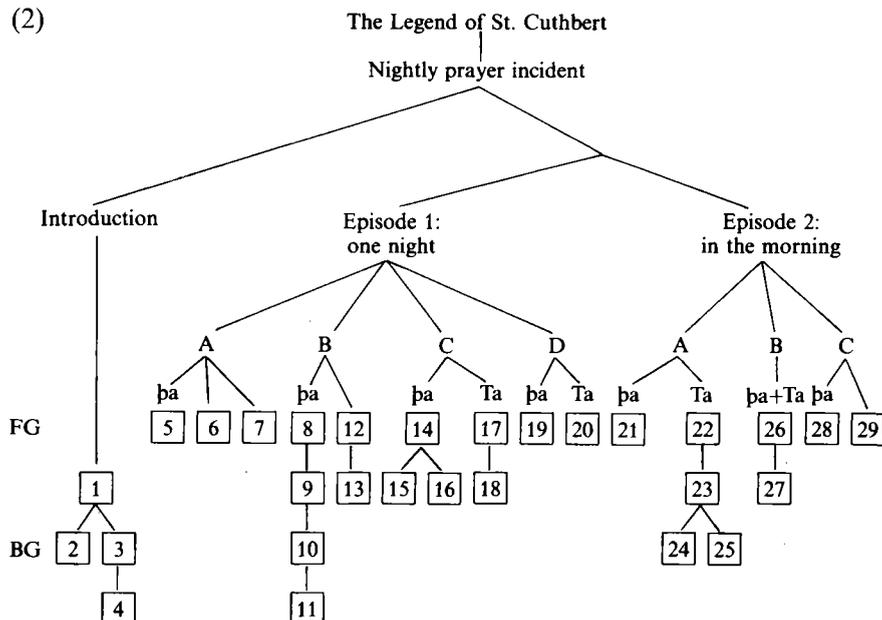
Other studies have examined the connectors *dô/dâ*. They were motivated by the same text-linguistic curiosity in Old High German, Old Saxon, and Old English. Wilbur (1988) compares the retelling of *John 11* (Lazarus' Resurrection) in the Old High German translation of Tatian's *Evangelienharmonie* (9th century Fulda monastery — referred to as Old High German *Tatian*) and two contemporaneous biblical lyrical works, in the Old Saxon *Heliand* and in Otfrid's *Evangelienbuch*. His observations on the Old High German *Tatian* coincide in part with Betten (1987a), where I compared the Old High German *Tatian* rendition with Luther's Bible translation on the one hand and with the Latin and Greek sources on the other. In doing so, I was concerned with the various kinds of sentence connectives and therefore, in contrast to Wolf, also with subordinating connectives. Furthermore, I took into account the suppression of junctives in the translation as well as the transformation of hypotactic into paratactic constructions and vice versa.

A third essay about OE *þa* was written by Enkvist—Wårvik (1987). I shall begin with their results. In earlier essays Enkvist had already defined OE *þa* as an "action marker" in narrative texts and connected it with "grounding" theories, i. e., "foregrounding" and "backgrounding". This comparison revealed the multi-functionality of *þa*: it is an action-signal. However, because actions tend to stand in the foreground, it is also a "grounding marker", for it places in prominence the conditions that are static, but important in the narrative. At the same time it shows the sequence of actions of the main story-line and marks the subsections of the actions. Enkvist—Wårvik (1987: 221—222) emphasized the relatedness of these characteristics to spontaneous oral narrations:

It may well have been particularly common in impromptu storytelling, where a clear marking of foreground and background, sequencing, and narrative structure are important to ease the processing load under real-time conditions. There *þa* may be associated with a colloquial, lively, impromptu-speech-like narrative style.

Enkvist—Wårvik (1987: 223) illustrate the use of *þa* in a comparison of various Old and Middle English narratives "as one of a set of devices marking narrative hierarchies and main-line sequencing and foregrounding" (see [2]).

(2)



The structure of *Ælfric's Catholic Homilies X*, p. 83. (FG = Predominantly foregrounded; BG = Predominantly backgrounded; Ta = tim adverbial)

Wilbur (1988: 88–90) also emphasizes the necessity of considering junctives as “extrasentential and not at all constituents of sentence grammar but, rather, of text grammar ... their presence is dictated not by the necessities of the syntax of sentences, but by the demands of the maintenance of textuality”. Just as Enkvist does, he perceives the principal function of the junctives to be to “establish the textual mise-en-scène since they belong to the internal pragmatics of the text”. With particular reference to *thô* in *Tatian*, directly comparable to Enkvist’s observations about OE *þa*, Wilbur claims that in initial position it signals “the progression of the narrative” and more particularly it “introduces progressive assertions that must come in a certain order. Temporally speaking, there can be no rearrangements”:

- (3) a. John 11.3: *Miserunt ergo sorores ad eum dicentes*
 Tatian 135.2: *Thô santun sino suester ci imo inti quadun*
 [NE: ‘And then his sisters sent to him and said’]
- b. John 11.17: *Venit itaque Ihesus et invenit eum quattuor dies iam in monumento habentem*

Tatian 135.9: *Thô quam ther heilant inti fand inan fior taga iu in grabe habentan*

[NE: 'And then the savior came and found him already four days in the grave']

In this manner the Old High German text-producer lays out for the recipient the absolute order of the events. In the Latin text there is frequently no connector at all (as is the case in the two examples), for only the verb stands in sentence-initial position. Wilbur takes this to be evidence for the independence of the Old High German *Tatian* translation from the Latin text at least in this regard – which is important in many respects.

Researchers usually attribute to the *Tatian* little independence and only slight deftness in language with regard to the translation of typically Latin constructions such as accusative with infinitive (AcI), ablative absolute, etc. Much more rarely does Eggers' opinion (1963: 206–207) find any support, that the connection with the Latin text is not a question of ability, but of intention, as the German text is subordinate to the sacred Bible text. Lippert (1974: 191) nevertheless expressed the reservation that the question of the quality of the *Tatian*-translation has not yet been by any means resolved, and that in another syntactic region a more advanced re-shaping of the target text could be present. A supra-sentential text-grammatical examination of the types of sentential connection seems to provide this proof.

Especially revealing is the comparison with Luther's resolutions. The greatest significance is attributed, as is well-known, to his translation of the Bible – not only for the history of German Bible translation, but also for the history of the German language. This translation is classified – with all philological exactitude – as a theologically interpretive one. In Sonderegger's (1984: 146) formulation, Luther was striving for a clear, generally comprehensible German with a gripping style that was to appeal to the people (cf. the famous remark "dem Volk aufs Maul schauen").

When seen in the light of these long-established critical opinions, it would seem astonishing that Birgit Stolt in a series of publications (cf. 1983: 23–24) has pointed out the fact that Luther preserved more faithfully than his predecessors the style of the texts he translated in regard to those points that are relevant to the "atmosphere" and to their preparation for reception. Stolt speaks of certain signals strewn throughout the text, primarily the so-called macrosyntactic signals (among which we include the introductory and connective formulas) that indicate the

sequence of events in the narration. Alongside the introductory formula *Es begab sich aber, daß ...* (Lat. *Factum est autem*, NE *And it came to pass that*) she counts as an especially striking signal the almost monotonous paratactic sequencing with *und*. Here Luther follows almost slavishly the *kai* of the Greek original and the *et* of the *Vulgate*: this manner of sentence sequencing was quite normal in Hebrew. The fact that it was carried over into the *Septuagint* made it a characteristic feature of style that was loaded with all the connotations and affective force of a sacred language, because it was the language of the Bible. From that point on, this stylistic practice communicated a numinous emotional tone which impresses the reader with the transcendental nature of what is being related. For Luther it would have been easy to adapt the sentence structure to the prevailing state of Early New High German sentence structure: he would not have been the first. That he did not undertake this modernization showed that Luther – probably unconsciously – was attuned to the style of the Biblical language as it had developed historically.

This résumé of Stolt's theses shows that she interprets the technique of sentence introduction and connection as a "rezeptionsästhetische Einstimmung" [reception-esthetic tuning-in] of the reader or listener to the experiencing of the text mythologically.

Furthermore, Betten's (1987 a) comparative studies of Luther and the Old High German *Tatian* have shown that in Old High German not only Lat. *et*, but also *autem*, *ergo*, *tunc* and several other text-connective particles, are with striking frequency translated by *thô*, which was clearly firmly fixed in Old High German narrative style. When a comparison is made between the use of *und* (Old High German *inti*) and that of *thô*, it is shown that *thô* acts not only as a signal for constituting an oral text, but also as a signal calling attention to a new turn of narrative action, as, for example, Enkvist has demonstrated for OE *þa*.

Example (4 a) shows first of all Old High German *thô* as the equivalent of Lat. *et* and *autem*, while Luther translated literally with *und* and *aber*:

(4) a. John 1.37: *Et audierunt eum discipuli loquentem et secuti sunt Ihesum.* 38. *Conversus autem Ihesus et videns eos sequentes se, dicit eis:*

Tatian 16.2: *Thô gihortun inan thie iungiron sprechantan inti folgetun themo heilante. Thô giuuantu wih ther heilant inti gisah sie imo folgente, quad in:*

Luther: Vnd zween seiner Jünger höreten jn reden | vnd
 folgeten Jhesu nach. 38 Jhesus aber wandte sich vmb
 /vnd sahe sie nach folgen | vnd sprach zu jnen |

Example (4b) shows that *thô* in Old High German texts is inserted independently and even alongside *inti* as a translation of *et* – which means that *thô* had its own additional significance:

- (4) b. Luke 1.38: ... Et discessit ab illa angelus.
 Tatian 3.9: ... inti arfuor thô fon iru thie engil.
 Luther: ... Vnd der Engel schied von jr.

I define this “additional” meaning as the orientation of the reader or listener to the structure and content of the text by means of a sort of metacommunicative function. This function exceeds the original localizing-temporal indication of *thô* by directing attention to the progressions in the narrative text that are to be emphasized as new, surprising, or important from the point of view of the text.

In this case Luther and the Old High German *Tatian* pursue different principles of text formation. Perceived in such a manner, the text structure of the Old High German *Tatian* would no doubt be closer to typical oral Germanic traditions in the use of text-connectors than Luther. Although even Luther’s signals (as well as Latin and Greek signals) originate in the same Hebrew narrative structural principles, through literal translation they have become different language-stylistic devices with a completely different function.

2.3. Connectors, intentions, and text types

In the studies discussed in 2.2 three kinds of contrastive analyses of textualizing strategies were undertaken: 1) synchronic comparisons of various texts in the same language at the same stage of development (Wolf: *Nibelungenlied* and the courtly epics); 2) translations of a text into another language (Greek and Latin Bible texts translated into Medieval German with the possibility of demonstrating that the Old High German *Tatian* and Luther’s Early New High German translation represent two different textualizing strategies); 3) as a sort of variant, the comparison of a Middle High German text with its translation into New High German in order to observe diachronic changes (Wolf: *Nibelungenlied*).

Claudia Riehl (1987) attempted to extract from various translations of the same text the factor of diachronic linguistic change (which would

have to be taken into account in the comparison of the Old High German *Tatian* and Luther's translation) in order to point out the contrasting intentions of the translations more clearly. She examined four Bible translations from the fourteenth century. The attitudes toward translation in pre-Lutheran Bible translations can be differentiated into two groups depending upon the purpose, i. e., who undertook a translation and for what group of readers: 1) simple literal translations, primarily intended to aid understanding of the Latin text; and 2) those translations which aimed at replacing the original and were made for the so-called layman and, in part, translated into more polished German. The first printed Bible by Mentel, most frequently compared with Luther's text as a prototype of early Bible translations (the text first investigated), belongs to the unpretentious word-by-word translation type, and, in addition, represents an essentially older stage of language development. It is therefore by no means *the* representative of the pre-Lutheran possibilities of translation. With certain reservations this can be said of Matthias von Beheim's *Evangelienbuch* (second text). For a long time research has recognized other types of Bible translations into German, such as plenaries, commentaries, paupers' Bibles (*Biblia pauperum*) and history Bibles, as having a style much more practised and suitable for the German public. In 1927 Pietsch determined that the language of Luther's Bible was not only more comparable to the textual type of the sermon, but also that the German of the plenaries was nearer to it than the German of the earlier Bible translations. As representative of such earlier translations Riehl chose the *Berlin Evangelist* and the *Evangelists of the Good Masters of Prague* as the third and fourth texts to be studied. She compared both the connectors of independent and dependent clauses as well as those of independent sentences (and sentence structures) with one another. In addition, she studied the rendition of special introductory formulas in the *Vulgate* (such as *ecce* and *factum est*, where Stolt finds support for her own arguments). It turned out that, among other things, the pericopes in the choice of sentence-joining particles essentially follow less the Latin original than those of the Mentel and Beheim translations. This is revealed in the first place by their greater inclination for variation in the case of junctors, both *con-* and *sub-*, and in the second place by the frequent transformations of sentence structures into paratactic sequences of independent clauses. Even Mentel and Beheim do not always imitate the original text, but prefer to use just a few forms in the connections of independent and dependent clauses: in doing so, they nevertheless use the introductory forms of the *Vulgate et* and *autem*,

MHG *unde* and *abir*. Stolt has interpreted their exact rendition in Luther as a stylistic trick. In contrast to Luther, however, Mentel and Beheim place *unde* and *abir* to a great degree in original and new distributions, which, even when the two are compared, are quite different. The pericopes on the other hand for the most part change here into connections with *dô*, just as in the renditions with *ecce* (if they do not eliminate *ecce*, differing from Mentel and Beheim). Just as in the Old High German *Tatian* translation, some of the late Middle High German Bible translations decided upon a textualizing strategy that deviates totally from the original Latin text, a strategy that obviously corresponds to the specific norms of text formation of Medieval German, as the comparison with other narrative prose forms shows. The medieval prose narrative style was still strongly oriented to the oral principles of presentation. Even in learned works, as in the Old High German *Tatian* translation and also in the Early New High German Bible translations, addressed principally to the lay public, these norms of textualization of the target language are neatly handled – despite awkwardness that results from absolute adherence to the text in other aspects of the syntactic translation of the initial Latin text.

The questions touched upon here are naturally closely connected with the problem of medieval differentiation of text types, the prevailing norms of text types, and stylistic expectations; the latter are connected with conditions of reception. Various language historians have recently emphasized that the syntax of most text types up to the sixteenth century was “syntax for the ear”, i. e., the internal sequence of sentential clause structure and the embedding of sentences in the text essentially followed the principles of aural understanding (see Betten 1987 b: 135, 161). In the case of reading reception, on the other hand, the partitioning of the text is accomplished by optical placement and punctuation, and the formulation of the text can be concentrated (at least in the further development of German in the New High German period) on the working-out of logical relationships inter alia. In the case of aural reception, obviously verbal signals are central for the linear sequence of the events on the one hand as well as for changes of theme, action and focus on the other. What has been worked out in Enkvist–Wärвик (1987) or Betten (1987 a) for OE *þa* or Old High German *thô* likewise holds true in German language history for the prose romance (cf. Betten 1980, 1985), for legends, chronicles and other narrative text types. (As I have indicated above, the respective dominant connector of a text need not always be Old High German *thô*, MHG/ENHG *dô*.) In text types with different

traditions and conditions of reception other norms prevail: as, for example, in the textual types with an ancient written tradition cultivated by those skilled in Latin (cf. Admoni 1980 concerning the syntax of various textual types in the language of the German chanceries). As a further example one could cite directly quoted speech in High and Late Medieval romances, formed according to the principles of rhetoric, which can contrast stylistically with the epic basic text conceived in quite a different manner. In Betten (1985, 1987b) I demonstrated this for the first Middle High German prose romance *Lancelot*. It is clearly shown here that a paratactically sequencing style with a connective sentence juncture that appears to be relatively stereotyped need not be an expression of lack of capability for hypotaxis (with its connections aimed more at logical relations and hierarchical subordination). It is, rather, actually expressive of a different stylistic impulse, of another stylistic principle (cf. Betten 1987b: 151 ff., 161 ff.). I do not wish to contend that “the” German written language from Old High German to its codification in New High German times had undergone no development in the direction of an ever expanding differentiation of the hypotactic possibilities of expression. Also, we cannot in principle contradict observations such as those made by Ursula Schulze (1975: 196) in her comparison of thirteenth-century German and Latin parallel documents, when, for example, she discovers that in certain principles of sequencing in Middle High German a difference in the nature of the thought processes becomes evident. According to Schulze they bear in part a prelogical character and reveal that the cognitive process of organization and its linguistic-syntactic reflection are at a different stage of development, at a different point in the “Abstraktionsprozeß” [abstraction process] from that of Latin. It would seem to be important and rewarding to expand and modify the usual assumption of gradual development and growth of sophistication in the course of historical development, rather than simply to repudiate it. This modification or expansion would aim at developing a differential model that explains syntactic alternatives on a functional basis and would reveal in the variants a unique achievement that receives its expressive motivation from different communicative conditions and requirements.

In a comparative examination of the Early High German prose romance, *Tristrant and Isalde* (fifteenth century), and its original Middle High German verse text (end of the twelfth century) I have tried (Betten 1984) to show that in these transformations we can study not only changes in the system of sentence connectors, which are documented in the disappearance of old and the arising of new con- and sub-junctors: above

all, the shifts in frequency of the connectives (e. g., reduction of the temporal connectives from 140 to 90 in the comparable parts of the text; increase of the adversative *aber*, *sunder*, *doch* from 8 to 56) allow insight into changes to the narrative stance and argumentation in the style and affective intent of textual presentation between the twelfth and the fifteenth centuries.

3. Cross-references and conclusions

The comparison of diachronic developments with synchronic possibilities of variation leads to clarification of the relationship of various requirements of communication in temporal simultaneity and in temporal sequence. Basically this attitude corresponds to the functional approach in historical linguistics that attempts to deal justly with the special achievements of the language system in earlier epochs. (Cf. Wells 1985: 260–261, who, for instance, shows this in the example of the “complexities of earlier aspectual marking” and warns “against underestimating the subtlety of medieval language”.) The macroscopic structuring of texts by means of certain connectors and the choice of linear or hierarchical sentence structuring enables us to trace medieval language forms back to their determining conditions. This conjecture turns out to be an important means of showing how texts were composed for a particular circle of recipients. Research in the fields of reception theory and stylistics can profit equally from this.

Among the papers presented in this volume, I regard Suzanne Fleischman’s observations on Old French *si* as especially closely related to my own research methodology. There seem to be some striking similarities in the use of OFr. *si* and MHG *dô* — and some even more striking differences in the total range of functions of these particles. This confirms the structuralist conviction that each linguistic sign in every language has its very own semantic scope and history. I share with Fleischman the view that particles such as we have both discussed can function as “traffic signals” inserted into the discourse for the purpose of identifying units of utterance at various levels of discourse structure. I agree also with her analysis of *si* “as a discourse marker of subject and topic continuity”. (How similar our approaches are in regard to the value of analyses of “natural” narrative for medieval syntax in general and for different

techniques of foregrounding in particular is also quite evident in Fleischman 1989.)

Furthermore, a comparison of discourse markers in Indo-European languages with the Japanese materials presented by Noriko Fujii (this volume) excites special interest. The results that Fujii obtained concerning the permanent, obligatory marking of “staging” or “theme-creation” and “theme-maintenance” in Japanese, which nevertheless underwent radical changes in regard to the particles in question, will stimulate even more detailed analyses of a particle such as Old High German *thô*, MHG/ENHG *dô*, NHG *da*, particularly in regard to the interplay with other particles in each of these periods. My own investigations concerning the rendition of Lat. *et* by Old High German *thô* or *inti* (which display different discourse functions) are to be expanded to include more particles in each historical period and in order to attain a more complete description of the variety of functions of discourse particles and the subtle changes to them which have not yet been sufficiently illuminated.

With respect to the predominantly oral composition of medieval texts that achieve grounding by means of connectors such as Old High German *thô*/MHG *dô*, in close relationship with the conjunction Old High German *inti*/MHG *und(e)*, Marianne Mithun’s rich materials from the Iroquoian languages provide additional evidence about universals and differences in oral grounding and sequencing techniques. The transition from temporal, locative, causative adverbs to conjunctive discourse markers seems to take place in those languages just as it does in Indo-European. In Paul Hopper’s paper “On particularity in reconstruction” many other striking parallels to Old High German *German thô*/MHG *dô* in quite diverse languages are discussed. As this paper was presented at a regular session of the Rutgers Conference, it will appear in the Acts of the Congress. This article should be read along with the above-mentioned papers in this volume since each one of them demonstrates with different data almost identical phenomena.

The internal factors that cause the changes in the systems of adverbs, conjunctors, and subjunctors have been described quite often by historical linguists. This holds true at least for the history of the German language (Betten 1987 b: 78 ff.). According to Brigitte Schlieben-Lange (this volume), the development of subordinating conjunctions in French has not yet been so thoroughly explored.

The continuous recruitment of new particles and the semantic shifts in the system of particles in German are often attributed to the falling-together of different particles by sound change and the constantly in-

creasing requirements of the written language for logically more and more differentiating particles (especially subjunctors). The first of these processes is an internal factor while the second is an external one. Nevertheless, I am not sure whether the discourse functions of particles could be described as externally caused only because they are closer to the manner of oral textualization. Of course, oral and written text processing are the result of external factors of communication. However, both types of text presentation are anchored in the syntactic-stylistic structure of a language. Only in the case of a general agreement that so-called stylistic and functional choices of language variants must always be regarded as the result of external factors would the answer be clear. I prefer to look upon the stylistic diversities described (which are often results of past changes and impulses for future developments) as text-inherent and only upon their respective choice as externally caused.

Language changes often take place on the basis of linguistic variety, as we emphasize today. In the case of the topic of this paper, the change in stylistic devices (giving preference to hypotaxis with subjunctors) happened in written standardized New High German texts – an external factor! –, but the older style was maintained in the spoken language up to the present time (and seems to have some traits of universality). I draw the following conclusion: external factors have in certain textual types/genres led to restructuring in the realm of discourse particles/markers. But, in saying so, we do not include the total phenomenon, for the old forms survive under similar (spoken) conditions. The language historian should more painstakingly take into account in his or her theories of language change the conditions for the existence of variants and their functional use in different text types. Thus, the concept “determined by external or internal factors” is not always sufficient to fulfill our aim at the highest level of theoretical refinement.

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Grammatical variation and divergence in Vernacular Black English*

John R. Rickford

0. Introduction

The study of linguistic change as it is taking place — particularly if based on natural speech data — provides one of the best opportunities we have for understanding its internal and external constraints. In contrast with the study of changes that have long since been completed, we do not have to depend on written texts, with all their limitations. And we can, with more hope of success, keep collecting data until we have the critical linguistic environments, sociological categories, and subjective attitudes we need to solve the transition, embedding, evaluation, and actuation

* This is a considerably revised and expanded version of a paper presented at the annual meeting of the Linguistic Society of America in 1987, and at the International Conference on Historical Linguistics Symposium on Internal and External Factors in Syntactic Change held at Rutgers University, New Jersey, August 15–16, 1989. The research was made possible through research grants provided to myself or the students listed in the next paragraph by the following agencies and individuals: the Program in Urban Studies at Stanford, the Irvine Foundation, and Carolyn Lougee, former Dean of Undergraduate Studies at Stanford.

Many individuals contributed to the research reported in this paper. I am indebted to Faye McNair-Knox (research associate), Jawanza Osayimwese and Keith Denning (research assistants), and participants in a 1987 residential summer research seminar at Stanford who helped to transcribe and tabulate data on several of the variables (Renee Blake, Jeannine Carter, Pamela Ellis, Genine Lentine [graduate supervisor], Diana Loo, Erin Mulligan, Barbara Pearson, Sharon Tu, and Fox Vernon), and the students who were involved in the VARBRUL analysis of the copula data in the summer of 1988 (Arnetha Ball, Renee Blake, Raina Jackson, and Nomi Martin). I am especially grateful to my wife Angela Rickford for feedback and encouragement.

problems of linguistic change. (See Weinreich – Labov – Herzog 1968 and Stein and Gerritsen’s papers in this volume.)

The one disadvantage which the study of change in progress has over the study of completed changes is that synchronic variability might offer misleading evidence on change in the linguistic system or community norm. Apparent-time data (distributions across different age-groups) which suggest that the system is changing might actually reflect stable age-grading, in which “differences between older and younger speakers ... are repeated in each generation” (Labov 1966: 320). Contrariwise, if older speakers can change their speech in line with innovations introduced by younger ones – which seems to happen more often with syntactic variables – apparent-time data might suggest stability while actually changes in community norms are taking place. These and other problems of interpreting synchronic evidence of change are discussed at length by Labov (1981), who proposed (1981: 103) that the best solution is to combine apparent-time data with evidence of change in real time derived from a trend study, involving random samples of the community at intervals of about ten to forty years.¹

With this in mind, let us turn now to an issue about diachronic interpretations which is generating considerable controversy in American sociolinguistics and is particularly relevant to this workshop since its primary focus is grammatical variability. The issue is whether US Vernacular Black English is currently diverging from Standard English and local white vernaculars,² as Labov – Harris first claimed to be true in a 1983 conference paper (1986: 2): “The English spoken by Black Philadelphians is quite distinct from that of Whites, and the differences appear to us to be increasing.” Citing data on the absence of third singular /s/, possessive /s/, and the copula, among other variables, Labov and his colleagues (Ash – Myhill 1986, Myhill – Harris 1986, Graff – Labov – Harris 1986) argued that increasing racial segregation in Philadelphia had produced “a BEV [Black English Vernacular] that is more remote from other dialects than ... reported before” (Labov – Harris 1986: 4). The work of Bailey – Maynor (1987) in the Brazos Valley, Texas, which concentrated on conjugated and invariant *be*, appeared to provide independent support for Labov’s divergence hypothesis, and suggested that it might be a general urban pattern.

The divergence hypothesis was discussed in some detail at a symposium in 1985, the proceedings of which were published as Fasold et al. (1987). The primary critique of the hypothesis which was raised there – in Vaughn-Cooke’s contribution in particular (Fasold et al. [etc.] 1987: 12 –

32) — is that Labov and his colleagues had failed to provide comparison points in either real or apparent time, and that Bailey and Maynor needed an intermediate age group to minimize the possibility of age-grading.³

In this paper I will report preliminary results from ongoing research in East Palo Alto, California, which attempts to overcome the limitations of earlier divergence studies by providing comparisons across three age groups (evidence of change in apparent time) as well as comparisons with earlier studies in other cities (approximate evidence of change in real time). Ideally, we should have real-time evidence from East Palo Alto itself, but, like Labov and his colleagues in Philadelphia, we have not (yet) been able to locate or draw on data about local usage from earlier periods. Implicit in Labov and Harris' original claims about divergence, however, was the assumption that urban Vernacular Black English was pretty similar from one city to the next, so that comparisons with earlier studies in other cities could serve as evidence of change in real time.⁴ This is by no means an ideal strategy, since the assumption of uniformity might be invalid for specific variables, and the social dynamics of change might be quite different from one city to the next.⁵ However, since no major grammatical differences have emerged from the study of Vernacular Black English in Detroit, New York City, Philadelphia, Washington DC, Atlanta, Wilmington, Berkeley, and Los Angeles, it seems reasonable to accept comparisons with earlier studies in other cities as preliminary real-time evidence, and I will accordingly compare synchronic East Palo Alto data with data from New York City and Detroit gathered twenty years ago (Labov et al. 1968; Wolfram 1969).

East Palo Alto is a low-income, newly incorporated city just east of Stanford University and Palo Alto, with a population of 18,000, over 60% of whom are black. Our data on vernacular-language use there come primarily from highly naturalistic spontaneous interviews and interactions recorded by insiders to the community, principally Faye McNair-Knox, a research associate on the project who is herself black and who grew up in East Palo Alto from the age of twelve.⁶

The primary data I shall discuss — shown in table 1 — are from six black East Palo Alto speakers from working-class backgrounds, although I shall also draw on a larger sample of thirty-three black speakers when discussing the copula. The six core speakers are evenly divided into old (76 years and over), middle-aged (38–42 years), and young/teenager (14–15 years) age-groups, permitting inter-generational comparisons and inferences about change in apparent time.⁷ The features considered are classic ones in the study of Vernacular Black English. They include:⁸

- (a) The use of invariant *be* to mark habitual or durative aspect, as in *He be studyin all the time* 'He studies/is studying all the time.'
- (b) Absence of inflected *is* and *are* in copulative and auxiliary constructions, as in: *You Ø sick* and *She Ø workin right now*.⁹
- (c) Absence of possessive *-s* in Noun–Noun possessive constructions, as in: *JohnØ hat, the ladyØ house*.
- (d) Absence of third-person *-s* on present-tense singular verb forms, as in *The man walkØ there every morning*.
- (e) Absence of the regular plural *-s* suffix on semantically plural nouns, as in: *four dogØ, many houseØ*.
- (f) Absence of past-tense marking (by suffixation of *ed*, stem change, and other inflections) on semantically past verbs, as in: *he walkØ there yesterday, he tellØ me so before*.

Table 1. Six Vernacular Black English variables as used by six Black East Palo Altans, grouped by age

Speaker, age, tape #	Invar. <i>be</i>	<i>is, are</i> absence	poss. <i>-s</i> absence	3rd sg. <i>-s</i> absence	plur. <i>-s</i> absence	unmarked past tense
O John						
L Carbon, 88	1	19% (123)	0% (5)	63% (117)	12% (112)	20% (245)
D EPA 1, 2						
F Penelope						
O Johnson, 76	0	15% (55)	13% (23)	57% (75)	10% (242)	14% (372)
L EPA 5,6						
K						
M Dotsy						
I Boston, 42	1	18% (77)	0% (2)	54% (65)	3% (124)	10% (69)
D EPA 24–26						
A Paula						
G Gates, 38	0*	35% (115)	36% (11)	44% (34)	1% (145)	12% (135)
E EPA 14						
T Tinky						
E Gates, 15	50	81% (256)	53% (15)	96% (56)	11% (167)	11% (132)
E EPA 12, 13						
N						
A Foxy						
G Boston, 14	146	90% (154)	86% (22)	97% (69)	13% (107)	9% (147)
E EPA 7, 8						
R						

The first four variables are ones examined in articles on the divergence hypothesis by Labov, Bailey, and their colleagues, and as it turns out two of these provide support for the hypothesis. The other two variables have not been considered in discussions of the divergence hypothesis, and do not appear to support it. I will now discuss each feature in turn.

1. Invariant habitual *be*

The data on invariant habitual *be* — probably the best-known feature of Vernacular Black English — provide the strongest local support for the divergence hypothesis, because the difference between the teenagers and the older generations is qualitative (the adults virtually never use the form), and because the frequency with which the teenagers use *be* outstrips anything reported in the literature to date.¹⁰ In some parts of her interview, for instance, Foxy uses *be* in almost every sentence:

- (1) “Shoot, I know I do, cause I *be* wakin’ up and I *be* slurping’ an’ I *be* goin’”, “DANG, THA’S SERIOUS!” (Foxy B., East Palo Alto 7: 686 ff.)

The one hundred and forty-six tokens which she produced in an interview lasting less than two hours exceeds the total of ninety-eight which Labov et al. (1968: 236) recorded from the eighteen members of the New York City Thunderbirds street gang in all individual and group sessions, and the total of ninety-four which Wolfram (1969) recorded in interviews with a Detroit sample of forty-eight people. Since this feature is markedly absent from white vernacular varieties, except for occasional use among very old “folk speakers” in the South (Bailey — Bassett 1986), its frequent use by young black speakers certainly has the effect of making the black vernacular more distinctive.

One factor which might make us hesitate to accept high frequencies of invariant *be* among teenagers as evidence of change in progress, however, is the fact that, in the 1960s and early 1970s, Labov et al. (1968: 235), Wolfram (1969: 201) and Fasold (1972: 212–214) all found this feature to be commoner in the speech of pre-adolescents and teenagers than in the speech of adults, suggesting that it might represent a stable pattern of age-grading within the community. Both Vaughn-Cooke (1987: 20) and Wolfram (1987: 45–46) draw attention to this possibility, the latter proposing (1987: 46) to:

examine middle-aged V[ernacular] B[lack] E[nglish] speakers in communities where twenty years ago we found habitual *be* to be more frequent among children than adults ... If current speakers between 30 and 40 show persistent high levels of habitual *be + ing*, then Bailey and Maynor are probably correct in proposing habitual *be + ing* as a relatively recent change; if not, *be + ing* is probably genuinely age-graded.

While the data which Wolfram proposes to gather in Washington CD will undoubtedly be valuable, it should be noted that the “high levels” of invariant *be* use reported for adolescents in eastern cities two decades ago were much lower than those recorded for the East Palo Alto teenagers today. Wolfram (1969: 201) reported an average of 12.8 occurrences of invariant *be* per individual for lower working-class teenagers in Detroit, and 4.8 per individual for upper working-class teenagers.

Bailey – Maynor (1987: 458; 1989: 13 – 14) argue that intergenerational differences in the use of invariant *be* are not only quantitative, but qualitative – young black speakers in Texas are changing the grammar of *be* by using it primarily as an auxiliary, before Verb + *ing*, while older black speakers use it more often as a copula, before adjectives and locatives – and that they are therefore less likely to represent age-grading. The linguistic and logical inferences that follow from the evidence itself are not that straightforward, as Butters (1989: 6 – 32) notes in an extended critique, but the intergenerational differences with respect to following syntactic environment are themselves very robust, attested in other cities and data sets, including our own (Bailey – Maynor 1987: 461 – 463; Viereck 1988: 295, summarized in Fasold 1989: 28; Rickford 1989). Although the East Palo Alto data are uninformative with respect to adult usage, local teenagers show the marked preference for the use of invariant *be* as an auxiliary, before Verb + *ing*, which Bailey – Maynor (1987) report for young urban Texans: 76% of Foxy’s invariant *be* tokens and 94% of Tinky’s occur in this environment (Rickford – McNair-Knox 1987).

Because it accords so well with the theme of this volume, I will now summarize Bailey – Maynor’s (1987: 463 – 496) account of the internal and external factors which seem to them to have facilitated the concentrated rise in the frequency of invariant *be* before Verb + *ing*. On the one hand, this is portrayed (1987: 463 – 466) as due to internal factors – the unusually wide range of meanings of the English progressive (limited duration, future, extended duration and habituality), coupled with the apparently unsystematic variation between *be*, zero, and inflected *is* and *are* in adult grammars. In making *be* the almost exclusive marker

of extended duration and habituality, the children are seen as effecting a syntactic reanalysis of the form in line with Langacker's (1977: 110) principle of "perceptual optimality", in particular, "transparency", the notion that "the ideal or optimal linguistic code, other things being equal, will be one in which every surface unit will have associated with it a clear, salient and reasonably consistent meaning or function, and every semantic element in a sentence will be associated with a distinct and recognizable surface form". In turn, this internally motivated reanalysis – or at least its spread – is attributed by Bailey–Maynor (1987: 466–469) to an external factor, the increasing segregation of Black and White populations which followed the post-World-War I "Great Migration" of Blacks from the rural South to the urban West and North, and the accompanying "White flight" to the suburbs. With less pressure from Standard English and white vernacular varieties, young black-vernacular speakers were freer to reanalyze invariant *be* and use it to minimize the semantic ambiguities of the English progressive.

I discuss Bailey–Maynor's (1987) analysis in more detail elsewhere (Rickford 1989; see also Butters 1989: 6–32), and, since *be* is only one of several features which I want to examine in this paper, I will comment on it only briefly here. Their interpretation of the internal and external factors which triggered the increased use of *be* is quite persuasive, but clearly cannot represent the whole story. With respect to the external factor, for instance, it ignores evidence that even in small communities where Blacks and Whites live together their grammars can remain distinct in fundamental respects because of attitudinal factors and limits on the frequency and quality of their verbal interactions (Rickford 1986). In short, conditions favorable to syntactic reanalysis might have existed within Black communities long before the urban migrations of the twentieth century. With respect to the internal factors, a neglected point is the virtually complementary distributions of invariant *be* and zero realizations of inflected *is* and *are* in terms of following syntactic environment. Such zero forms are in fact commonest before Verb + *ing* (excluding *gonna* – before which invariant *be* does not occur) and have been for at least a century, on the evidence of ex-slave narrative data in Bailey (1987: 35); the sharp rise in invariant *be* forms before Verb + *ing* could thus reflect a structural filling of this hole or vacuum in the paradigm, as much as a response to the ambiguities of the English progressive. Another factor which Bailey–Maynor neglect is the relationship between invariant *be* Verb + *ing* and present tense Verb (+*s*) (compare Wolfram 1969: 196–197 and Myhill 1989). As invariant *be* spreads, it displaces present-

tense forms as well as inflected and zero forms of *is* and *are*, and until present-tense forms are included in the set of potential environments, an accurate picture of the embedding of this innovation in linguistic structure (Weinreich – Labov – Herzog 1968: 145) cannot be achieved. Moreover, the older black folk-speakers in Bailey – Maynor’s study show a more systematic restriction of invariant *be* to habitual contexts than the authors give them credit for, weakening the authors’ claim (1987: 464) that the use of *be* as a marker of habituality and duration is due entirely to the youngest generation.¹¹ Finally, it should be noted that mesolectal Caribbean-creole grammars show the same preference for explicit preverbal habitual marking which is found with young American black speakers. While these additional factors indicate a need for us to examine other data sets and consider other interpretations before accepting Bailey – Maynor’s (1987) analysis of the rise of invariant *be* as an auxiliary in Vernacular Black English, they also reveal the potential richness of this feature for linguists interested in internal and external constraints on syntactic change.

2. Zero copula and auxiliary *is, are*

The table-1 data on zero realizations of copula and auxiliary *is* and *are* provide relatively strong support for the divergence hypothesis, since three of the four adults omit these forms less than 20% of the time, while the teenagers are at the other end of the spectrum, omitting them 82% and 90% of the time.¹² As noted above, we have no local real-time data from an earlier period, but *is/are*-absence frequencies for black teenagers (14–17 years old) in Detroit twenty years ago (Wolfram 1969: 179) are lower (30.3% for upper working-class and 67.7% for lower working-class youths), suggesting that the vernacular of our East Palo Alto youth really may be more non-standard, assuming that the stylistic levels of these data sets are comparable. By contrast, adult East Palo Alto copula absence is on the whole lower (15%–35%) than the means reported by Wolfram (1969) for black Detroit adults twenty years ago (27.4% and 38.4% frequencies for upper working-class and lower working-class speakers 30–55 years old), suggesting that the trend towards increasing vernacularization in this area of the grammar is limited to East Palo Alto teenagers and may therefore be fairly recent.

Furthermore, if we separate the figures for zero *is* and zero *are*, as in table 2, Paula Gates' intermediate table-1 status is seen to derive from her *are*-absence data; with respect to *is* absence, she is as conservative as the older folk, and as distinct from the teenagers.¹³ The data of table 2 also permit comparisons with Labov et al.'s (1968) study of copula absence in New York City, which examined *is*-absence only. The *is*-absence means for the four working-class peer groups in New York City (computed from table 3.14 in Labov et al. 1968: 202) are all lower than those of our East Palo teenagers: 28% (57/202) for the 15–18 year old Oscar Brothers, 36% (169/471) for the 9–13 year old Cobras, 43% (200/460) for the 12–16 year old Jets, and 55% (127/232) for the 11–17 year old Cobras. Labov et al.'s (1968: 292) average *is*-absence figure for New York City adults (about half of them aged 20–39 years, the rest over 40 years old) is lower still – 14% (69/506), and in comparison with this the East Palo adults again appear unchanged or closer to the standard.¹⁴

Table 2. Details of *is* and *are* absence for speakers in table 1

	OLD FOLK		MIDDLE-AGED		TEENAGERS	
	John Carbon	Penelope Johnson	Dotsy Boston	Paula Gates	Tinky Gates	Foxy Boston
0 <i>is</i>	11% (54)	5% (39)	0% (45)	8% (48)	67% (129)	79% (72)
0 <i>are</i>	25% (69)	38% (16)	44% (32)	54% (67)	96% (127)	99% (82)

So far we have isolated two constraints on the absence of *is* and *are*: the internal effect of which form is absent (*are* favoring deletion more than *is*) and the external effect of age (teenagers favoring deletion more than older groups). Table 3 provides a more sophisticated perspective on the behavior of this variable in East Palo Alto, for it draws on data from thirty-three speakers (the six in our core sample plus many more young people), takes into account six potential constraints, and estimates constraint effects in terms of variable-rule probabilities instead of frequencies. In interpreting these probabilities, it should be borne in mind that factors with values greater than .5 favor deletion, those with values less than .5 disfavor deletion, and those just around .5 have little effect either way. The table presents two alternative computations of *is/are* deletion, but I will concentrate on the straight-deletion figures in the column to the far right, since this exploits the higher number of tokens (1424 vs. 1119) and makes fewer a-priori assumptions about the nature of the Vernacular Black-English grammar and its relation to Standard English. (See Rickford et al. 1988 for discussion.)

Table 3. Variable rule probabilities for Labov deletion and straight deletion, *is* and *are*, combined, East Palo Alto

Factor group	constraints	<i>is/are</i> Labov deletion	<i>is/are</i> straight deletion
Following Grammatical	<i>gonna</i>	.77	.83
	verb- <i>ing</i>	.66	.67
	locative	.42	.47
	adjective	.47	.45
	noun phrase	.29	.27
	miscellaneous	.37	.29
Subject	personal pronoun	(.51)	.62
	other pronouns	(.44)	.46
	noun phrase	(.54)	.42
Person/ number	2nd person, plural	.67	.64
	3rd singular	.33	.36
Following phon. envir.	___consonant	(.48)	(.48)
	__vowel	(.52)	(.52)
Preceding phon. envir.	consonant___	.59	(.47)
	vowel__	.41	(.53)
Age	old	.22	.23
	middle	.42	.42
	young	.83	.82
Data on each run			
Overall frequency (n's in parentheses):		67% (1119)	53% (1424)
Input probability		.62	.35
Formulae:		$\frac{D}{C + D}$	$\frac{D}{F + C + D}$

The first observation we might make about table 3 is that age is still clearly the single most significant constraint on deletion (the young people associated with a strongly favoring probability value of 0.82 while the middle and old groups are progressively more disfavoring), and that the person/number category of the form is also significant (second person plural *are* more favorable to deletion than third singular *is*). This much, of course, we had already known from tables 1 and 2, although the supporting data base is now much stronger. But the straight-deletion

probabilities in table 3 also provide evidence on other internal constraints which we have not yet considered. The parentheses around the consonant and vowel values in the preceding and following phonological environment indicate that these phonological factor groups did not have a significant effect on *is/are* absence – contrary to what Labov (1969) had found for the Cobras and Jets (for preceding phonological environment) – but were in line with a system in which conjugated *be* is underlyingly absent, and inserted by grammatical rule. The other two internal-factor groups – subject and following grammatical category – are significant, and pretty much along the lines which Labov and other Vernacular Black-English researchers (like Baugh 1979) have found: a personal-pronoun subject favors *is/are* absence more than a full noun phrase or any other kind of pronoun; and *gonna* and Verb + *ing* are the following syntactic environments most favorable to *is/are* absence, with a following noun phrase least favorable. I will not attempt to explore here why these varied internal constraints work as they do (see Rickford et al. 1988), but it is clear that *is/are* absence is a complex variable, affected by several internal constraints plus the external effect of age.

3. Absence of attributive possessive -s

The table-1 data on the absence of attributive possessive -s at first seem to provide some support for the divergence hypothesis too, insofar as the adults rarely, if ever, omit this morpheme (Paula Gates is again somewhat an exception) while the teenagers often do (53% and 86% of the time). However, the quantitative data on this feature are less reliable than those on the other features, because possessive -s simply does not occur frequently in everyday speech, and the samples on which the percentages are based are small, ranging from two to twenty-three tokens.

Earlier studies of this variable in other cities also suffer from limited data,¹⁵ and the evidence they provide of change in real time is, in any case, mixed. The frequencies of possessive -s absence which Wolfram (1969: 150) reported for Black teenagers in Detroit (36.6% and 19.2% for upper-working and lower-working class speakers respectively) are lower than those of today's East Palo Alto teenagers, while the frequencies which Labov et al. (1968: 169) reported for New York City peer-groups (72% and 57% in single and group style, respectively) are about the same. In the article in which the divergence issue was first broached,

Labov–Harris (1986: 11–12) report even higher possessive *-s* absence frequencies (75%–100%) for the core group of young Vernacular Black-English speakers in Philadelphia who have little contact with whites. Of the two East Palo Alto teenagers, Foxy is more similar to these core speakers, but it is not clear (especially with the low *n*'s) that Foxy and the Philadelphia core speakers represent a fundamental shift away from the New York city peer-group usage of twenty years ago, which led Labov et al. (1968: 170) to conclude even then that “there is no underlying *-s* in the attributive possessive form”. Tentatively, on the combined evidence of our apparent-time and real-time data, we might conclude that absence of possessive *-s* is an age-graded feature, but not one which shows significant recent or ongoing change in community norms.

We have not investigated internal constraints on this variable. Its relatively low frequency of occurrence makes such investigation difficult for all researchers, and in any case, earlier studies of this variable report no significant internal effects.¹⁶

4. Absence of third singular, present tense *-s*

When we turn to the absence of third singular present tense *-s*, the East Palo Alto teenagers are decidedly in line with the Philadelphia “core vernacular” pattern of 75–100% third singular *-s*-absence reported by Labov–Harris (1986: 8–12), since they both show virtual categorical absence of this form (96–97%). Note, however (see table 1), that while there is still an appreciable gap between the teenagers and the adults in East Palo Alto, the adults show higher frequencies for this Vernacular Black English feature (44–63%) than they do for zero copula or possessive *-s*-absence.

The evidence of this variable from studies done in Detroit and New York City two decades ago is somewhat ambiguous. Black working-class teenagers in Detroit in the late 1960s (Wolfram 1969: 150) omitted third singular *-s* 56.4% to 76.5% of the time (upper and lower working-class groups, respectively), while the mean omission rate for the New York City peer-groups from the same period (compiled from statistics in Labov et al. 1968: 161) was 68% ($n = 592/876$).¹⁷ While these figures reveal that the tendency to omit this marker more often than not has been manifest for some time, and Labov et al. (1968: 164) had concluded that third singular *-s* was not an underlying part of the grammar of Vernacular

Black English, it seems appropriate to characterize at least some of the speakers in these early studies as having the variable third singular *-s*-insertion rule which Fasold (1972: 134, 146) found appropriate for Washington DC speakers in the 30–70% *-s*-absence range. By contrast, Tinky and Foxy's extreme *-s*-absence statistics make them more similar to Fasold's Washington DC speakers in the 80%–90% *-s*-absence range, the ones he characterized (Fasold 1972: 146) as having "no concord rule for verbal *-s*". However, at least some of the individuals in the early New York City and Detroit studies must have displayed similar near-categorical frequencies of third singular *-s* absence, so we cannot conclude that Foxy's and Tinky's statistics, dramatic though they seem, represent a fundamental shift in community norms. If further research indicates that most working class East Palo Alto teenagers display the almost categorical *-s* absence which Foxy and Tinky do, this would provide clearer evidence of divergence.

We have so far found no significant internal conditioning on this variable, except for verb type (compare Labov et al. 1968: 246–248): *have* and *don't* occur without third-singular inflections (i. e., *has*, *doesn't*) more frequently (67% and 77% of the time, respectively) than regular verbs do (54%), while zero forms of *say* occur less often (29%).¹⁸ Like Poplack – Tagliamonte (1989: 74) we found no significant effect of subject type (personal pronoun versus full NP versus indefinite).¹⁹ We have so far not tabulated our data on potential phonological constraints, which show inconsistent and/or minimal effects in most Vernacular Black English studies. But we have looked specifically for the two novel features which Myhill – Harris (1986) reported for core Vernacular Black English speakers in Philadelphia: the use of *-s* as a marker of narrative past, and the tendency to insert *-s* on the first but not the second member of conjoined verb phrases, as in "she **TAKES** your clothes out, and **LEND** (them) to people". However, neither of these features occurs in our corpus,²⁰ and their absence cannot be attributed to formal interview style or high-status interviewer effects, as Myhill – Harris (1986) suggest may have been the case with studies prior to theirs. Tinky and Foxy, surrounded by peers and community insiders, relate many excited narratives, but the use of *-s* as a narrative past or historical present is absent from them all, as it is in this extract:

- (2) This one day, Nita *came* over to that girl house. We *were* standin' – they *were* standin' outside, an' Shanti, she *came* up to that school that day, as this girl just *kep'* pickin – pick –

pick – pick – pick. As she had box me three days. Two days she had hit me from – an ah wouldn't hit that girl back. Ah would not hit her back. An Nita *say*, “why you fightin' wid my – you know? Why you messin' wid her?” You know, Anita *was* lookin at her all crazy, “Why you messin' wid her?” An' she *sai*', “Cause I beat her up.” An' ah *looked* at her like this, ah was – ah *was* sick o' that girl then. Ah *say*, “YOU BEAT WHO, WHAT, WHEN?!! YOU MEAN YOU BEAT ME UP?!!” Ah *looked* at her like dis, ah *start* laughin' – honestly, ah *did*, ah *asked* her, ah *say*, “YOU BEAT ME UP?!!” Ah *ran* through that house like Rambo, a tookin' off earrings an', throwin' things everywhere. Ah *came* out that house, ah – ah *was* Ah WAS BEATIN' her up ... (Tinky G., East Palo Alto 12, 597–608)

5. Absence of plural *-s* and past-tense marking

When we turn to the last two variables in table 1, variables not examined in recent discussions of the divergence hypothesis, we find that they provide no evidence that Vernacular Black English has become more divergent or non-standard over time. With respect to the absence of plural *-s* on regular verbs, the East Palo Alto teenagers and old people show the same low relative frequency (10%–13% *-s* absence), while the intermediate age group is lower still (1%–3%). Wolfram (1969: 150) had reported comparable frequencies of plural *-s* absence in Detroit: 3.4% and 7.4% for upper working and lower working-class Black teenagers, and 5.0% and 8.6% for upper working and lower working-class Black adults. Labov et al.'s (1968: 161) report of 8% ($n = 132/1707$) plural *-s* absence for New York City peer groups two decades ago suggests similarly that no appreciable change has occurred in the interim. We are still tabulating our data on possible internal constraints, but preliminary indications are that a following vowel does inhibit plural *-s* absence, as Labov et al. (1968) also found to be true.²¹

With respect to zero past-tense marking (including the presence of *-ed* on regular verbs and stem changing and other inflections on irregular or strong verbs) the picture is similar, except that the tendency, if anything, is towards less nonstandard usage as one descends the age hierarchy. Certainly Mr. Carbon, leaving one in five past-reference verbs unmarked, is more non-standard with respect to this feature than anyone else in our

core sample. As is evident from extract (2) above, the tendency of Tinky and most young vernacular speakers in East Palo Alto is to mark most of their past-reference verbs with Standard English past-tense forms, especially in the case of irregular or strong verbs. This is pretty much as Labov et al. (1969: 250) reported for black speakers in New York City, and as Fasold (1972: 39) found for black speakers in Washington DC.

The only significant internal constraint on zero past marking which we have located to date is verb type. In the combined data for the six core speakers, zero past marking is highest (31%, $n = 156$) on weak verbs ending in a consonant not adding a syllable in the past tense, which would yield consonant clusters on suffixation (e. g., /pIkt/ 'picked'), and on the verb *say* (25%, $n = 222$). It is equally low (6%) in irregular or strong verbs ($n = 622$) and on weak verbs like *agree* which end on a vowel ($n = 51$), and is lowest (2%, $n = 49$) on weak verbs with syllable-adding *-ed* like *start* in which the past tense suffix (*start-ed*) is therefore most salient.²²

6. Conclusion: Interpreting the evidence for divergence and convergence

On the basis of the apparent and real-time data we have examined in this paper, particularly for the first two variables in table 1, Vernacular Black English in East Palo Alto seems to show some evidence of ongoing change away from the patterns of standard and Vernacular White English, in line with trends reported for other urban areas. Having said this much, however, several qualifications must be made. In the first place, both our apparent-time and real-time data need to be improved, and we are attempting in our ongoing research to do precisely this – enriching the apparent-time data by increasing the sample size, and trying to locate comparable linguistic data or observations for East Palo Alto ten years or more ago to strengthen our real-time evidence. In the second place, apparent divergence with respect to invariant *be* and the zero copula is matched by stability and/or convergence of other features, particularly with respect to plural and past marking, as shown above, and with respect to the pronunciation of the unstressed syllable in *happy*, *fifty*, and so on as higher, fronter, tenser (more like [i] than [ɪ]) – as shown by Denning (1989), drawing on data from our project in East Palo Alto.

The coexistence of convergent and divergent changes which we find locally is similar to what Anshen (1969) found for Hillsboro, North Carolina,²³ and should of course be no more surprising than the finding that Vernacular Black English is changing. The alternative assumption, that it is standing still, and has been for the past century or longer, would be unwarranted. But the sociolinguistic challenge then becomes, as both Vaughn-Cooke (1987) and Denning (1989) have noted, to explain why some features show evidence of divergence while others remain stable or appear to be converging with Standard English and Vernacular White English.

One external factor that strikes me as very relevant to divergence but one that has been neglected in discussions of it to date, is the differences in attitudes towards black identity and culture, including vernacular language use, between successive black generations. Black teenagers are less assimilationist than their parents and especially their grandparents, and more assertive about their rights to talk and act in their “natural way”. By contrast, black adults, affected by the demands of the workplace, seem to be impelled away from distinctively black patterns of language and behavior.²⁴ Consider, for instance, the following response of Penelope Johnson, a former domestic, to the question of whether one’s speech makes a difference:

- (3) I do think it’s — it makes a difference, because in our day an’ time, if you don’t use your English as near right, people kinda look at you as if, “Oh, I don’t want her in — on my job, to speakin’ dis way or in my kitchen, aroun’ my childrens, you know, so I think it does make a difference how you speak ... (What do you think of your own speech?)
 Oh, it’s terrible, sometime.
 (Have you ever tried to change it?)
 Yeah — I’m — I — I have to try, you know, I guess. I — I tries to put the words right, the verbs and things, I try my best to — take my time if I — especially if I’m — speakin’ to someone tha’s — is — uh — educated, you know. I try to, you know, place my words as near right as I possibly can. Sometimes I slip up.
 (Do you think everyone needs to speak standard English?)
 I think so. Would be better on us [black people]. (Laughs.) It would be much better on us. (East Palo Alto 6A: 445–478)

Not only do black working-class teenagers from East Palo Alto and surrounding areas not express this kind of insecurity about their own speech,²⁵ they are also outspoken in their criticism of black peers who act white in speech or any other aspect of social behavior. Consider, for instance, Tinky G.'s scathing comments on a cousin who falls into this category:

- (4) Then i's these wh – these Black girls jus' like – ack lak White girl(s). Ah say, "You wanna be White, go change yo' sk – color. Shut up!" Ah – mah cou' – they ack stupid. Ah got – ah got a cousin, R[...], an' she got this Black girl, her name is C[...], an' she ack so white, po' he'p her. Ah tell her – ah say she love Boy George [a white British rock star]. Ah tell 'er, ah say, "You know what, C[...], why'on'choo go live wi' Boy George?" Say, "He not doin anything for you." (East Palo Alto 12: 241 – 245)

Compare, too, the comments of Reggie, a black teenager from neighboring Redwood City who goes to the same high school as many East Palo Altans, on the taunts that can stick with you for talking white:

- (5) Over at my school, if they – first time they catch you talkin' white, they'll never let it go. Even if you just quit talkin like that, they'll never let it go! (Reggie, East Palo Alto 50: A530 – 532)

And consider, finally, the staunch objections voiced by Fabiola, a black teenager from East Palo Alto, to "Oreos" (like the cookie, black on the outside, white on the inside) who try to correct her vernacular usage:

- (6) It pisses me off when the Oreos – they be tryin to correct your language, and I be like, "Get away from me! Did I ask you to – correct me?! No! No! No, I didn't! Nuh-uh!" (East Palo Alto 50: A254 – 258)

For these teenagers, Vernacular Black English is an important means of asserting their Black identity, in accord with the "Acts of Identity" model of Le Page – Tabouret-Keller (1985).²⁶

But even if we used the differential orientation of teenagers and old folks to explain the teenagers' increased use of zero copula, how can we explain the fact that they are not doing the same with the absence of plural -s or past marking? At present, neither an external (social identity) explanation nor an internal one (for instance, pressures to simplify the

system by reducing redundant markings) is capable of discriminating among all the variables of table 1 and accounting for their varied distributions in apparent and real time.

There do seem to be some valid reasons, however, why invariant habitual *be* should represent the leading edge of the features apparently undergoing change. In the first place, it is now very salient as a distinctively black form, one which in this respect has become the focus of public comment and use by black entertainers and other public figures,²⁷ and which is frequently included by whites discussing or imitating black speech (see Butters 1989: 15). One reason for the rapid dissemination of this form among black youth and for its attracting the notice of others is that although it functions as a grammatical marker — as a counter in a set of tense-aspect oppositions marked in the verb phrase — *be* is an invariant lexical item, which can be consciously adopted and rapidly spread like slang terms and other lexical items.²⁸ Furthermore, as a preverbal (semi-) auxiliary marking tense, aspect, or mood, it occupies a syntactic and semantic slot in which the distinctiveness of Vernacular Black English has always been marked, perhaps even more noticeably so over the past two decades. Compare recent discussions of stressed *BIN* (Rickford 1975), *steady* (Baugh 1984), *be done* (Baugh 1983: 77–80), *come* (Spears 1982), and *had* (Theberge—Rickford 1989). One can almost bet, as a linguist, that genuine qualitative and quantitative innovations in Vernacular Black English are likely to show up in the auxiliary (proximate future *finna*, from *fixing to* [Ching 1987], seems to be increasing in frequency now as a black vernacular marker), and the young native speakers of Vernacular Black English who are leading in the creation and adoption of such innovations may well be aware of the dynamic and salient nature of this grammatical category too.

Ultimately, despite our best efforts to interpret existing apparent- and real-time evidence, only the future will tell whether the heavy adolescent *be*-users and copula non-users of East Palo Alto today will adopt their parents' and grandparents' more conservative linguistic behaviors as they grow older, or whether they really represent the vanguard of a fundamental change in community norms. We intend to re-record and follow the linguistic development of Foxy, Tinky, and other individuals in our current sample and combine this with fresh samples of the community to minimize the ambiguities of each kind of real-time evidence (Labov 1986). Regardless of the direction future events take, it is clear that we would be in a much weaker position to interpret them and to untangle internal and external constraints on the grammatical variables discussed

in this paper if we did not have the detailed quantitative and attitudinal data for this point in time which we have presented above and are continuing to collect.²⁹

Notes

1. These figures are derived from Labov's (1981: 177) observation that the span between comparison points must be "large enough to allow for significant changes but small enough to rule out the possibility of reversals and retrograde movements: ... from a minimum of a half generation to a maximum of two".
2. In this paper, our focus will be on divergence from Standard English norms rather than local white vernaculars, partly because we have so far been able to locate and interview only a few whites in East Palo Alto (few non-transient working-class whites live in the central residential sections of the city), and because the data we have tabulated from those interviews so far (for copula absence and invariant *be* – neither of which the whites in our sample use) is identical with Standard English norms. For a number of phonological and other variables not examined in this paper, local White Vernacular English does differ from Standard English, however, and it is important to draw the distinction (see Fasold et al. 1987: 68; Butters 1989: 194).
3. For even more recent and comprehensive discussions of the controversy, see Bailey – Maynor (1989) and Butters (1989).
4. Labov – Harris (1986: 5) made this assumption and methodological strategy almost explicit, in noting that, "The extreme character of the core Philadelphia B[lack] E[nglish] V[ernacular] will be evident if the data we present here is compared to that reported for the Jets and the Cobras in New York City in the late 1960's (Labov 1972)." Labov (in Fasold et al. 1987: 65) was even more explicit: "We have no earlier records in Philadelphia. Our best comparison will be with the work done in New York in 1965–1968." But quantitative comparisons with that earlier work were not provided.
5. As Bailey – Maynor (1986) show, urban and rural black dialects in Texas differ in relation to the expression of habitual aspect, so we at least have to take this demographic difference into account when comparing the data from one black working-class community with another.
6. Since the primary interviewers of black peer-group and core vernacular speakers in Labov et al. (1968) and Labov – Harris (1986) were also black (John Lewis in New York City, Wendell Harris in Philadelphia), comparisons between these studies and ours should be particularly pertinent. A neglected issue in current discussions of the divergence issue is the importance of having data sets which are comparable with respect to interviewer characteristics and stylistic level. On this point see Wolfram (1987: 42–44).

7. John Carbon (a pseudonym, like the others) is a retired coal-miner, auto-worker, and construction worker who also earned a living for a while playing in local baseball games. Penelope Johnson is a retired farm-worker, domestic and nurse's assistant. Dotsy Boston is a machinist, and the mother of Foxy Boston (whose father is a construction worker). Paula Gates is a teacher's aide, and the mother of Tinky Gates. Unlike the 1960s studies of Vernacular Black English, we have fairly extensive data on each individual, and more females in our sample than males. Teenage girls in East Palo Alto use the vernacular as vigorously as the male street gangs in New York City in the 1960s did, and in some cases, even more so.
8. For convenience of reference and because such comparisons are basic to the divergence issue, these Vernacular Black English features are described in terms of comparisons with Standard English ("use of invariant *be*", "zero copula"), but it is of course possible to describe them in their own terms, as DeBose – Faraclas (1988) do.
9. Although this variable includes, strictly speaking, both auxiliary (pre-Verb + *ing*) and copula (pre-locative, nominal and adjectival) tokens, we will sometimes refer to it more loosely as "zero copula", following the tradition of the literature on Vernacular Black English.
10. Absolute and relative frequencies for this feature and others in table 1 are subject to modification as untabulated data from other tape recordings in our corpus is added. For instance, in a subsequent interview, Paula Gates uses four instances of invariant *be* when talking about "signifying" and other speech events in which she used to engage when she was in school. (Labov et al. 1968: 235 note similarly that New York City adults tend to shift towards *be* use when discussing childhood experiences, and suggests that this may be evidence of age-grading.)
11. What appears to be true from Bailey – Maynor's data (1987: 460, table 6) is that, in the auxiliary environment (before Verb + *ing*), *be* has become almost the exclusive marker of extended and habitual meaning for the children but not for the folk speakers, who use zero *is/are* for habituais much more frequently than *be* (73% vs. 6%). However, as I have pointed out elsewhere (Rickford 1989), since auxiliary tokens account for only 12% (4/31) of the folk speakers' tokens of *be*, but for 63% (62/96) of the children's, this kind of comparison can be misleading. See Butters (1989: 27) for a similar point.
12. In common with virtually all previous studies of the copula, these figures omit tokens which were indeterminate (e.g., contracted *is* followed by a sibilant, as in, "He's sick") or invariant (e.g., clause-final tokens, as in "Yes, he is", never contracted or deleted). See Rickford et al. (1988) for further details.
13. Table 2 also reveals that Dotsy follows the majority Mississippi white pattern reported by Wolfram (1974), allowing some *are* absence, but not *is* absence.
14. Labov et al.'s (1968: 202) mean *is*-absence figure for white Inwood teenagers is 0% (0/218), the same as reported by McElhinny (1988) for whites in Palo

Alto and East Palo Alto. For this grammatical variable, as for absence of third singular and attributive possessive *-s* (see Ash—Myhill 1986: 37, figure 2), divergence from Standard English norms is pretty much the same as divergence from white vernacular usage.

15. Labov et al. (1968: 161) report a total of 85 tokens for 44 or more members of the T-birds, Cobras, Jets, Aces, and Oscar Brothers; and Wolfram (1969: 143) reports 38 instances of potential *-Z* possessive for the 24 members of his working-class groups. In both cases, the mean sample size of two or three tokens per individual is considerably lower than in our data. Labov—Harris (1986) provide percentages, but no n's, so we cannot compare their sample size (nor perform chi-square or other significance tests on their data).
16. Wolfram (1969: 143) reported a slight favoring effect of a preceding consonant (especially /n/) over a preceding vowel: 34.6% to 27.8% *-s* absence respectively. Labov et al. (1968: 169) did not have enough data to determine phonological effects.
17. These figures combine statistics for the Thunderbirds, Aces, Cobras, Jets, and Oscar Bros across all styles and phonological contexts.
18. These distributions are based on the data of the middle-aged and old speakers only, since the teenagers are, as noted above, virtually categorical in excluding third-person *-s*. Here are the relevant statistics on third-singular *-s* absence for the adults (n's in parentheses: *have* = 67% (21), *do* = 44% (9), *don't* = 77% (35), *say* = 29% (7), regular verbs = 54% (222).
19. Relevant statistics — again for adults only — for absence of third person singular *-s*: personal pronoun subjects = 56% (174), full NP subjects = 61% (92), indefinite subjects = 58% (24).
20. Overall, *-s* occurs on semantically past verbs only 1% of the time (16 out of 1100 cases) in our corpus, and never in the speech of the teenagers. Ten of the 16 *-s* tokens occur in the speech of Paula Gates, and they are all tokens of *says*.
21. Combined statistics, for John Carbon and Foxy Boston only: ___ # # Consonant = 12% (85), ___ # # Vowel = 6% (51), ___ # # Pause = 17% (83). Note that Poplack—Tagliamonte (1989: 64–65) also find the same ordering of consonant, vowel, and pause with respect to absence of third singular *-s* in Samaná, and that, as they remind us, Guy (1980: 28) had also found a following pause most favorable for *-t*, *-d* deletion in contemporary Vernacular Black English.
22. On this point, compare Bickerton (1975: 142 ff.), and Poplack—Tagliamonte (1989: 64).
23. Anshen's finding — that /r/-lessness diminished with decreasing age while the pronunciation of /θ/ as [t] or [f] increased — is discussed by Vaughn-Cooke (1987: 29), who proposes a two-part hypothesis about Vernacular Black English change: "The majority of features undergoing change in Black English are converging toward standard English; powerful social and linguistic counterforces can reverse the expected direction of a change."

24. Lattice, a ninth grader, perceptively commented (East Palo Alto 50: A067–069) that adults use less Vernacular Black English than children because “when they’re in work, they got to try to be like the White people wan’ em to be”.
25. “I’m not really out to impress anybody,” the speaker of (5) observed, “I talk the way I want to!” (East Palo Alto 50: A478–479).
26. Note, however, that contrary to the impression sometimes given by proponents of the Acts of Identity model, speakers are still (subconsciously) controlled by applicable internal constraints.
27. Arsenio Hall, the Black late-night talk-show host, has even incorporated it into his slogan/theme: “Arsenio Hall – we be havin a ball!” And Arthur Ashe deprecates its use by one of his children’s teachers in a recent *Reader’s Digest* article. Butters (1989: 15–16) cites other recent examples of public figures using invariant *be*.
28. Quite independently, Butters (1989: 20 ff.) makes the same point. However, I do not agree with his additional characterization of invariant *be* as a “relatively superficial change” (1989: 24).
29. Note that written attestations of invariant *be* are few and far between. If we had to document current developments in the use of this feature in Vernacular Black English from written records, we would be almost totally at a loss, and this is probably true for most vernacular features undergoing change.

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Internal and external factors in syntactic change in an historical speech community

Robert Peter Ebert

1. Special problems of historical data

1.0 Introduction

This paper deals with problems and findings from the investigation of internal (linguistic) and external (social and stylistic) factors involved in four syntactic changes in progress in a German city from the late fourteenth through the sixteenth century. Since work of this type and scope is virtually unique for an historical speech community, I will devote a good deal of space to special problems posed by historical data before discussing the effects of specific linguistic and social/stylistic factors and their interaction in the observable syntactic changes.

1.1 Problems of documentation

In the 1960s and 1970s a rich set of analytical techniques was developed for the study of socially and stylistically conditioned variation in language. When we turn to the question of employing such techniques in the investigation of syntactic change in real, "historical" time, we find that the surviving documentation of the European languages provides us with relatively few opportunities for the detailed investigation of social and stylistic factors. The German language, for example, has been documented for over 1,200 years, but it is not until the second half of this period that the prerequisites for such an investigation begin to be met: autograph manuscripts or faithful copies of texts by numerous identifiable authors from one locale about whom sufficient biographical facts are known to allow for at least a rudimentary social classification. We are, however, fortunate in a few cases. As a result of bureaucratic efficiency and the interest in family and local history among the newly prosperous German burgher class, for a few cities of the fifteenth and sixteenth centuries we

have not only official documents and published (printed) technical and literary works but also a large body of private letters, city chronicles, family histories, autobiographies, diaries, and household records.

1.2. Sociolinguistic models and the problem of written data

The “sociolinguistic” investigation of such cities must be based to some degree on a “uniformitarian hypothesis” that the basic processes which produced the historical record are like – or, at least not fundamentally unlike – those at work in linguistic communities today. But great caution must be used in trying to employ the findings from studies of contemporary communities in interpreting the fragmentary evidence of the past. We have a body of generalizations from the sociolinguistic study of numerous Western urban speech communities as well as generalizations from the study of European rural and urban dialects and to a lesser extent the interactions of dialects and standard languages. But do the results of these studies on phonology and morphology generalize readily to syntax? Even if they do, are the factors at work in the spoken language in contemporary communities analogous to those involved in the written usage in a German city of the fifteenth and sixteenth centuries? We shall see in the discussion of the written records from such a city that we cannot readily generalize across the gaps of time, culture, and medium of communication. But while we must be very cautious about treating the findings of studies of the present as explanatory principles for the past, we can, as long as we remain sensitive to the historical differences, adapt the research tools used in contemporary communities to the historical situation and employ their variables and hypotheses as heuristics in the study of historical speech communities. One hopes that this will result in the discovery and use of richer data and greater precision in measurement and analysis.

1.3. The linguistic variable

There are a number of much discussed problems involved in treating differences in syntactic form as a linguistic variable to be correlated with other linguistic and extralinguistic variables (see especially Lavandera 1978 and Romaine 1982). Two of the variables which I will discuss appear to be free of these problems: both the relative order of an attributive genitive and its governing noun as well as the relative order in dependent clauses of an auxiliary verb and the nonfinite form with which it is in

construction appear to be truly “equivalent ways of saying the same thing”: not only are they semantically equivalent but there appear to be no pragmatic or discourse factors influencing the sequencing of these elements. The two other variables also appear to be semantic (at least truth-functional) equivalents, but here it is possible that discourse and pragmatic factors might be involved. In the one case we are concerned with the question whether a single finite verb or verbal complex stands in final position in dependent clauses or whether some other constituent or constituents can follow it:

- (1) a. ... *das ich dir ein pryf an sant Yohanastag* hab
 ... that I you a letter on Saint John’s Day have
geschryben
 written
 ‘that I wrote you a letter on St. John’s Day’
 b. ... *das ich dir ein pryf* hab *geschryben an sant Yohanastag*.

In the other case we look at the position of nonfinite verb forms in main clauses:

- (2) a. *also ward ich Endres Tucher von einem*
 so was I, Endres Tucher, by an
erbern ratt hie zu der stat
 honorable council here in the city
paumeister ampt bestellet
 architect office installed
 ‘Thus was I, Endres Tucher, installed here (in Nuremberg) in
 the office of city architect by the city council’
 b. *also ward ich Endres Tucher von einem erbern ratt hie* *bestellet*
zu der stat paumeister ampt.

It is possible that postposed nonverbal constituents might be afterthoughts or focused elements. Rather than attempt a pragmatic analysis of the massive body of texts examined in these studies, I ask instead whether these discourse factors are likely to lead to a skewing of the analysis of social and stylistic effects: do different social groups have a greater opportunity for afterthoughts or focusing? This can hardly be the case. Do different styles or types of texts provide greater opportunities for such effects? This is more likely and will have to be considered when we look at the style contrasts.

Another problem is whether the different word-order patterns which we can observe in the texts result from inherent variation in the same

linguistic system or from differential usage of different language varieties, for example a written standard versus an attempt to reproduce dialect usage in writing. In the fifteenth and sixteenth centuries a supraregional written standard was developing in German by a process of selection from the regional written varieties in a core area in the south and east of the German-speaking territories. The city which provides the data for these studies, Nuremberg, was at the very heart of that core area and thus the local written usage shared a number of features with the emerging standard. To be sure, in some of the documents, especially women's letters, a number of forms appear which deviate from general written usage and on the basis of later evidence of spoken usage can be considered dialect spellings, but by and large the orthographic, morphological, syntactic, and lexical differences do not appear to be sufficiently great and sufficiently consistent to justify treating differences between the groups as the choice of two or more distinct varieties.

Differences in the surface order of constituents can come about not only from variable constraints on some relatively low-level sequencing rule, but also from fundamentally different sets of syntactic rules with far-reaching consequences elsewhere in the grammar. For this time period we simply lack detailed studies of the grammar of any group of texts which might support a hypothesis of such fundamental differences. For the purposes of this discussion I will not go beyond observations on the surface order of elements.

1.4. The speech community

Nuremberg in the fifteenth and sixteenth centuries was one of the largest and most prosperous German cities. This economic prosperity was based on a large number of varied and highly skilled crafts and on large-scale trade with all parts of Europe. A large body of diverse documents survives from this time period, a good number of which have been published. As is the case for other German cities, nearly all of the surviving texts were produced either by trained scribes in the various offices of city government or by members of the wealthy upper social stratum composed of patricians and "honorable" (*erbare*), who together made up less than 10% of the population of the city (Endres 1971: 196). The patricians were members of a small number of specific families with special rights and privileges. The far larger group of *erbare* included large-scale merchants and manufacturers as well as professionals such as lawyers and doctors (Strauss 1976: 81). The large middle stratum comprised of the smaller-scale mer-

chants and the many prosperous artisans has left us little documentation, and what we have is from atypical individuals such as the widely traveled artist Albrecht Dürer and the well-read cobbler-poet Hans Sachs. For the linguistic usage of the city's large lower stratum we have no sources at all. Although the available documentation can provide us with little in the way of large socio-economic contrasts, the writers from the wealthy upper stratum still represent both sexes and a range of occupations and education levels.

1.5. Social factors

Any study of extralinguistic ("external") factors in the use of language is faced with the task of hypothesizing what factors may be directly relevant to linguistic usage, and with the problem of finding ways to observe and measure these factors. For example, in Labov's New York City survey and studies modelled on this work it is hypothesized that linguistic behavior is connected with ascribed or achieved social status (Labov 1972: 284). Since such status and other factors such as authority, respect, or intimacy are based on the subjective reaction to a group by other members of the society and are difficult to measure reliably, proxy variables such as income, occupation level, and education, which can be more reliably measured, are employed. Another, quite different, approach, is to measure the actual social contacts between individuals and to correlate measures of the type and density of such social networks with observed linguistic usage.

Now, both social status and social-network density probably had some effect on spoken linguistic usage in fifteenth- and sixteenth-century Nuremberg. Perhaps there was some carry-over effect in written usage as well. In looking for factors which directly influence written usage, we also need to consider factors such as 1) access to different written traditions which are transmitted within groups and institutions and can be observed in the usage of such groups and institutions; 2) the appropriateness of different written forms for a) different recipients and b) different types of documents (some information on orthography and lexis is available in printed manuals from the sixteenth century, otherwise this must be arrived at indirectly from the study of documents classified according to type and recipient; no such study has been done for syntax); 3) the general subjective evaluation given to different written forms; for this we have scant evidence in the form of remarks in prescriptive manuals of the sixteenth century, the ironic use of stereotyped forms and the use

of stereotyped forms by characters in dramas and dialogue. It would be valuable to construct a written-communication network analysis for a range of groups within the city. Since most written communication was with locales outside the city, such an analysis would also give us insights into the ways in which forms from elsewhere made inroads into the city. Some individuals have left us a large correspondence, but these are rare exceptions. Archives in Nuremberg contain many collections of letters and documents from various families from this period. These have yet to be explored and might suffice for a rudimentary written-network analysis. But at the moment we can only use circumstantial evidence to speculate about the exposure of individuals to various types of written language.

To turn now to the data for the studies to be discussed here, we are concerned with written records produced by scribes employed in the city chancery, by patricians and “honorable”, and by just a few artisans. For the more than forty individuals used for the studies on verb position and auxiliary position, we find strong correlations between the factor groups of sex, education, and occupation. Not only did males and females receive a different education but education and occupation are strongly linked. The university-educated males in the sample were professionals or large-scale merchants and most of them held important administrative posts in the city government. Boys preparing for careers as merchants or skilled craftsmen attended Latin school and usually also one of the many private schools of the “Schreib- und Rechenmeister” (German schools), where they received practical instruction in German correspondence and business arithmetic. The teaching methods themselves were kept secret; the copying of documents from the chancery as models of good usage appears to have played an important part in instruction in the “German schools” (Jaeger 1925: 110). After leaving these schools those boys who were to become merchants gained further experience in business correspondence as merchant apprentices. In general, girls were taught separately from the boys. Girls were generally excluded from Latin schools at this time and while some of the *Rechenmeister* accepted girls into their schools, the girls appear to have been separated from the boys (Reicke 1901: 66). Aside from private tutors, other educational forms available to girls were convent schools and private classes given by women. Many girls from the upper social stratum entered religious orders in their early teens and continued their education within the walls of the convent. Of course, the available documents often tell us nothing about the education of many of the sources; in these cases we can only assume that they received the education typical for individuals of their social class and occupation.

Now clearly both education and occupation had an influence on one's written usage, but because one tended early in life to embark on a separate educational track toward one's occupation it is difficult to isolate the effects of education vs. occupation. There are a few contrasts: 1) administrators with a university education can be compared with those without a university education, and 2) there are two university students who provide a contrast to the university-educated administrators. The different groups can be distinguished most simply by their occupations: 1) men who held high posts in city government (administrators), 2) university students, 3) artisans, 4) merchants (this category includes several men who trained as merchants but went on to other occupations: a brewer, a professional soldier, and the secretary of a nobleman), 5) abbesses, 6) nuns, and 7) married and single women who lived and worked in their family households.

1.6. Stylistic factors

One of the most impressive demonstrations by quantitative sociolinguistic studies of spoken variation in contemporary communities is that some features show the same pattern of variation on a stylistic continuum from casual to formal speech as well as on a social continuum from working class to upper middle class. The basic problem in investigating stylistic patterns together with social patterns in historical texts is that there are many dimensions of style that are supported by studies of historical texts, but we need to find a small number of justifiable stylistic distinctions which are comparable over several centuries and among social groups. The two general approaches involve either a taxonomy of text types (genres, *Textsorten*) or diagnostic features of usage. Assuming for the moment that a given text type/genre can be treated as monostylistic, we find that the literature on such text types for the historical period in question is devoted largely to making a large number of fine distinctions between types. Unless we can find criteria for grouping these many types, the number of cells for which we need to find several individuals from each time period and social group quickly exceeds the available data. In addition, only some individuals produce more than one or two types of text: among natives of Nuremburg, for example, Albrecht Dürer has left us a number of technical works, a diary (unfortunately transmitted only in a later copy), and a small number of original personal letters; for Lazarus Spengler we have legal and political advice, official letters, religious polemics written in the service of the Reformation and some

personal letters (but not enough were available to me to allow establishment of a contrast with his other works). Secular women have left us by and large only personal letters and household records. Other groups, for example merchants and students, certainly had a larger written repertoire but for most only one type of document has survived. The consequence of this type of historical record is that we cannot get evidence of a wide range of social groups each writing several styles (analogous to the spoken styles elicited in interviews with speakers from different socio-economic groups).

The second approach is not really an option. I know of no well worked-out body of linguistic diagnostics to distinguish styles in a non-literary text or between texts for this period. As a result we can only give an impressionistic answer to questions of whether common types of documents such as personal letters can each be considered monostylistic. By and large it does appear justifiable to treat each of these as monostylistic. Occasionally there are some readily apparent differences between individual texts of the same type. For example, the merchant Balthasar Paumgartner uses some features of business usage in personal letters to his wife and she occasionally adopts these as well. The student Christof Kress employs some salient features of administrative language in personal letters to his father. Official letters employ the jargon of the chanceries to varying degrees. Not infrequently, official documents are included verbatim in chronicles (these are, in general, readily apparent and can be excluded from the data).

In order to allow for comparison of the social groups I have grouped the many fifteenth and sixteenth-century documents into three "styles" which allow for a rudimentary control on stylistic differences. These three styles are based on the type of document and the addressee. Business and diplomatic correspondence as well as legal advice are classified as "formal letters". I have included here also a few other expository texts: an explanation of scripture by Veit Dietrich, Lorenz Meder's account of merchant practices and Endres Tucher's description of the duties of the city architect. Letters to friends or family members are considered "informal letters". The third style is made up largely of chronicles, travelogues, diaries, and an autobiography, which form a natural category of personal narratives of events. Included are also a few early narrative texts: two accounts of a nun's visions, and one literary narrative. This corpus unfortunately does not contain evidence of the same individual writing two or more different styles.

2. The first variable: the position of the verb in dependent clauses

The position of the verb in dependent clauses has been variable since the earliest German documents. I consider a closed set of variants: only those dependent clauses which contain a constituent which can appear either before or after the verb. Sentences with clausal complements (*dass*-clause, indirect question, etc.) and infinitival complements are not included. Clausal complements can, in principle, appear before the verb, but this occurs very rarely. Since some groups and styles use far more clausal complements than others and such clausal complements are nearly always postposed, the results would be skewed if these sentences were included. The same distortion can result to a lesser degree from the inclusion of infinitival complements. The variable is treated as binary: cases where the verb or a verbal complex consisting of a finite form and one nonfinite form appears in clause-final position versus cases where a constituent or constituents of a simple clause (noun phrases [including single nouns and pronouns], prepositional phrases, adverbs) appear after the verb. (3) and (4) are examples with verb-final order, (5) and (6) contain postposed constituents:

- (3) *so hab wir nymant, den wir zu dir hinein schicken*
 so have we no one whom we to you in send
 'We have no one to send in to you'
- (4) ... *aber wolten sy es darumb thun, das wir*
 but wanted they it therefore (to) do, that we
darmit den orden und alle gelubt uibergeben solten
 therewith the order and all vows give up should
 '... but they wanted to do it in order that we give up the order
 and all our vows'
- (5) ... *sofern daz sy der covent*
 so far that her the convent
ledig saget des ampts (postposed genitive NP)
 free speak the office
 'when the convent should release her (the abbess) from the
 office'
- (6) ... *when man uns kont*
 if one us could
pringen zu der ewangelischen freyhait (postposed PP)
 bring to the evangelical freedom
 'if one could bring us to evangelical freedom [i. e. the Protestant
 faith]'

These examples are from a personal letter by the nun Clara Pirckheimer. The order of an auxiliary and a nonfinite verb is treated as a separate variable (see below).

Data samples (total 12,553 dependent clauses) from 41 natives of Nuremburg were examined formally using the statistical package GLIM (= Generalized Linear Interactive Modelling; see Ebert 1980: 364–365 for details of this program). Maximum likelihood estimates were calculated for the external factor groups time, style, age, sex, class, education, and occupation. Of these, four, time, style, education, and occupation, had significant effects. When all other factors are held constant there is an increase in the use of verb-final position (i. e., a decline in the postposing of nonverbal constituents) from the fifteenth to the sixteenth century. The estimates for style give large and significant contrasts between informal letters and the other two style categories: informal (personal) letters favor verb-final order more than formal letters and chronicles/diaries. Formal letters slightly favor verb-final order over chronicles/diaries.

When we discussed the education and occupations of individuals above we saw that education and occupation tended to form “tracks”. As a result the correlation estimates between the factor groups education and occupation are high and the significance levels for education ($p \approx .09$) and occupation ($p \approx .10$) give us fairly low levels of confidence so that we can reject the null hypothesis of no effect due to these factor groups. The consequence is that in a society like fifteenth- and sixteenth-century Nuremburg, where young people separate early onto different educational tracks and each track usually leads to a distinct cluster of occupations (and, moreover, these tracks are highly dependent on sex and social class), it is difficult to establish with confidence the independent effects of education and occupation. What one can do in this case is to combine estimates for education and occupation. This produces idealized groups in terms of these educational and occupational tracks.¹

We find a number of large and significant contrasts. University-educated administrators favor verb-final order most, followed by administrators and merchants with a German school education. These three groups contrast with nuns, artisans, and students and all groups contrast with the group which favors verb-final order the least, the secular women.² This pattern of stratification, with administrators and merchants leading other groups, points to the possible influence of the written tradition of the language of administration. A sample of that tradition in the form of a large number of letters and decrees produced in the city chancery

was examined. The results are striking: from the middle of the fifteenth century chancery usage is characterized by the nearly exclusive use of verb-final order (mid-fifteenth to early sixteenth century approximately 95%, after 1525 over 99%). Chancery usage of verb-final order clearly leads all the groups of individuals: the closest to it are the formal letters and opinions of Lazarus Spengler (98.7%), who was himself the head of the city chancery, and the personal letters of the merchant Balthasar Paumgartner (100%) from the very end of the sixteenth century. It appears, then, that this is a normative change proceeding from the language of administration to those groups with the most experience and training in this tradition, the administrators and merchants. One would expect artisans, students, and nuns to be less affected by this tradition and, indeed, their estimates are significantly lower. By virtue of their schooling and their linguistic exposure, which was restricted largely to family and friends, one would expect secular women to be the least affected group and they do, in fact, have the lowest estimates.³

This clearly appears to be a normative change which is slowly wiping out the variability in verb position in favor of verb-final position. One might expect an analogous situation to that found in some contemporary communities for high-status variables: their presence increases both as one moves up the socio-economic scale and as the form of communication becomes more formal. Here, however, we had a higher estimate for personal letters than for official letters.⁴

One of the few advantages we have in the study of variation in historical communities over studying contemporary communities is that for a given period in the past we usually know not only what preceded but also what followed: we can see where ongoing changes are really going. In later centuries and in modern German the postposing of non-verbal constituents in clauses of the sort discussed here has become increasingly restricted to those prepositional phrases which are optional constituents of the predicate and to noun phrases which contain a clause.⁵ One can see these constraints becoming stronger in the course of the fifteenth and sixteenth centuries, as indicated by a general decline in the comparative frequency of other constituent types in the position after the verb (see further the end of section 3). The change toward less frequent postposing of all nonverbal constituents progresses from the language of administration to groups more remote from this written tradition.

3. The second syntactic variable: the position of the participle or infinitive in main clauses in constructions with *haben/sein/werden* + past participle or *werden*/modal verb + infinitive

As with verb-final position in dependent clauses we consider only main clauses containing nonverbal constituents which can be postposed beyond the participle or infinitive. Since the earliest German documents the position of the nonfinite form has been variable. Using a data base of 7,924 main clauses from the same 41 individuals used for the first variable above and the same statistical program, we see that the use of final position for the nonfinite verb increases from the fifteenth to the sixteenth century. Here, too, informal letter style has higher values than formal letters and diaries/chronicles. As with the first variable the estimates for education and occupation were combined. Here the highest group is university-educated administrators. These contrast with a lower group of merchants, administrators with a German school education, students, and nuns. These groups contrast with the two lowest groups, artisans and secular women. Thus the overall pattern of social stratification is quite similar to that for verb-final order in dependent clauses. This pattern of stratification also suggests the language of administration as a model, but when we compare the usage of chancery documents with the usage of these 41 individuals, we find that the rates of chancery sources are not consistently higher than the rates of all individuals, as was the case for verb-final order in dependent clauses. Nevertheless, the rates of chancery sources are higher than those of most individuals. Here, too, over time the postposed elements are increasingly restricted to optional prepositional phrases and complex noun phrases.

In addition, there is an indication of an interaction between linguistic and social/stylistic factors. If we look at the various types of constituents which appear in the position after the nonfinite verbal form, we find that obligatory constituents make up proportionally fewer of the postposed cases in the period 1500–1550 (odds 0.134), when postposing is in general less frequent, than in the fourteenth and fifteenth centuries (odds 0.403 and 0.464 respectively), when postposing was far more frequent. Likewise, in the style where postposing is least frequent (personal letters), obligatory constituents make up proportionally fewer of the postposed constituents (odds 0.107 for personal letters vs. 0.403 for formal letters and 0.447 for diaries/chronicles). Since the differences can hardly result from different

time periods or styles using more or less obligatory constituents in all types of clauses, we can reject the null hypothesis as implausible and conclude that there is an effect due to the type of constituent. It appears that over time writers have become more sensitive to a constraint against postposing obligatory constituents (later in the history of the language this constraint becomes nearly categorical). There appears also to be a stylistic contrast. One might expect to find social contrasts as well, that groups who postpose less in general would be even more sensitive to the postposing of obligatory constituents. One does find some contrasts of this sort: for example, university-educated administrators of the sixteenth century postpose least and have the lowest odds for obligatory constituents (0.013), whereas groups such as artisans and students postpose more and have higher odds for obligatory constituents (0.232 and 0.285 respectively); but secular women, who postpose relatively frequently, have very low odds for obligatory constituents. Because the pattern is not consistent and because sample sizes for some groups are relatively small, this can only be taken as a suggestion of varying sensitivity to this constraint by different social groups. Dependent clauses show similar contrasts over time and by style, but group contrasts are even less clear than for main clauses (see Ebert 1980: 375 ff. for further details).

4. The third variable: the relative order of one auxiliary verb and one nonfinite form in dependent clauses

Here we consider the relative order of one auxiliary verb and one nonfinite form in dependent clauses in the following constructions: the perfect periphrasis *haben/sein* + past participle, the passive with *werden* + past participle, the future with *werden* + infinitive and combinations of a modal verb + infinitive (see examples below).⁶ This is an attractive variable for quantitative analysis because 1) it shows extreme and bewildering variation, 2) differences between the sequences AUX + V and V + AUX do not correspond to differences in meaning, and 3) the order of auxiliary and verb does not appear to be sensitive to pragmatic or discourse factors.

The order of auxiliary and nonfinite form, which is now fixed as V + AUX in the modern standard language, was variable in written German from the earliest records up until the seventeenth century. For

data from the Nuremberg chancery and 44 individuals (including the 41 individuals studied for the first two variables) quantitative analysis shows the spread of a normative order V + AUX within a system of variation conditioned by linguistic, stylistic, and social factors.

There are two major linguistic factors and a few which may have small effects (for details on the latter see Ebert 1981: 205–209). The type of syntagm has a large effect: the future norm V + AUX is favored very strongly in the passive periphrase *werden* + past participle: odds for the order

$$\text{past participle} + \textit{werden} \left(= \frac{\text{number of occurrences of V + AUX}}{\text{number of occurrences of AUX + V}} \right)$$

for the complete corpus are 10.7, for past participle + *haben* 4.92, for infinitive + modals/*werden* 1.77, for past participle + *sein* 1.46 (cf. the pattern in the subset of data in table 1).⁷

There is also a clear pattern involving the stress of the word which immediately precedes the combination of auxiliary and nonfinite verb form (the possibility of such an effect was first pointed out by Otto Behaghel [1932: 87 ff.]): there is a preference for an alternation of stressed and unstressed words, namely stressed word + unstressed auxiliary + stressed past participle/infinitive on the one hand or unstressed word + stressed past participle/infinitive + unstressed auxiliary, on the other:⁸

– preceding word is stressed

- (7) ... *das man sy aller gelub ledig sagen soll*
 ... that one them all vows free say shall
 ‘... that one should declare them free of all vows’

- (8) ... *daz wir uns auf deine wort durfen laßen*
 ... that we ourselves on your word may let
 (idiom: *reflexive* + *auf etwas lassen* ‘to rely on something’)
 ‘... that we may rely on your word’

– preceding word is unstressed

- (9) ... *daz sy doch nit thun wollen*
 ... which they indeed not do want
 ‘... which they surely don’t want to do’

- (10) ... *und wem man aufsperrn solt*
 ... and whom one open up should
 ‘... and for whom one should open up’.

The same statistical program (GLIM) employed for the first two variables was used for the analysis of external factors of style and social group and to check for interaction of stress and external factors.⁹ The

use of the later normative order V + AUX increased steadily from the fifteenth through the sixteenth century. Formal letter style strongly favors V + AUX over both informal letters and chronicles/diaries. The social contrasts for each of the three syntagms were examined separately. The contrasts are clearest for the perfect periphrasis with *haben* + past participle. Here the patrician administrators with a German school education have the highest estimate for V + AUX order and contrast significantly with all other groups. The next highest stratum is comprised of the university-educated administrators and the merchants. The next lower stratum is composed of artisans, students, and nuns. These groups contrast with the lowest group, the secular women.

For *werden*/modals + infinitive the contrasts are not as clear and the stratification is a bit different: the upper stratum is comprised of male administrators, merchants, and artisans; students and secular women have lower estimates and these are clearly higher than for the nuns. For *sein* + active past participle administrators form the highest stratum, merchants and artisans are in the next lower stratum, students and nuns are lower still and secular women have the lowest values. One can quickly get a sense of sample size and range of variation, as well as the contrasts due to the type of construction, the stress of the preceding word, and the various social groups, from a selection of raw data. These data are presented here as the number of tokens of the order AUX + V, which was being superseded by the normative V + AUX, divided by the total number of tokens.

By and large we find the same pattern of stratification for each of the three construction types. As with the first two variables the fact that the highest estimates for the order V + AUX belong to administrators and merchants, men whose education and work involved the language of administration and official correspondence, suggests that we look at the usage in documents emanating from the city chancery as a possible normative influence leading to the suppression of the variant AUX + V in the usage of individuals. In chancery documents we find consistently high rates of V + AUX, rates that exceed those of all except a few individuals, largely administrators and merchants (see Ebert 1981: 235–236). Chancery usage also shares the same systematic effects of the type of construction.

We find here, then, an analogue to the stylistic and social patterning typical of a prestige variant: the variant is more frequent in formal styles and increases as one goes up the socio-economic scale. Here, however, the relevant social dimension is not socio-economic, since nearly all

Table 1. Order of auxiliary and one nonfinite form

	AUX + infinitive		<i>haben</i> + past participle	
	Unstressed word precedes	Stressed word precedes	Unstressed word precedes	Stressed word precedes
<i>University-educated administrators</i>				
Willibald Pirckheimer	2/6 (33%)	1/18 (6%)	0/7 (0%)	2/17 (12%)
Lazarus Spengler	2/31 (6%)	3/102 (3%)	1/9 (11%)	1/33 (3%)
Kaspar Nützel	11/38 (29%)	21/63 (33%)	0/8 (0%)	1/9 (11%)
Christoph Scheurl	0/25 (0%)	0/54 (0%)	0/31 (0%)	0/62 (0%)
<i>Secular women</i>				
Katharina Lemlin	15/38 (39%)	37/59 (63%)	2/53 (4%)	25/67 (37%)
Margareta Behaim I	4/7 (57%)	11/11 (100%)	16/21 (76%)	9/15 (60%)
Margareta Behaim II	6/11 (55%)	7/7 (100%)	11/21 (52%)	17/23 (74%)
<i>Nuns</i>				
Clara Pirckheimer	32/66 (48%)	49/65 (75%)	2/35 (6%)	8/44 (18%)
Felizitas Grundherr	8/16 (50%)	8/11 (73%)	0/17 (0%)	2/27 (7%)
Katharina Pirckheimer	20/30 (67%)	19/21 (90%)	9/20 (45%)	11/20 (55%)

individuals sampled belong to the upper stratum, but rather exposure to the written language of administration (and perhaps, too, the more widespread public use of language in printed works – that will need to be studied).

Other dimensions of this change can be seen in a few salient cases where AUX + V order is most resistant to normative influences. The perfect forms of the verb *werden* 'become' and *sein* 'be' are much more frequently AUX + V than comparable rhythmical types of other verbs. Also, for some reason verbs with a stressed separable prefix strongly favor AUX + V order (for example, ... *kann ankommen* or ... *an kann kommen* vs. ... *ankommen kann*). Frequently the only (or nearly the only) exception to V + AUX order in the usage of an individual occurs with one of these verbs.

Thus we see a system of conditioned variation being wiped out by a normative or prestigious written variant. This change proceeded at different rates for different stress patterns, to some degree for different lexical items, in different styles, and in the usage of different social groups. Just how much this system of conditioned variation was affected by local dialect usage cannot be known. When a self-conscious dialect poetry emerges in the eighteenth century (by this time the change to V + AUX order had long since reached its conclusion in the written language), Nuremberg dialect poets still use both orders V + AUX and AUX + V in rhyming and non-rhyming position (Ebert 1981: 237).

The order of auxiliary and nonfinite verb is related by various typologies to the relative position of the verb and its arguments (Greenberg 1966: 84 – 85; Lehmann 1971: 23; Vennemann 1974: 347). However these might be related in syntactic theory, there is no doubt that the developments over time and the social stratification for verb-final position in simple dependent clauses and for the order V + AUX are remarkably similar. The use of verb-final order reached very high rates in the early sixteenth century and started to level off, whereas the order V + AUX increased sharply in the sixteenth century. The very high rates of verb-final order in simple dependent clauses preceded, then, the sharpest rise in the order V + AUX.

5. The fourth variable: the position of the attributive genitive

The fourth variable to be considered is the order of an attributive genitive and its governing noun. This can be treated as a closed set of variants. Differences in the order of these elements do not correspond to differences in meaning.

The data are early sixteenth-century texts (1500–1540) written by 12 individuals from Nuremberg and three sets of early sixteenth-century official letters written by scribes in the city chancery. The twelve individuals comprise three groups:

- (1) 5 patrician or *erbar* class women with women's-school or convent education (this includes two secular women, a widow who entered the convent at the age of 50 and two nuns who entered the convent in their teens); the documents are letters to family members;
- (2) 3 patrician or *erbar* class men with a Latin-school or German-school education, largely engaged in commerce – the documents are a diary, an autobiography, and a collection of personal letters;
- (3) patrician or *erbar* class men with a university education who held posts in city government – the documents are official letters.

The texts from groups 1 and 2 are private documents whereas the texts from group 3 were produced by these men in their public roles in city government. Too few private letters are available from group 3 for comparison, so we will be uncertain to what degree the contrasts between group 3 and the other groups should be attributed to style rather than to social group.

Linguistic factors play a large role in the pattern of variation. The major factor involves the referent of the genitive noun. Previous research as well as these data support a distinction between four major types: names, common personal nouns (appellatives), abstract nouns, and concrete nonpersonal nouns (for examples see the discussion below). A possible secondary factor involves the relationship between the governing noun and the genitive. Previous research has considered differences in the position of the *genitivus subjectivus*, *genitivus objectivus*, partitive genitive, possessive genitive, genitive of origin, and genitive of quality or characteristic.¹⁰

In the course of the Middle Ages attributive (non-partitive) genitive nouns which do not denote persons increasingly occur in postnominal position. From about the fourteenth century on, common personal nouns (appellatives) occur in increasing numbers in postnominal position,

whereas proper personal nouns (names) remain much longer in the position before the governing noun.

Let us now turn to the contrasts in the data (see table 2).¹¹

Names are overwhelmingly prenominal, for example *des Spenglers swester, von der Charitas costgeld*. If we consider that half of the post-nominal cases are names with a Latin inflection (for example *das Wort Pauli* – such names are consistently postnominal) the pattern for German names is even more striking. Groups 3 and 4 taken together (administrators and chancery sources) tend to postpose names a bit more frequently than do groups 1 and 2 (women and merchants).¹² Titles (for example *eur gnaden* ‘your grace’, *kaiserlicher Majestet*) and nouns such as *des königs, des kaisers, des bapsts* ‘the pope’s’, *des teufels* have, in general, the same positional characteristics as names.

Previous studies of a wide range of documents from various geographical areas have shown that appellatives (for example, *in deins weibs brief, der veind Land, zu hilf und trost deines nechsten*) are the most variable type of genitive. For example, in Carr’s (1933: 479) study of twelve works from the fifteenth and sixteenth centuries the range was 0% to 68% for NG order (see also Ebert 1988: 42). There is a wide range of variation in the Nuremberg sources, too, but there is also a clear pattern of contrasts between the groups. The women and merchants strongly favor prenominal position for this type of genitive; university-educated administrators favor this position as well, but less strongly. There is little deviation among the individuals within each group. The chancery documents slightly favor the opposite order.¹³ There is another dimension involved here as well. The data for groups 1 and 2 are private and personal documents, groups 3 and 4 are represented by official letters. The contrast between groups 1 and 2 taken together and groups 3 and 4 taken together is large and significant ($\chi^2 = 15.4$, $p < .001$), although it is not clear how much of this contrast is due to style and how much to differences between those individuals thoroughly accustomed to the traditions of administrative language (groups 3 and 4) and those with less such experience (the merchants) and those with little or none (the nuns and secular women).

Designations for the Deity are treated quite differently from the other personal nouns. In every group postnominal position of *Gottes* and *des herrn* dominates by a wide margin.

Virtually all nonpersonal, concrete genitives are postposed. Abstract attributive genitives, on the other hand, still appear in numerous examples in prenominal position. By the sixteenth century many of these involve formulaic expressions (e.g. *der seelen seligkeit, seiner selen hayl* ‘the

Table 2. Position, by types of genitive
(GN = genitive + noun, NG = noun + genitive)

Source	Name		Title		Appellative		Gottes		Abstract		Nonpersonal, concrete	
	GN	NG	GN	NG	GN	NG	GN	NG	GN	NG	GN	NG
<i>Group 1</i>												
Margareta Behaim (I)	9	0	0	0	1	0	0	11	0	1	0	0
Margareta Behaim (II)	6	0	0	0	1	0	0	0	0	1	0	0
Katharina Lemlin	20	1	1	1	7	3	0	31	9	9	0	1
Clara Pirockheimer	11	1	2	0	6	3	0	7	8	9	0	7
Sabina Pirockheimer	5	2	1	0	11	3	0	19	4	7	0	1
<i>Total:</i>	51	4	4	1	26	9	0	68	21	27	0	9
<i>Adjusted total:</i>	51	0	4	1	26	9	0	68	7	27	0	9
% (adjusted total)	100	0	80	20	74	26	0	100	21	79	0	100
<i>Group 2</i>												
Sebald Örtel	11	1	2	0	3	0	0	3	0	1	0	3
Michel Behaim	13	2	0	0	13	0	1	6	3	6	1	2
Hieronymus Köler	56	5	9	1	22	6	4	8	8	21	0	22
<i>Total:</i>	80	8	11	1	38	6	5	17	11	28	1	27
<i>Adjusted total:</i>	80	5	11	1	38	6	5	17	7	28	0	27
% (adjusted total)	94	6	92	8	86	14	23	77	20	80	0	100

<i>Group 3</i>												
Kaspar Nützel	5	2	0	1	12	6	8	13	6	29	0	4
Willibald Pirckheimer	9	5	24	3	14	8	0	0	3	16	0	6
Christoph Scheurl	24	2	25	0	13	9	1	1	7	40	0	13
Lazarus Spengler	1	0	24	2	18	11	4	16	28	117	0	1
<i>Total:</i>	39	9	73	6	57	34	13	30	44	202	0	24
<i>Adjusted total:</i>	39	7	73	6	57	34	13	30	38	202	0	24
% (adjusted total)	85	15	92	8	63	37	30	70	16	84	0	100
<i>Group 4</i>												
Chancery letters:												
to W. Pirckheimer	18	5	6	0	8	12	0	2	8	57	2	20
1525	0	5	33	0	9	22	9	32	2	91	0	10
1530	20	1	26	3	17	9	8	4	44	65	0	9
<i>Total:</i>	38	11	65	3	34	43	17	38	54	213	2	39
<i>Adjusted total:</i>	30	4	65	3	34	43	17	38	29	213	2	39
% (adjusted total)	88	12	96	4	44	56	31	69	12	88	5	95
<i>Grand total</i>	208	16	153	11	155	92	35	153	126	470	2	99
<i>Adjusted grand total</i>	200	16	153	11	155	92	35	153	81	470	2	99
% (adjusted grand total)	93	7	93	7	63	37	19	81	15	85	2	98

salvation of his soul', *des glaubens sachen* 'matters of faith'). Nearly all the remaining abstract nouns which appear in prenominal position refer to groups or institutions made up of people, for example *des convents*, *der stat*, *der christenheit*, *des bunds*, *des rats*. These are clearly abstract nouns, but like other nouns which refer to persons they appear (far less frequently, to be sure) in a position before the governing noun. There appear to be no significant differences in the usage of the various groups.

To summarize, the overall direction of change is toward postnominal position for the attributive genitive. The change has progressed at this point in time, the early sixteenth century, to a different stage for different types of nouns. German names are most conservative: here GN order still dominates very strongly. Chancery and administrators are leading the beginnings of this change toward the variant order NG. Appellatives are widely variable. Here, too, chancery and administrators have progressed much further toward NG order. For abstract genitives NG order is strongly dominant; it is virtually categorical for concrete, nonpersonal genitives.

6. Concluding remarks

For each of the four word-order changes we found that change was embedded in a network of linguistic and social/stylistic changes. In the cases of verb position in dependent clauses and the position of infinitives and past participles in main clauses the postposing of constituents to the right of the verbal form was dependent on the type of constituent; in the case of AUX + V order vs. V + AUX order rhythmic and lexical factors were involved; in the case of attributive genitives the type of noun in the genitive was the primary linguistic factor.

The four word-order changes discussed here appear to be analogous to Labovian "change from above": the conscious adoption of a prestige or normative variant which (generally) spreads downward through the socio-economic scale. In this case the crucial social variable is not socio-economic stratum — nearly all of the individuals whose written records are available belong to the upper stratum of society in fifteenth and sixteenth-century Nuremberg — but rather differences in sex, education, and occupation which result in different exposure to certain written varieties. In general, boys and girls set off early on different career tracks, beginning with different educational forms which lead to different occupations. As a result there are relatively few contrasts based on education

or occupation alone and thus it did not prove possible to calculate estimates of their independent effects with a high degree of confidence. Because of their education and occupations, women remained more remote from the written varieties with the highest frequency of the innovative variants and thus, in contrast to most findings from studies of contemporary Western societies, where women are usually more sensitive to national norms, the women in fifteenth and sixteenth-century Nuremberg show the least frequent use of the emerging written norm. We also found a case where linguistic constraints were not shared uniformly within the community: some groups were more sensitive to constraints on the postverbal position of nonverbal constituents in main clauses (in regard to the discussion in the literature of whether linguistic constraints are shared by all groups in a speech community see the summary in Romaine 1982: 210–211).

The “classical” work in quantitative sociolinguistics looked at social stratification, the use of different styles by individuals, and the subjective evaluation of linguistic variables. In fortunate cases one was able to show parallel directionality in each of these dimensions: the variant shown independently to be more prestigious by subjective evaluation tests was used increasingly frequently by each group as that group’s usage became more formal and the frequency of this variant generally correlated directly with the position of these groups on a socio-economic scale (more frequent in the higher groups, less frequent in the lower groups). As we have seen, the documents available from fifteenth and sixteenth-century Nuremberg, which may well be the richest documentation for any German city of this time, do not provide us with much socio-economic depth. Even if further documentation from the middle strata becomes available, it is still problematic just how socio-economic proxy variables are to be related to more immediate effects on written usage. Numerous style contrasts can be detected, but the most valuable type of data, different types of documents written by one individual or evidence of one individual writing distinctly different styles within a document, is available for relatively few members of the community, generally those who wrote public or official communications as well as private letters or diaries. As we saw above, when we lack evidence for different styles for each member of several different social groups, it is difficult to assess with confidence the independent effects of social vs. stylistic variables. For the subjective evaluation of a variant (which provides the basis for a psychological account of why a form is used more [or less] by different groups) we have virtually no direct evidence.

Still, there is no doubt that independent external factors of the sort discussed here can be investigated for fairly frequently occurring dependent linguistic variables, and that studies of change in progress in historical communities can add to our knowledge of factors involved in syntactic change.

Notes

1. No attempt was made to construct an index of social rank based on a complex of socio-economic measures such as income, education, and occupation. There are no reliable data on income or wealth; there are no tax records for Nuremberg at this time, since the citizens paid their taxes in secret. There is also nothing akin to a social survey of the sort available to Labov in his famous study of New York's Lower East Side. There are thus no grounds for weighting and scaling socio-economic variables for Nuremberg at this time. Were one able to produce such an index, we still would be left with the thorny problem of how it might relate to written language use.
2. Complete data and details of the analysis are available in Ebert (1980). Some raw data from the early sixteenth century give a rough impression of some of these contrasts.

Groups	Verb-final tokens/ total tokens	% verb final
<i>University educated administrators – formal letters</i>		
Willibald Pirckheimer	121/128	94.5
Lazarus Spengler	379/384	98.7
Kaspar Nützel	211/221	95.5
Christoph Scheurl	332/350	94.9
<i>Merchants – personal letters</i>		
Michel Behaim	285/304	93.8
Sebald Oertel	36/40	90.0
<i>Nuns – personal letters</i>		
Clara Pirckheimer	423/445	95.1
Katharina Pirckheimer	160/174	92.0
Felizitas Grundherr	152/162	93.8
<i>Secular women – personal letters</i>		
Katharina Lemlin	657/734	89.5
Margareta Behaim (I)	137/156	87.8
Margareta Behaim (II)	151/193	78.2

3. It might seem that cloistered nuns would be just as remote from this normative influence but, in fact, they read a great deal of religious-didactic material and some were involved with correspondence with the secular authorities. Since for each group we are dealing with small numbers of individuals, individual peculiarities can be involved in some of the finer contrasts, such as the contrast between nuns and secular women. Still the overall pattern is quite clear.

Handbooks and histories of German traditionally cite Latin influence as the/a cause of verb-final position in dependent clauses. This claim has never received convincing support (see Ebert 1978: 41–42). To be sure, some contrasts here, for example the highest estimate for university-educated administrators or the contrast of nuns vs. secular women, could be linked to knowledge of Latin, but there are numerous individuals whom we know to have been fluent in Latin who use verb-final position less frequently than contemporaries who are likely to have had little or no training in Latin (for details see Ebert 1980: 381). There is, thus, no evidence of direct Latin influence as a factor on the pattern of usage in these groups.

4. Since the style contrasts are not based on the same individuals writing different types of document, there might be some distortion due to the distribution of styles among the social groups. The social group with the highest value for verb-final order, the university-educated administrators, also produced a large portion of the official/formal letters. In situations with this kind of aliasing of effects, a small number of contrasts elsewhere strongly influences the weighting given to the effects of style and education/occupation. In a sample with less aliasing perhaps more of the effect might be attributed to style. Another possibility is that in the longer clauses in formal style writers might be less inclined to place the verb at the very end than in the shorter clauses; but a check of small samples for individuals did not produce a direct correlation of shorter clauses with higher rates of verb-final position.
5. All indications are that this is a grammatical constraint. To be sure the position after the verbal form(s) can be occupied by focused elements and afterthoughts and thus pragmatic factors are involved. But pragmatic and discourse factors are not crucial in this change, since some constituents, especially PPs and complex NPs, can still be focused in this way or appear here as afterthoughts. This same observation applies to the similar results in section 3.
6. This variable is made up of a closed set of variants: either the sequence V + AUX or the sequence AUX + V. In German there are also numerous variable combinations of AUX + more than one nonfinite form, but these combinations with two or more nonfinite forms show different word-order patterns from the two-part constructions which are discussed here (see Härd 1981; Ebert 1986: 128–130). These types with more than one nonfinite form are also too infrequent to provide a sufficient number of tokens for the analysis of stylistic and social contrasts.

7. Patterns similar to this have been noted in other documents from this period (Hammarström 1923: 137, 148) but no plausible account of what might be the cause of this pattern has been given.
8. Examples are from letters by the nun Clara Pirckheimer. Since there is very little direct evidence of stress and intonation for this time, the assignment of stress must be made on the basis of the modern language. The assignment of stress patterns to written language in general is legitimate, of course, since stress is a matter of linguistic knowledge, not just a manifestation of the spoken medium.
9. The passive *werden* + past participle did not provide enough tokens for formal analysis; it was examined informally.
10. These semantic relations are aliased strongly with the type of noun in the genitive: for example, the possessive genitive and *genitivus subjectivus* tend to be personal nouns, very often names and titles, whereas the genitive of quality or characteristic and the genitive of origin tend to be nonpersonal. The type of genitive gives the clearest contrasts. The semantic relation appears to have some slight effects. For example, for appellatives, the only type of genitive which at this time provides a large number of tokens of both preposed and postposed genitives, the *genitivus objectivus*, favors the order governing noun + genitive (for further details see Ebert 1988: 39–41). Partitive genitives appear to pattern differently than the non-partitives. Previous research has concentrated on non-partitives; in order that my results can be compared to findings for other periods and locales, I concentrate on non-partitives as well. Discourse factors have not been considered in the literature. Given the size of the other effects, discourse factors can hardly play a role in the position of attributive genitives at this time.
11. The data do not include, of course, cases where the writer has no choice of word order, for example fixed types such as dates (*an aller seelen tag*, *an S. Wilbalds tag*, *for sant Johanßtag*), place names (*in Sanct Lorentzen pfarrhof*, *in S. Peters munster*), the construction *um* + genitive + *willen* ('for the sake of ...'). In the construction *von* (...) *wegen* 'because of ...' with genitive the genitive noun may either precede or follow the word *wegen*, but the genitive does not pattern with *wegen* as does the attributive genitive with a governing noun: nonpersonal genitives very frequently precede *wegen*, and personal genitives, including names, quite frequently follow as they would a preposition. Compound words consisting of genitive + noun (for example, *frauen-closter*, *gottswort*, *landsknecht*, *kriegsvolk*, *reichstag*, *menschenleere*) are likewise excluded (on the problem of distinguishing compounds see Ebert 1988: 34–35). The adjusted totals in table 2 were arrived at by eliminating additional instances where only one order occurs (or nearly always occurs) in usage of this time; these include genitives with Latin inflection and various formulaic expressions (see Ebert 1988: 33 ff.).

12. For names the contrast of groups 3 and 4 taken together vs. groups 1 and 2 taken together is significant at $p < .025$ ($\chi^2 = 6.04$ on 1df, calculated using Yate's correction for 2×2 contingency tables).
13. χ^2 for the contrast group 3 (administrators) vs. group 4 (the chancery documents) is 5.02, $p < .05$. One must keep in mind that the chance of spurious "significant" results increases with the number of hypothesis tests on the same data set.

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Counterfactual *may have*

David Denison

0. Introduction¹

Consider this newspaper headline:

- (1) Swift launch *may have saved* Penlee lives (*Gdn.*, 15 Mar. 1983, p. 1).

The story concerned an inquiry into a marine disaster in which all lives had been lost. The intended sense of *may have saved* is therefore given by the paraphrase ‘it is possible that ... would have saved’, a past “hypothetical” (= counterfactual conditional) sense. Now many speakers of English would not use *may have* in this way. For them *might have* is required in (1), since *may have* would suggest a non-conditional epistemic sense, ‘it is possible that ... saved/has saved’. The latter sense of *may have*, in which the possibility is open, is conveniently illustrated in the headline over the back-page continuation of the same story:

- (2) Lifeboat launch delay *may have cost* lives (*Gdn.*, 15 Mar. 1983, p. 28)

The usage in (2) is uncontroversial, I take it, and normal for most speakers of English.

What then is the explanation for (1) – what I shall refer to as an example of “counterfactual” *may have*, by which I mean a usage implying a rejected or unreal hypothesis about the past? (1) cannot be dismissed as an accidental error or as a deliberate licence to save space in a headline, because it is a usage that occurs quite often now both in speech and in print.

0.1. Organisation of this paper

I am concerned here to describe exactly the usage in (1), to see whether it is an example of incipient change, to relate it to other properties of the English auxiliary system, and to raise some sociolinguistic and method-

logical issues. I begin with a selection of attested examples (section 1). There follows a review of six internal factors: other circumstances in present-day English where *may* and *might* are interchangeable (section 2); modals in conditional apodoses (section 3); the *have* of unreality (section 4); blending (section 5); tense marking (section 6); obsolescence of *may* (section 7). Then the following external factors are discussed: register differences (section 8); prescriptive grammar (section 9); dialect differences and borrowing (section 10). The concluding section is concerned with the interaction of internal and external factors (section 11).

0.2. Labels

Of course it is arguable whether the change under discussion is syntactic at all. It would make sense to view it as a lexical substitution, as a semantic change,² or as a morphological change. However, to the extent that modals are a closed category with a syntactic distribution different from that of other verbs, and to the extent that their interaction with tense is a matter of syntax, the rise of counterfactual *may have* is a symptom of syntactic change.

As for the theme of this volume, internal and external factors, I shall take these terms relative to the morphosyntax of a given English dialect. External factors, then, will include all matters of attitude to language, of stylistic and social variation, and of interdialectal influence (foreign influence does not seem relevant here). I shall have nothing to say about discourse factors.

1. Examples

Here is a selection of the examples I have noted over the last few years, classified on the basis of paraphrase.

1.1.

In the group to which (1) belongs, *may* (...) *have* is paraphrasable by 'it is possible that ... would (...) have':

- (3) a. Earlier launch *may not have saved* lifeboat (headline).

- b. An earlier launch of the Penlee lifeboat *may still have resulted* in the final tragedy, in which 16 people died, the inquiry into the disaster was told on its final day yesterday. (*Gdn.*, 28 Apr. 1983, p. 3)
- (4) Anyone off to France this summer will doubtless be anticipating the benefits of a pound valued at 12 francs. They will equally be aware the franc *may have been* even lower had it not been for President Mitterrand's austerity package in the spring. (*Gdn.*, 3 Aug. 1983, p. 19)
- (5) Funds from a "Save Carol" campaign in her home town have belatedly paid some of her legal bills, but they *may not have been* necessary had the resources for expert rebuttal of the prosecution theory ... been forthcoming at the appropriate time. (*Gdn.*, 21 Oct. 1983, p. 15)
- (6) Some US officials are quoted here as saying that the ... coup in Guatemala ... *may never have happened* if Congress had not voted to cut off some \$40 million of American aid to the country. (*Gdn.*, 10 Aug. 1983, p. 6)
- (7) The whole thing *may never have happened* if it hadn't been for a chance meeting. (*Old. Ad.*, 7 July 1983, p. 3)
- (8) ... since he *may have been* a success had he learned some human relations skills. (Brown Corpus J, 1961)
- (9) It *may not have made* any difference if they had ... (*Gdn.*, 1 Nov. 1983, p. 9)
- (10) On the other hand there are times when Hudson meticulously points out loose ends which the reader *may have* otherwise³ not *noticed*. (Donna Jo Napoli, *Journal of Linguistics* 22 [1986]: 191)
- (11) What seems clear ... is that *on*, *along*, and *away* ... mark continuative/iterative aspect; that is, they portray a situation which *may* otherwise *have stopped* as continuing ... (Laurel J. Brinton, *The development of English aspectual systems*, Cambridge, 1988: 175)
- (12) It's easy to turn the page.
Just as easy as it is to switch TV channels.
This has never prevented the [*sic*] Yorkshire Television's hard-hitting documentary series, 'FIRST TUESDAY', from saying "Go"; when "Stop" *may have been* more popular.
Or taking the lid off a news story; when it *might have been* safer to sit on it. (Advertisement, *Gdn.*, 5 Oct. 1989, p. 7)

- (13) ... but it had to be done in one fell swoop now – or it *may* never *have come* into being. (Student letter, May 1984)
- (14) A fire brigade spokesman said yesterday: “He thought quickly and acted commendably in a situation where lesser men *may have panicked*.” (*Gdn.*, 17 Oct. 1984, p. 4)
- (15) “If they had released me at the end of October, the members *may have got* together and started a row.” (*Gdn.*, 22 Dec. 1984, p. 11)
- (16) ... it seems quite possible that the English construction *may have come* into existence even if don had not also had the function of verb substitute (B. Trnka, *On the syntax of the English verb from Caxton to Dryden*, Prague, 1930: 52; non-native speaker)
- (17) Equally, if the order and allocation of tales were changing, it is quite likely that both *may have been* subsequently *changed* by Chaucer in some further revision if he had lived to make one. (N. F. Blake, *English Studies* 66 [1985]: 171)
- (18) Without our **help!** she *may have* died (caption to photo of child filling bucket, WaterAid charity appeal, Feb. 1987)
- (19) Two years ago, Mrs X *may have had* nowhere to turn to – but thanks to ... she was put in touch with ... (*Old. Ad.*, 28 Dec. 1989, p. 8)
- (20) Words such as “body-building” ... are also, arguably, words that *may never have been linked* if advertising did not exist. (Student dissertation May 1987; student brought up in Zimbabwe.)
- (21) Had we known about Mrs Westbrook’s illness we would have taken this into consideration, and the case *may not have ended up* in court. (*Gdn.*, 17 Dec. 1982, p. 4)
- (22) Had Austrian politics taken a less controversial turn two years ago during the presidential election campaign then this historical trauma *might have been* more calmly *addressed* during next month’s commemoration of the Anschluss’s 50th anniversary, but the debate *may have been* less thorough. (Misha Glenn, *Gdn.*, 11 Feb. 1988, p. 19; not known whether author is native speaker)
- (23) Had the author not recently acquired copies of Eyre’s earlier letter to Bosco, this item *may have remained* no more than a curio in the college museum. (James M. Lawlor, *Innes Review*

- 36 [1985]: 97; example supplied by A. MacDonald, personal communication)
- (24) ... and if an 'ordinary' woman had been there, *we may have been surprised* by her reaction to the same situation. (Letter, *RT*, 19–25 Feb. 1983, p. 72)
- (25) If he'd have lived [*sic*], the entire technological development of Britain *may have been* different. (*Gdn.*, 10 Nov. 1986, p. 18)
- (26) ... relevant safety warnings were not made public. If they had been, action *may have been taken* and the disaster *avoided*. (*Consumer Which*, April 1989, quoted in *Gdn.*, 6 Apr. 1989, p. 20)
- (27) If they had not been there, Mr Scrafton *may not have hit* the boy quite so hard and only caused injury. (*Old. Ad.*, 8 Sept. 1983, p. 9)
- (28) Your new Barclaycard credit limit is intended to ... increase the range of transactions that can be settled with your Barclaycard. Many higher value purchases, which previously *may have taken* you over your limit, will now be possible. (Promotional leaflet, June 1988)

1.2.

Certain examples seem to belong with (3–28) semantically but require a modified paraphrase, either because they include the idiom *may/might well*⁴ or because of the superordinate clause:

- (29) How successful such an academy *may have proved* to be will never be known. (Student essay, May 1984; "academy" never formed)
- (30) ... sufficient for the British and Australian Governments' contemporary suppression of the fact that a Japanese submarine had been involved: exposure *may well have caused* an outcry in Australia at a time when fear of war with Japan was matched only by lack of preparation for it. (*Gdn.*, 6 Apr. 1989, p. 38)
- (31) Both universities might well fly their flags on the birthday of Queen Catherine Parr, but for whom it seems there *may well have been* no colleges or gardens. (Mavis Batey, *Oxford Today* 2.1 [1989]: 27)
- (32) One English Heritage spokesman admitted: "Had we realised the site was as impressive as it is, we *may well have sought* a different solution." (*Ind.*, 15 Apr. 1989, p. 28)

- (33) Yet as Nist ... indicates, English *may well have become* bankrupt had it not had the influx of vocabulary. (Student essay, University of York, Apr. 1989)

1.3.

In a few examples it can be argued that the meaning of *may* is “dynamic” (Palmer 1979: 36–37) or “root” (Coates 1983: 18–21) possibility, in which case a suitable paraphrase is ‘it would have been possible for ... to ...’.⁵ However, an epistemic reading cannot be ruled out, and it is not always clear whether we have an epistemic or a root sense or indeed a merger of the two (cf. Coates 1983: 163–164):

- (34) The facility STOP BEFORE SORT (not implemented at Queen’s) *may have alleviated* this situation. (*ALLC Bltn.* 11 [1983]: 70)
- (35) Whitehall sources said that the decision to deport the five amounted to an admission that while the available information pointed firmly to illegal activities, it *may not have secured* a connection [*sic*; read “conviction”]. (*Gdn.*, 15 Mar. 1984, p. 2)
- (36) ... but she proved that she was of true blue blood by not being quite rude to him in return as I’m sure many lesser mortals *may have been*. (Letter, *RT*, 7–13 Jan. 1984, p. 76)
- (37) I’m not saying that’s a hundred percent success rate, because some of them *may have survived* anyway. (Geoffrey Pattie, *ITN News*, 15 Feb. 1984, discussing advanced medical treatment given to wounded men, all of whom were known to have survived.)
- (38) ... and I was thankful that I had no children staying up late who *may have heard* the crudity and vulgarity of some parts. (Letter [Rochdale address], *RT*, 19–25 Jan. 1985, p. 80)
- (39) ... the editor *may have served* his reader better by judicious repunctuation so as to clarify the sense. He does, after all, have no qualms about repointing the poems. (John Gouws [S. African], *Notes & Queries* 33 [1986]: 411)
- (40) With Nægling intact, [Beowulf] *may well have killed* the dragon unaided. (Bruce Mitchell, *Neophilologus* 47 [1963]: 138, cited in turn by R. W. Zandvoort, *English Studies* 44 [1963]: 282, and Visser 1963–1973: §1670)

- (41) There are a number of questions and points that Lord Lane *may have taken* into consideration if he were really serious about appropriate sentencing for sexual crimes against females. (Letter, *Gdn.*, 3 Aug. 1989, p. 18)

1.4.

The distinction between epistemic and root senses does not appear to affect the point under discussion, however, except in relation to competition with another variant, *could have* (see section 3.2). What is noticeable is that only 7 of 41 examples above have a clausal protasis directly preceding the apodosis (15, 23–27, 32): most have a protasis which is non-clausal or verbless, or unstated, or which follows the apodosis, or which precedes the apodosis but with another clause intervening.

One inference would be that counterfactual *may have* is a sporadic error occurring most often in non-salient positions, perhaps in anacoluthon. However, the sheer number of attestations and the fact that many observers (and in one or two cases, the original writers) accept these examples even when studied at leisure, makes anacoluthon an inadequate explanation overall. And it may be that explicit protases are actually rather rare in general. For example, when *might* appeared in epistemic hypothetical (unreal) use, Coates (1983: 159) found an expressed condition in only 17% of cases.

2. *May and might*

Are *may* and *might* to be treated as forms of the same lexeme? Palmer decides that they are, and lists both under MAY (1979: 32–33); Coates assumes without argument that they are not, and lists MAY and MIGHT as separate lexemes (1983: 7). In order to avoid prejudging an important question, I shall do without capitalization for lexemes.

2.1. Epistemic *may/might have*

Palmer notes that *may* in epistemic use can be paraphrased by ‘it is possible that ...’ (1979: 41), that the modality is generally in the present, and that if the proposition is in the past, *have* is used before the main verb (1979: 50); this is of course the usage illustrated in (2). He describes

might as the tentative form of *may*. It “is used exactly as *may* is”, and “in epistemic modality it seems to have no clear implication of conditionality” (1979: 48). Thus we have near-synonymous pairs like:

- (42) a. They may have recognised us.
 ‘It is possible that they recognised us.’
 b. They might have recognised us.
 ‘It is tentatively possible that they recognised us.’

Coates, incidentally, finds little difference in meaning between epistemic *may* and *might* in her corpus: *might* “seems no longer to be used as the tentative form of MAY, but simply as an alternative form for the expression of the modality ‘it is possible that ...’” (1983: 153).⁶

2.2. Counterfactual *may have*

Example (42 b) without further context is ambiguous, since a possible reading is ‘it is (tentatively) possible that they would have recognised us (but it never happened)’ – in other words the clause may be an incomplete conditional, an apodosis with protasis implicit, and *might have* a counterfactual modal. In the dialect type described by Palmer and Coates, any distinction of tentativeness between *may* and *might* is neutralised in this reading of (42 b). (I summarise part of the discussion in Palmer 1979: 142–144.)

The dialects which provide examples (1) and (3–41), then, presumably have complete parallelism between (42 a) and (42 b), since (42 a) also becomes ambiguous between a non-conditional epistemic reading (the “traditional” one) and a counterfactual reading (the new usage). Both forms can then have a counterfactual meaning, perhaps with a distinction of tentativeness: cf. examples (12) and (22) above, where they are used in parallel.

2.3. Other *may/might* interchanges

I have a few examples of a similar use of *may* for traditional *might* in present unreal conditionals:

- (43) In today’s violent world, people *may* not *feel* quite as vulnerable out of doors if they had a telephone in their pocket. (*Ind.*, 24 Oct. 1989, p. 14)

- (44) ... if I were to be attacked by an assailant wielding a rubber dagger, I think laughing at him *may be* just as effective as any knowledge of the fighting arts. (Letter, *RT*, 23–29 July 1983, p. 60)
- (45) If, improbably, the present generation of leaders were to feel too tarnished to remain in power, the result *may not be* to the West's benefit. (*Ind.*, 15 Apr. 1989, p. 16)
- (46) And even if there were such a thing as totally independent advice, it *may not turn out* to be the best. (Margaret Dibben, *Gdn.*, 2 Feb. 1985, p. 25)
- (47) Perhaps if these cowardly thugs were put before television cameras and forced to explain their appalling actions, then others *may think* twice before copying similar attacks [*sic!*]. (Nicolette Webster, *MEN*, 20 Feb. 1985, p. 10)
- (48) If the same reaction were going on in the open, several different end product *may be* possible. ... (*Gdn.*, 15 Nov. 1984, p. 15)

However, (48) is perhaps an anomalous example in that *may* and *possible* are at least partly tautologous, and there may be contamination, e. g. from:

- (48') ... it may be that several different end products are/would be possible.

Replacement of *might* by *may* can also be found in the failure of sequence of tenses in indirect and free indirect reported speech (cf. Wood 1955: 247; Visser 1963–1973: §1663; Coates 1983: 155) and in other kinds of dependent clause:

- (49) At the bottom they found a shovel [*sic*, no comma] raising hopes that the lost men *may have dug* themselves into a snow hole to shelter. (*Gdn.*, 27 Jan. 1984, p. 26)⁷
- (50) ... but Sheriff Johnston upheld the police contention that the refusal was on the proper grounds that the licence *may not have been used* in good faith. (*Gdn.*, 5 Apr. 1983, p. 3)
- (51) One member of the Central Committee, General Ogarkov, retained his place despite rumours that he *may have been dropped*. (BBC World Service News, 7 Mar. 1986, attested by A. MacDonald, personal communication)
- (52) No one was hurt. My girl friend was taken to a hotel in town and I went to see her as I thought she *may have been injured*. (LOB Corpus F, 1961)

- (53) He described Mr Smith's action as 'foolish in the extreme' and said if he had had time to reflect he *may not have killed* himself. (*Old. Ad.*, 14 Mar. 1985, p. 9)
- (54) The news ends fears that Mr Barnett (60), former Chief Secretary to the Treasury, *may be forced* to leave Parliament because he did not have a seat. (*Old. Ad.*, 21 Apr. 1983, p. 11)
- (55) Residents had been concerned that the school *may be built* off Sandy Lane which they felt was too far away for most of the pupils. (*Old. Ad.*, 20 Jan. 1983, n. p.)
- (56) I thought initially that her reply [quotation] *may be* a standard construction ... I was forced to abandon this idea. (Student essay, Apr. 1989)
- (57) Patterns of future research could not be predicted and even seemingly irrelevant material might be of future value. Acquisitions policies could be undermined by sale of valuable material which had been a central feature of the collection. Scholars and research students *may well have based* their research on the presence of the materials considered for sale. (*THES*, 27 Jan. 1984, p. 6; report of document on sale of valuables by university libraries, in free indirect speech in this paragraph.)
- (58) The concrete shielding *may crack or be damaged* on first impact of collapse but even if it was not the fire would burn it away. ... (*Gdn. Weekly*, 9 Mar. 1986, p. 3)
- (59) Professor Rabin ... claimed that volunteers were not told of all the possible risks; that they were not told to warn their GPs that they were taking part in the trial; that under the contract they were obliged to sign they *may not have been able* to claim compensation if they were damaged by the drug; and that Charterhouse did not plan to keep track of them after the trial had finished. (*Gdn.*, 31 Jan. 1984, p. 26)
- (60) The log walls, the stove's heat ... dulled Jim's thoughts. He *may as well have been* asleep; his father was lost to duty and nostalgia. (Hugh Brody, "Jim's Journey", *Granta* 10 [1984]: 239; free indirect speech?)
- (61) Rask ... was slow in coming to terms with the facts of change; in his 1818 masterpiece he was still asking what attested languages Old Norse *may have originated* from. (Weinreich – Labov – Herzog, "Empirical foundations for a theory of language change", in *Directions for historical linguistics: a symposium*, Lehmann – Malkiel (eds.), 1968: 104 n. 7)

Further examples are given by Visser (1963–1973: §1670), with an indirect reference to Joyce (1910: 84), who described this as a peculiarity of Irish English. That some of these examples probably show contamination from the related direct discourse does not detract from their relevance here. Examples (51–56) are clearly counterfactual, so that (51–53) can be added to the collection of counterfactual *may have* examples in sections 1.1–1.3.

3. Modals in conditional apodoses

It is often claimed that the apodosis of an unreal conditional requires a modal verb in the past tense (see, e.g., Palmer 1974: 141). Past time is distinguished by the addition of *have* to the verbal groups, finite in the protasis and non-finite in the apodosis:

- (62) a. If you disagreed/should disagree/were to disagree with her next week, she *would fire* you.
 b. If you had disagreed with her last week, she *would have fired* you.

Alternatives to *would* in sentences like (62) are *should*, *could*, *might*, *ought* (on the margins of the modal system), and perhaps *need* and *dare* (especially when non-affirmative).

3.1. *Must*

Palmer includes *must* here (1979: 143), with the example (from Huddleston 1977: 46):

- (63) If he had stayed in the army, he *must have become* a colonel.

I find this example ungrammatical, probably because in my dialect of English *must* normally has no past tense form (which Palmer mentions as the reason for what he calls the exceptional use in this instance of a present-tense modal for unreality).

It may be possible to relate the confusion of present *may* and past *might* directly to the use of *must*. *Must* was once a past-tense form, later became a present tense as well, and most recently has become almost entirely a present-tense form (cf. also *ought*).⁸ Most handbooks do not recognise a past-tense use of *must*, though some notice its retention in

reported speech or in subordinate clauses generally (e. g., Poutsma 1928: 58–59; Palmer 1979: 98). The point is discussed at length by Jacobsson (1979: 303–306). First some examples to show that past root *must* is still occasionally found:

- (64) But Boon didn't know this. He *must seduce* me. And he had so little time: only from the time the train left until dark. (William Faulkner, *The Reivers*, 1962, ch. III [Random House edn., p. 46]).
- (65) Therefore some re-formulation was necessitated by the theory of change in order to prevent a breakdown of communication. Again, the re-formulation *must conform* to the theory of grammar and yield surface results similar to those produced by the earlier grammar. There were no further constraints ... It was a matter of chance that the actual solution was as indicated ... (Lightfoot 1979: 407, and similar usage p. 406)⁹
- (66) ... made it sound like a secret society which I *must* at once *join*. (Robert Robinson, *BBC Radio 4*, 4 Jan. 1984; context clearly implies past tense)

Then some historical examples of counterfactual (i. e., past counterfactual conditional) *must have*:

- (67) But it would have secured me nothing, as there would have been no funds for my maintenance at the University ... , and my career at Oxford *must have been* unfortunate. (Anthony Trollope, *An Autobiography*, 1883, ch. I [OUP edn., 1950, pp. 10–11])
- (68) They had got the vote for two reasons – because for years before the war they had made themselves nuisances and because during the war they had proved to be essential. Had they not volunteered they *must have been conscripted* for national service. (*Gdn.*, 21 Jan. 1984, reprinted from 21 Jan. 1934)

Must is a present-tense form with a few remnant past-tense uses, probably because it has no related past-tense partner. *May* is now beginning to behave in the same way, though of course there is in many dialects a corresponding past-tense form. It is just conceivable that *may* has been influenced by *must*, especially if *may* and *might* are not regarded as tensed members of the same lexeme, though (so far) I do not take this suggestion very seriously.

3.2. *Could*

Recall examples (3), repeated here as (69):

- (69) a. Earlier launch '*may not have saved* lifeboat' (headline)
 b. An earlier launch of the Penlee lifeboat *may still have resulted* in the final tragedy, in which 16 people died, the inquiry into the disaster was told on its final day yesterday.

For some speakers *could have* is roughly synonymous with counterfactual *may have* or *might have*,¹⁰ allowing the use of *could* – sometimes even a preference for it – in a sentence like (69 b), thus:

- (69) b'. An earlier launch of the Penlee lifeboat *could still have resulted* in the final tragedy

It is possible that counterfactual *might have* will be overwhelmed by the advance of *could have*, especially in American English, and that replacement by *may have* is no more than a minor diversion. Certainly when full statistics are gathered it will be necessary to deal with all three variants.¹¹ Notice, however, that the substitution of *could have* is not suitable in negative examples like (69 a):

- (69) a'. !Earlier launch '*could not have saved* lifeboat'.

The reason is that *could* normally falls within the scope of a negative, whereas with *may/might* the unmarked case has negation within the scope of the modal. Hence (69 a') would not be synonymous with (69 a). This fact, plus the dynamic meaning attributed to *could* whenever salient, means that *could have* is not at present a pure morphosyntactic variant of counterfactual *may/might have*.

3.3. *Can*

Example (70) is almost an example of counterfactual *can have*:

- (70) The two immediate regulations to be enforced on Thames pleasure craft are disturbing. Firstly, a short safety drill ... *cannot realistically be expected to have had* any significant helpful effect upon the partying and drinking people aboard the ill-fated *Marchioness* last weekend, given the speed with which she sank. (Letter, *Gdn.*, 24 Aug. 1989, p. 20)

Admittedly we do not quite get *cannot have had*, but even so the counterfactual hypothesis of (70) would for many speakers require a condi-

tional (past-tense) modal either in the *expect* clause or in a finite embedded clause, thus *could not ... be expected to have had* or *could not have been expected to have (had)* or *cannot ... be expected that ... would have had*.

3.4. *Will*

I have come across one example recently of a clear counterfactual where *will have* appears instead of the expected *would have*:

- (71) With any other ruling party this sort of information *will have cast* doubts on the timing, and possibly the holding of the election. It all suggests that the Jaruzelski leadership not only prepared its own death warrant but (*Gdn.*, 8 June 1989, p. 23)

I do not yet know whether (70–71) are isolated errors or a sign that the link between past tense and counterfactuality/unreality is becoming weaker with all modal verbs and not just with *may*.

4. The *have* of unreality

The anomalous use of *have* as an auxiliary implying unreality or lack of fulfilment is discussed by Visser (1963–1973: §§ 2154–2157). The close association between *have* and unreality appears from the frequent occurrence of clauses where the marking of unreality by finite past *had/'d* is apparently reinforced by a superfluous *have*:¹²

- (72) If I'd have known, ...
 (73) I wish we hadn'ta moved so fast with the sonofabitch. (Tom Wolfe, *The Bonfire of the Vanities*, 1987, ch. 19 [Bantam ed. 1988, p. 426])

Another example occurs in the protasis of (25). It seems to be specifically the *have*-auxiliary rather than perfective aspect which has the association with unreality, to judge from the historical evidence in Rydén–Brorström's study of variation between *be* and *have* as auxiliaries of the perfective. They show that unreality (rejected condition) almost guarantees the choice of *have* even in texts and with main verbs that might otherwise allow *be* (1987: 186).

Traditionally the unreality of counterfactual *might have* is signalled by the choice of *might* rather than *may*. If the distinction between unreality and open possibility is not to be neutralised in dialects which permit counterfactual *may have*, then it must be marked in some other way, perhaps by a greater or different use of perfective *have*. A possible line of research would be to look for a correlation, whether dialectal or diachronic, between counterfactual *may have* and the use of *have* as a marker of unreality. This might show up in, say, a greater use of the double perfect in (72–73) or the (c) variant in the (74) type:

- (74) a. I would have liked to see that film.
 b. I would like to have seen that film.
 c. I would have liked to have seen that film.

5. Blending

Example (48), with present unreal *may*, invited explanation as a blend. A similar suggestion can be made for counterfactual *may have*. Examples like (31) and (39), repeated here as (75) and (76), are accepted by some speakers who generally reject counterfactual *may have*:

- (75) Both universities might well fly their flags on the birthday of Queen Catherine Parr, but for whom it seems there *may well have been* no colleges or gardens.
 (76) ... the editor *may have served* his reader better by judicious repunctuation so as to clarify the sense. He does, after all, have no qualms about repointing the poems.

Apparently the *may/might* distinction involving degree of tentativeness can be more salient than that involving open possibility vs. counterfactuality; the lack of explicit protasis is probably relevant. Now in all dialects which use them at all, both *may* and *might* are fully grammatical if something like (76) is embedded in an epistemic clause:

- (76') It *may/might be* that the editor would have served his reader better ...

Any contrast in meaning between *may* and *might* in (76') is confined to degree of tentativeness, and *may* can easily carry intonational focus to signal precise degree of doubt. This raises the possibility that in general

the grammaticalisation of (77 a) with counterfactual meaning is licensed by the existence of the types (77 b) and also (77 c, d):

- (77) a. X may have Ved
 b. It may be that X would have Ved
 c. Maybe X would have Ved
 d. X maybe would have Ved

Then (77 a) would originate in part at least as a blend construction, possibly through clause union. Compare too the sentence-adverb analysis of double modals, on which see, e.g., Butters (1973: 283–284 n. 3).

Another route to the introduction of counterfactual *may have* has been suggested by Professor Bolinger (personal communication, 10 Sept. 1989). He offers the following dialogue with four different responses to the original question:

- (78) Weren't you able to prevent it?
 a. We might have [prevented it], but we didn't.
 b. We might have been (able to), but we didn't.
 c. We may have been (able to). [Who knows?] But we didn't.
 d. *We may have [prevented it], but we didn't.

If (78 c) conforms to the standard dialect – Bolinger says yes, I'm just not sure – then his idea is that the possibility of a possibility, as in (78 b, c), provides a bridge between the simple possibility examples (78 a, d), allowing counterfactual *may have* in at (d), a point of least resistance. (I notice too that Palmer [1979: 158] floats the idea of explaining a slightly different *may/might* pattern as a possible blend construction involving epistemic possibility.)

6. Weakening of tense marking

It has been suggested that *may* is perhaps being mistaken for a past-tense form (Howard 1984: 124, cited by Wekker 1987: 459). At first sight this is unlikely, since the more common development in modals is for past tenses to start being used as presents (cf. *must*, *ought*, discussed in section 3 above). Furthermore Coates notes the occasional use even now of past-tense *might* (epistemic and root) in relative clauses and as an independent past epistemic (1983: 156–157). But example (58), repeated here as (79) in a larger context, does provide some support for Howard's idea:

- (79) ... a basic design fault ... which meant that a few seconds of seismic shock could sever the bolts supporting the 2.000-ton pressure vessel. This could mean it crashing 18 feet to the ground. This could split the vessel ... but even if it did not it would cut the cooling pipes and I know of nothing that would prevent a fire of devastating proportions. The concrete shielding *may crack or be damaged* on first impact of collapse but even if it was not the fire would burn it away. ... (*Gdn. Weekly*, 9 Mar. 1986, p. 3)

Apart from an irrelevant first person *know*, there are nine finite verbs parallel to *may*, and all are in the past tense. This brings us back to the question of whether *may* and *might* are different tense forms of the same lexeme. (79) and the like suggest that for some speakers they are not. I have just come across a suggestion to the same effect specifically for Australian English (Rodney Huddleston, quoted by Collins 1988: 284 n. 9).

If we compare the history of *must* we find some support for this hypothesis. Although the main development is that past tense *must* became a present tense while present-tense *mote* disappeared, there are sporadic examples of past-tense use of *mote* — i. e., the opposite phenomenon — before its final obsolescence.¹³ The history of *owe/ought* is rather different, as historically it was not a preterite-present like *must* and *may*, but even here there is one possible occurrence of the present tense in past use during the period of its replacement by what had been the past tense (*MED* s. v. *ouen* v. 4 e.[b]). I am here drawing an analogy between the late Middle English behaviour of *must* and *ought* and current changes in *may*, rather than suggesting a direct contemporary influence of *must* on *may* (cf. section 3.1).

Is a general weakening of sequence-of-tense rules in progress? Examples (49–61) arguably suggest that possibility for *may*, (63) and (67–68) for *must*, and (70–71) for *can* and *will*. Note too this apparent failure of sequence of tenses when the auxiliary (*would*?) is omitted altogether from the apodosis:

- (80) She looked delighted. This kind, he thought. *Holds* hands with a gorilla as long as it had pants on. (Anne Blaisdell, *Greenmask*, p. 78; quoted in Strang 1970: 67)

For present purposes I cannot look into the behaviour of verbs other than *may*, but a diachronic corpus investigation should be feasible.

7. Obsolescence of *may*

May is odd even among modals. For some speakers it has no contracted negative, and it does not occur in epistemic questions. We shall see that *may* seems to be regarded by some speakers as more formal than *might*. Coates writes: "My data leads me to think that MAY and MIGHT, in their Epistemic usage, are usually interchangeable. Recent work on child language ... and regional dialects ... indicates that *might* is superseding *may* as the main exponent of Epistemic Possibility" (1983: 147). Collins supports this judgement for Australian English (1988: 283–284). Is the form *may* actually obsolescent?

Another possibility must be considered as well. Simon-Vandenberg (1983, 1984) and Kytö (1987) present evidence that *can/could* has been gradually taking over several functions of *may/might*. It is arguable therefore that the whole *may/might* paradigm is becoming marginalised and is perhaps on the way to obsolescence. If there is any truth in this, then a slightly chaotic swapping of forms is not so surprising. I offer the comparison of the apostrophe in written English, probably doomed to extinction fairly soon, and simultaneously losing and gaining territory in its terminal throes (*orange's 4 for 30 p.*, *Linguistic's*, *mens clothing*, etc.).

It is difficult to spot the long-term trend here without some careful statistical work, which I have not attempted. (Both Kytö and Simon-Vandenberg treat *may/might* as a single lexeme.) My provisional view, based on evidence discussed in this paper, is that *may* is in a steeper decline than *might*.

8. Stylistic variation

There are strong indications that, in general, *may* is regarded as being more formal or more genteel than *might*. This is implicit in the discussion by Partridge and Clark (1951: 259, cited by Visser 1963–1973: §1670). Coates compares surveys which have differed in their findings as to the relative frequencies of *may* and *might*, conducts a small test of her own, and concludes that "it may be that MAY, which is distinguished from CAN in its Root uses in terms of formality ..., tends to be more commonly used [than MIGHT] as an Epistemic modal in formal contexts" (1983: 154–155).

Perhaps this is related to the knowledge that *may* is the old-fashioned modal of permission:

(81) a. May I have a chocolate?

where majority usage nowadays is

b. Can I have a chocolate?

Pairs like (81 a, b) might lead to an association of *may* with formality or old-fashionedness.¹⁴ The use of counterfactual *may have* would then be an instance of hypercorrection.

I have made informal use of a short questionnaire with ten examples in it.¹⁵ One thoughtful respondent rejected nine examples of counterfactual *may have*, and accepted only (3 a, b) precisely because (3) was explicitly from a newspaper (I had not given the provenance of the others). She added the revealing comment that “*may* wouldn’t be used [in ordinary speech] because it sounds far too ‘posh’ and even archaic”, and that “*might* could be used but still ... in some cases sounds too ‘posh’”; she thought *could* a more likely substitute for either of them in her Sheffield speech in the non-negative examples.

There are some interesting indications in the results as to how counterfactual *may have* is perceived. One informant rejected most examples as “very strange” or “not possible”, apart from two. One was the (5) type, with the comment “*might* implies more doubt”. Here there seems to be interference from the potential timelessness of *be necessary* as an epistemic predicate (cf. the discussion of [48] in section 2.3). The other was (3 a) (but not [3 b!]). One respondent rejected all but (37). Another rejected *may* only in negatives (cf. section 3.2 on an asymmetry between positives and negatives). For one speaker only the (6) type was rejected, the only sentence among her examples which satisfied two conditions: dynamic (event) verb and obvious counterfactuality. Another rejected none and queried only (13). Other respondents accepted all the sentences offered and rejected *might have* in some instances: in one case in (3 a) and (35), in another in (3 a, b) and (13), in another in (4), (35) and (37). One respondent accepted all the sentences on the questionnaire except (36), which he queried, and allowed the substitution of *might* in all of them, but queried the substitution in (35), where *may* was “better”. Several called *may* “old-fashioned” or “formal” or “written, not spoken”. There is scope for more systematic informant testing here.

A student in my department, Imelda Cahill, included the following test sentence in a questionnaire that formed part of her 1987 undergraduate dissertation on attitudes to correctness:

- (82) If John Lennon had not been shot, ‘The Beatles’ may have reformed [*sic*].

She records the acceptability judgements of 20 schoolteachers and 30 students over four contexts: informal spoken, informal written, formal spoken, and formal written. Overall it scored 57% acceptable, though the students recorded 70% acceptable responses, so that the teachers presumably found it rather less acceptable. The only detailed figure she gives is that the teachers found it only 20% acceptable in the formal contexts, which is primitive evidence of an age differential. These results bear out my own impressions.

9. Prescriptive grammar

It has been suggested that the much-decried absence (or near-absence) of formal English-grammar teaching in schools has contributed to the growth of what are seen as solecisms like counterfactual *may have*. Although this factor cannot be ruled out entirely, my hunch is that it has little relevance. I doubt that much prescriptive teaching has ever been devoted to this particular distinction between *may* and *might*, especially given the elaborate background specification needed to make the distinction, unless in the context of explaining the Latin (or Greek) tense-mood system. It is noticeable that Quirk et al. (1985) do not treat counterfactual *may have* in the same way as the better-known shibboleths. For example, they point out that *less* (as opposed to *fewer*) + plural noun is “often condemned” (1985: 263), though without themselves endorsing the condemnation. But counterfactual *may have* does not (yet) have the tradition of proscription which might challenge descriptive grammarians to flaunt their objectivity, and their comment on it – as “occasionally occurring” in “contexts in which only *might* would normally be considered appropriate” (Quirk et al. 1985: 234) – comes quite close to condemnation.

10. Dialect differences and borrowing

10.1 Some anecdotal evidence

Comments of informants responding to my earlier questionnaire suggested a possible dialectal difference: southern British English speakers tended to reject (1) and examples like (3–41), whereas some northern

British speakers¹⁶ and a South African informant found nothing wrong with most or all of them. (Bruce Mitchell, the writer of example [40], is of Australian origin.) A second questionnaire produced contradictory results as far as British north-south differentiation was concerned, with greater acceptance of counterfactual *may have* from respondents from London and the southeast. In cases where informants find some but not all of the questionnaire examples acceptable, I have been unable to detect much system in their responses.¹⁷ I use these informal results mainly to confirm my impression (from sheer frequency of occurrence and from discussion with my students) that the usage in question is fully grammatical for some present-day speakers, not to make specific claims about provenance or current localisation.

10.2 Textbook evidence

As far as I know, the first scholars to comment on the phenomenon of counterfactual *may have* are Partridge and Clark, already mentioned above. What Visser does not mention is that Clark describes this “half-educated” usage in a section of their book dealing specifically with American English speech. It is not specifically mentioned in Wood (1955), an article for foreign learners on *may/might* differences which mentions several “mistaken” (British) uses of *may*. There are one or two examples in the Brown Corpus of written American English of 1960 against none in the comparable Lancaster–Oslo–Bergen Corpus of British English: small numbers, but consistent with Partridge and Clark’s localisation. Strang independently noted what she regarded as a new development in (presumably British) English (1962: 150; 1968: 170), and Palmer (1974: 147) describes it in a brief aside as “surprising” and “irregular”, commenting that *might have* would be “more ‘correct’”. In his later book (Palmer 1979) the phenomenon is not mentioned, nor is it in Coates (1983) – both use the Survey of (educated southern British) English Usage as main corpus. It is noted in Quirk et al. (1984: 234) but is not in previous grammars by Quirk and his team. Visser adds another couple of examples (1963–1973: §1670), mixed indiscriminately with examples of the open possibility type (as in [2] or [42]). A survey of recent discussions and opinion is given by Wekker (1987: 458–460), and Bolinger (1988) adds an early example and some interesting speculations.

It is possible to explain the frequent omission of counterfactual *may have* from descriptions of English as due to its absence from the dialect of those writing the description. Sporadic occurrences are not noticed –

perhaps because they are taken for open possibility rather than counterfactual *may have* — or are assumed to be errors, given “the tendency of listeners to filter out linguistic signals that do not conform to their own idiolects” (Youmans 1986: 71). That the standard English of many scholars is indeed syntactically different from other varieties is implicit in Jim Miller’s assertion that “standard written English differs greatly from all varieties of non-standard English with respect to all major areas of grammar” (1988: 113).

10.3 Class dialects

The only information I have on social as opposed to geographical dispersion is unsatisfactory: Perkins reports some research in which middle-class five-year-olds were far more likely than working-class children to take over *might* from a question put to them into their answer (1983: 132). But from this alone we cannot be sure whether we are dealing purely with sociolinguistic variation or with differential rates of language learning.

11. Internal and external factors

Counterfactual *may have* provides a perfect opportunity to witness the very earliest stages of a possible syntactic/semantic change. Without the benefit of hindsight we cannot discriminate with certainty between an incipient change and a collection of errors, though my hunch is that this is an incipient change: the apparent absence of examples until recently, followed by an increasing volume of attestations, strongly suggests a genuine innovation with the potential, at least, to move into the steeper phase of the S-curve of change. Whether it will be carried through in any or all dialect(s) of English is impossible to say. But even taking the most negative view — that this is merely a set of mistaken usages — we should try to explain the frequency and consistency of that particular “mistake”.

What then is the explanation for the appearance of counterfactual *may have*? Several possibilities have been discussed, and it seems probable, as so often, that the explanation lies in the interaction of factors. No single internal factor can be seen as causal, though at least one seems to be a crucial mediating factor: the frequent interchangeability of *may* and *might* in other contexts. I would cite too the adequacy of the *have*-perfect as

an alternative marker of non-realisation, and the support offered by the blending of present epistemic *may* or adverbial *maybe* with a *would have* clause. The relevance of such factors could be verified, if with some effort, by corpus work, elicitation testing, and/or psycholinguistic testing, as appropriate.

It is less clear to me how to assess the relevance of the long-term trends identified above. To enumerate them again, they are:

- (i) the possible loss of *may* in favour of *might*, within which counterfactual *may have* is a reverse, “death-throe” phenomenon;
- (ii) disruption associated with the probable gradual obsolescence of the whole *may/might* paradigm;
- (iii) the generally-recognised development of present- and past-tense modals towards separate, perhaps tenseless, auxiliaries;
- (iv) a possible weakening of the sequence-of-tense rules (if true, and if separable from the previous).

In all four we enter on the possibility of drifts lasting many generations, almost imperceptible in real time, and none of them anywhere near completion. Whether, if genuine, they could be regarded as causal is highly dubious, but they provide some sort of historical framework for understanding what is going on.

The most important external factors are a growing association between *may* (more so than *might*) and formality, and the decreasing dominance of southern educated British English as a standard. The first of these would suggest an element of hypercorrection, a (false) movement towards a prestige variety, and it is the only purely causal factor I have identified. The second factor involves a change independent of the prestige standard and probably retarded by it, with a possible future influence on the prestige variety from lower-status varieties. Here again verification is difficult but not impossible. Given sufficient data one might hope to find stylistic differentiation in the innovating regional or class dialects, with counterfactual *may have* associated with more formal styles, as against discourse/pragmatic/syntactic differentiation in the prestige dialect, where counterfactual *may have* should be most acceptable in non-salient contexts. Eliciting conditionals is not easy, especially when one needs enough stylistic and contextual differentiation to base statistics on. Anyone with the time for such a task should get moving soon. All of this assumes, of course, that *may have* and *might have* are functionally equivalent and are operating within a single grammatical system; see especially Harris (1984)

on the risks of making such assumptions, also Ebert, Gerritsen and others (this volume).

The provisional conclusion, then, is that we are seeing an incipient change which is facilitated by a complex of internal and external factors but driven initially by a single external factor.

Notes

1. I have been working on this paper for a long time, on and (mostly) off. Some of the ideas were presented in lecture form at the University of Nijmegen on 11th March 1986, where useful comments were made by Herman Wekker and others. Different parts were plundered for a lecture given in Sweden, Finland and Germany in April/May 1989. I am grateful for the various suggestions made at the ICHL IX workshop and by Professor Dwight Bolinger and Gilbert Youmans, not all of which I have had the time or the grace to follow up.
2. I considered treating counterfactual *may have* as a semantic change in *may (have)* from open possibility to counterfactuality. Broadly it fits in with at least one of the three tendencies for semantic change described in recent work by Elizabeth Traugott (1990: 500), namely development of metalinguistic meaning: counterfactuality has a greater textually cohesive function than open possibility, since it presupposes an underlying protasis. I have not pursued this approach, however, since we are not really dealing here with the development of a new meaning, rather the borrowing of an existing meaning from another form.
3. I take *otherwise* in (10) to mean 'if Hudson had not pointed out the loose ends', a counterfactual reading, which seems more likely than the non-counterfactual 'in any other way'. Example (11) is very similar.
4. This idiomatic use of *well* requires the presence of *may, might, can* or *could*. (Professor Dwight Bolinger notes a similar usage in *You well know that ...* (personal communication 10 Sept. 1989).) Even when *well* is replaced by another adverb, it seems to belong in the *it is possible* clause of the paraphrase ('it is highly possible, it is indeed possible', etc.) rather than with the lexical verb. Incidentally, Bolinger's suggestion that *may well have* was resisting counterfactual use (1988) must be withdrawn in the light of examples (30–33 and 40), plus some quoted by Chalker (1989: 62).
5. Again the adverb *well* in (40) is incompatible with the chosen paraphrase.
6. As for root meanings, Palmer is doubtful about the status of non-epistemic *may/might* in present-day English (1979: 157–160), but Coates (1983: 139–165) provides some clear examples. The decline of dynamic *may* between the fifteenth and nineteenth centuries is plotted by Simon-Vandenberg (1983).

7. Example (49) may be unreal – the story does not make it clear whether or not the men had in fact dug themselves into a snow hole – but it is not the apodosis of a conditional.
8. Jørgensen (1984) reviews the evidence and decides that *ought* is still on balance a past tense form.
9. Lightfoot himself denies elsewhere that this is possible: “NE *must* and *ought*, historically past tenses, never carry past sense” (1979: 104).
10. Coates argues that epistemic *could* expresses a more tentative possibility than *might* in her corpus (1983: 165–167, and cf. also 121–122 on *could have*).
11. A recent study by Collins (1988) comparing British and Australian preferences in the usage of *can*, *could*, *may*, and *might* is of some relevance here, though Collins nowhere distinguishes counterfactuals within his more general Hypothetical category.
12. Professor Bolinger points out (personal communication, 10 Sept. 1989) that the HAVE of (72–73) is not superfluous prosodically.

Whether ‘*d* in (25, 72) stands for *had* or *would* is discussed in Visser (1963–1973: §2157) and more recently Wekker (1987: 460–462). Compare here Lakoff’s analysis (1987: 562–565) of the “strange existential”

 - a. There’s a man been shot.

where ‘*s* is a contraction of *has*, not *is*. Here the auxiliary cannot be used in uncontracted form – a “rational property” which depends on phonological identity with its “ancestor” element, the ‘*s* = *is* of normal existentials.
13. See *OED* s. v. *mote* v.¹ 1 b. An additional factor is confusion with *mought*, a variant of *might*; see *OED* s. vv.
14. Of course, this argument only works if the formal-but-tentative variant of (81),
 - c. Might I have a chocolate?

is less salient than (81 a), as it probably is for most speakers (Quirk et al. 1985: 244 call it “rare and apparently obsolescent”).

Partridge and Clark (1951: 259) assert that counterfactual *may have* is a hypercorrection, though they give a different source. They claim that speakers have been taught that “historical English idiom” prefers *may have* to *might have* in ordinary epistemic usage – i. e., that (42 a) is preferable to (42 b) – and that this preference is erroneously transferred to counterfactual examples.
15. The questionnaire contained examples (3–6), (13–14), (35–37).
16. The only evidence I have found of scholarly attention to this matter as a dialect phenomenon turns out to be unhelpful. Melchers (1979: 114) quotes question 4.14 in Book 9 of the Survey of English Dialects:

Smith said to you: It didn’t rain yesterday, though you thought it would. You said: True, but it very easily ... might have done

(The key answer is underlined.) In other words, 4.14 might have elicited counterfactual *may have*. Melchers says (1979: 122) that in Northern material

- might* and *mud* occur; she makes no mention of *may*. She points out, though, that 4.14 was a phonological question and that speakers were under a certain amount of pressure to produce *might*. As she says: "Responses to 4.14 certainly make a somewhat artificial impression." So we are none the wiser, except that the compilers of the questionnaire thought that they had a cast-iron method for eliciting *might* rather than *may*. Jenny Cheshire informs me (personal communication, 24 Jan. 1989) that the Survey of British Dialect Grammar does not cover counterfactual *may have/might have* variation either.
17. I have not undertaken the sort of survey on which statistical results could be based. For one thing, the sample was far too small. For another, the overt concentration on the *may have/might have* distinction is bound to have distorted respondents' perceptions.

Abbreviations

<i>ALLC Bltn</i>	<i>Bulletin of the Association for Literary and Linguistic Computing</i>
<i>Gdn.</i>	<i>The Guardian</i>
<i>Ind.</i>	<i>The Independent</i>
<i>MED</i>	<i>Middle English Dictionary</i>
<i>MEN</i>	<i>Manchester Evening News</i>
<i>OED</i>	<i>Oxford English Dictionary</i>
<i>Old. Ad.</i>	<i>The Oldham Advertiser</i>
<i>RT</i>	<i>The Radio Times</i>
<i>THES</i>	<i>The Times Higher Education Supplement</i>

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Changes in subject marking in Japanese*

Noriko Fujii

1. Introduction

Although some linguistic changes may be due exclusively to internal factors and others largely the result of external ones, many linguistic changes are in fact due to interaction between internal and external factors. Even in the case of lexical borrowing, which may be considered the result of external factors (language contact, the element of prestige, and so on), the process of selection and adoption is strongly influenced by factors internal to the adopting language.

This paper deals with changes in subject marking in written Japanese, and factors that have influenced those changes. Although in present-day Japanese grammatical relations and some discourse relations are marked by post-positional particles, in Old Japanese subjects were usually unmarked (NP \emptyset). The particles that follow subjects in present-day Japanese had related, but different, functions in Old Japanese, and played only peripheral roles. This paper examines how the development of these particles relates to the disappearance of unmarked subjects. Like other papers in this volume, this study shows the importance of considering both internal and external factors that affect the changes discussed. In sections 2. and 3., I will treat subject marking in present-day Japanese and in Old Japanese. This is followed by an explanation of data, and by a discussion of the difficulty in selecting data when dealing with historical study. Then I will examine how the particles (*ga* and *wa*) have evolved and developed, and how internal factors such as reinterpretation, the loss

* I would like to thank the organizers, Marinel Gerritsen and Dieter Stein, and participants of the workshop Internal and External Factors in Syntactic Change, held at Rutgers University in August 1989, for helpful discussions and comments. I am also grateful to Russ Tomlin and Sandra Thompson for their suggestions and encouragement.

of distinction between attributive and sentence-final forms in predicate forms, expansion of original functions, and the external factors establishing a new norm for writing at the time of the unification of speech and writing, have affected the changes.

2. Subject marking in present-day written Japanese

Japanese is a verb-final language. Grammatical relations are marked by post-positional particles. Discourse relations of a NP to other parts of a sentence or discourse (such as theme/topic of a sentence or paragraph) can also be indicated by post-positional particles. In present-day written Japanese, when subjects are explicitly indicated they must be followed by a particle, typically the nominative particle *ga* or a discourse particle such as *wa* or *mo* 'even, also' (the function of *wa* will be discussed below).¹ Observe example (1) from a narrative discourse in a grade-school textbook.

- (1) a. *“Hitotsu dake choodai.”*
 one only give me
- b. *Kore ga yumiko no hakkiri oboeta*
 this SUBJ [name] SUBJ clearly learned
saishono kotoba-deshita.
 first word-was
- c. *Mainichi teki no hikooki ga*
 everyday enemy GEN airplane SUBJ
tondekite, bakudan o otoshite-yukimashita.
 came flying bomb DO drop-went
- d. *machi wa tsugitsugi ni yakarete, hai ni*
 town TOP one-after-another burnt ash
natte-ikimashita
 became-went
- e. *Yumiko wa itsumo onaka o sukashiteita-*
 [name] TOP always stomach DO empty
no-deshoo-ka.
 is it that
- f. *Gohan no toki demo “motto, motto” to itte,*
 meal of time even more more Q said

ikurademo hoshigaru-no -deshita.
 much more want -it was that

- a. 'Please give me only one of them.'
- b. 'This is the first expression that Yumiko learned.'
- c. 'The enemy's airplane came flying to the town, and dropped bombs.'
- d. 'The town was burnt continuously, and became ash.'
- e. 'It may be that Yumiko was always hungry.'
- f. 'Even at the meal time, (she) said "more, more" and wanted to eat more.'

(Imanishi 1985: 90)

As can be seen in the examples above, subjects are typically followed by either *ga* (nominative particle) or *wa* (theme marker). It is also common that subjects are completely ellipted from the surface, as can be observed in (1 f). The problem as to the conditions under which *ga* and *wa* are used has drawn considerable interest and controversy in Japanese linguistics (e. g., Kuno 1973; Maynard 1980, 1987; Hinds — Iwasaki — Maynard 1987). Since *wa* is a discourse particle, it is used not only after subjects but also after objects, oblique cases, gerundive clauses, and adverbial phrases.² On the other hand, the occurrence of *ga* is essentially limited to subjects. However, because of considerable overlap between subjects and topics/themes, the actual use of *ga* and *wa* in sentences has stimulated much argument.

Recently, with the development of research respecting functions of particles in discourse, it has become clear that, although on the level of sentence the distinction between the two may not be apparent, they have distinctive discourse functions. In a narrative discourse, *wa* indicates, on a macro-level, the theme of a paragraph, and consequently quite often the theme of a story. This is because main characters of a story tend to be the theme of many of the paragraphs in the story. Maynard (1980, 1987) calls this function of *wa* "staging", and explains that the use of *wa* signals from whose perspective the narrator is narrating a story.

In example (1) above, *Yumiko* is first introduced to the story in (1 b) and reintroduced in (1 e) with *wa*. This is called "theme-creation" in Maynard's terminology, and it is to signal that *Yumiko* will be one of the main characters of the paragraph and the story. What the narrator wishes to accomplish through the use of *wa* is discrimination of thematized participants from non-thematized ones in such a way that thematized participants remain activated, evoked, and stored in the reader's con-

sciousness. Thematized participants provide referents for the development of the thematic flow (Maynard 1987: 61).

Iwasaki (1987) also indicates that, in an expository discourse, entities marked by *wa* are topics which have central importance in the discourse, and which are identifiable. In expository and narrative discourse, entities marked by *wa* constitute a basic framework for the discourse. On the other hand, *ga* marks either new information or non-thematized subordinate participants (Maynard 1987: 65; Ueno 1987: 232–237).

Once the speaker or writer considers the framework well established in the reader's or the hearer's mind, the characters who have already been introduced can remain implicit in the discourse. In this sense, \emptyset marks the continuation of referents. Important referents, who are often continual, are frequently referred to with \emptyset . Interference, distance (how long a topic has been away from the discourse scene), and episode boundaries are the main factors influencing explicit identification of topics (Clancy 1980; Watanabe 1989: 157).

3. The marking of subjects in Old Japanese

Although the use of *ga* for non-theme subjects and *wa* for theme subjects is the norm in present-day written Japanese, the situation in marking subjects was quite different in Old Japanese (from the eighth to the twelfth century); most of the explicit subjects were not followed by any particles at all.

- (2) *Sono toshi no natsu miyasudokoro*
 that year summer [title of the emperor's wife]
hakanaki kokochi ni wazurahi-te
 oblique sickness suffer and
makade-na-mu to shi-tamafu
 attempt-to-leave try-RES
wo (*The tale of Genji*, Chapter: Kiritsubo)
 however
 'In the summer, the prince's mother (= Kiritsubo) became sick and tried to leave the palace.'
- (3) *hajime yori ware ha to omohiagari-tamaheru*
 beginning from I TOP Q be-proud-of-RES

ohon-katagata mezamashiki-mono ni otoshime
 RES-(RES)people vexatious thing as speak-ill-of
sonemi-tamafu (*The tale of Genji*, Chapter: Kiritsubo)
 be-jealous-RES

'The grand ladies with high ambitions thought her a presumptuous upstart and spoke ill of her.'

(Lit.: 'The grand ladies who thought, "I will be the one [who will be loved by the emperor]!" from the beginning looked upon her as a presumptuous upstart and spoke ill of her.')

In (2), one of the main characters, Kiritsubo, is reintroduced after an episode boundary. The preceding episode has been about the birth of her baby boy; the story then turns to the summer, when she falls seriously ill. Because of this episode change, Kiritsubo is reintroduced explicitly with her title, *miyasudokoro*. After this reintroduction of her to the story, she remains implicit in the same episode. Notice that there is no particle following the subject, *miyasudokoro*.

In (3), the subject of the sentence is the grand ladies, who are peripheral characters in the story. Again, there is no particle following the subject here.

This phenomenon of subjects not being marked by any particles can also be observed in *The tale of Taketori* (tenth century). The following illustrates the lack of subject marking at the beginning of that story.

- (4) a. *Ima ha mukashi taketori no okina to yuu*
 now long-time-ago wood-cutter(name) called
mono arikeri
 person there was
- b. *noyama ni majirite take wo toritsutsu*
 mountains to go-in bamboo DO take-while
yorozu no koto ni tsukahi-keri
 various things for use- PAST
- c. *Na wo ba sanuki no miyakkomaro to namu*
 name DO EMP (name) Q EMP
ihi-keru ...
 say-PAST
- d. *Taketori no okina take wo toru ni*
 bamboo DO take and then
- e. *kono ko wo mitsukete nochi ni take wo*
 this girl DO find after bamboo DO

toru-ni

take and then

- f. *fushi wo hedatete yogoto ni kogane*
 joint DO separate every at gold
aru take wo mitsukeru koto
 there is bamboo DO find that
kasanarinu
 happen several times
- g. *kakute Okina yauyau yutaka-ni nari-yuku ...*
 this way gradually rich become
- a. 'A long time ago, there was a person called "Taketori no Okina".'
- b. 'He went into fields and mountains to take bamboo trees, and he used them for various things.'
- c. 'His name was "Sanuki no miyakkomaro".' ...
- d. 'When Taketori no Okina cut bamboos,'
- e. 'every time when he got bamboos after he found the girl,'
- f. 'he found gold between all the joints of the bamboos.'
- g. 'This way he gradually became rich ...'

In this story, an honest and hard-working old man called *Taketori no Okina* 'bamboo cutter' finds a beautiful girl in a bamboo tree one day. He and his wife take care of the girl as their own child. After they find the girl, many good things happen to them. Soon the girl grows to be a beautiful woman, and many men indicate their desire to marry her. However, toward the end it turns out that she has been sent to the bamboo cutter from the moon, and so she goes back to the moon. As can be observed in (4), one of the main characters of the story, *Taketori no Okina*, is first introduced explicitly at its beginning. Once he is established as a main character, he remains implicit, his identity easily recoverable from the context. When he is reintroduced after an episode change (4d) or a long absence, or when the writer wants to remind and confirm for the reader that he is still the focal character (4g), he is explicitly indicated. Notice that no particles follow after *Okina*. The establishment of the man as one of the main characters of the story thus takes the form: [NP- \emptyset [introduction] \rightarrow \emptyset [after the theme is established] \rightarrow NP - \emptyset [theme-maintenance] \rightarrow \emptyset \rightarrow NP - \emptyset [theme-maintenance]].

Thus, in old Japanese narratives subjects are in general expressed in the forms NP - \emptyset or \emptyset (implicit). \emptyset is a continuation marker, and NP - \emptyset appears when the referent might not be clearly identified, as in the case

of switch reference or episode change. NP-*ga* has no significant role at all during this period. NP-*ha* (the counterpart of *wa*) is observed only occasionally, but its use is limited to the case where there is a semantically competing referent in preceding or following clauses (for more detailed discussion on the use of *wa* in Old Japanese narratives, see Ueno 1987).³

A translation of the tale into present-day Japanese clearly indicates the differences in subject/topic manifestation and the use of particles between Old Japanese and present-day Japanese. In the following translation of the story by Asao – Nakano (1957: 1), the first introduction of the man, Okina, in (5 a) is done in the form of NP; the reintroduction of the man in (5 d) and (5 g) takes the form of NP-*wa*, since there is no significant interference of other participants motivating the writer to go through the establishment of the theme before (5 d) and (5 g).

- (5) a. *Ima-de-wa moo mukashi no koto da ga*
 by-now already long-time-ago of incident is but
Taketori no Okina to yuu mono ga ita.
 called person SUBJ there was
- b. *no ya yama ni haitte wa take o*
 field or mountain to enter TOP bamboo DO
tori-tori-shite iroirona doogu o tsukuru
 take-and various tools DO make
noni tsukatte-ita.
 in order to was using
- c. *Sono na o Sanuki-no-miyakkomaro to itta.*
 its name DO (name) Q said
- d. *Taketori no okina wa take o toru-to*
 TOP bamboo DO take-when
- e. *kono ko o mitsukete-kara nochi wa take*
 this girl DO found-after after TOP bamboo
o toru-to
 DO take-when
- f. *fushi to fushi no aida goto ni subete*
 joint and joint of between every at all
oogon no haitteiru take o mitsukeru-koto
 gold SUBJ be-contained bamboo DO find-NOM
ga nando-to-naku tsuzuita.
 SUBJ many-times continued
- g. *kooshite Okina wa shidaishidai yuufukuni*
 this way TOP gradually rich

natte-yuku

become

- a. 'It is already a story of long time ago. There was a person called "Taketori no Okina".'
- b. 'He went into fields and mountains to take bamboo trees, and used them to make various tools.'
- c. 'His name was "Sanuki no miyakkomaro".'
- d. 'When Taketori no Okina cut bamboos,'
- e. 'every time when he got bamboos after he found the girl,'
- f. 'he found bamboos with gold between the joints many times.'
- g. 'This way he gradually became rich.'

The comparison of (4) and (5) suggests that the development of the nominative particle *ga* and the theme particle *wa* has led to the disappearance of NP- \emptyset in present-day Japanese. In the following, I will discuss how this may have happened. First, a brief discussion of data is in order.

4. Data

The examination of written records involves various difficulties, one of which is the diversity in styles of writing. Because Chinese is the language the Japanese borrowed when they did not have a writing system, Chinese remained influential for a significant period of time in the history of Japanese writing. Even after the development of Japanese phonetic scripts around the ninth century, official records and much prose continued to be written in Chinese. In the Heian period (ninth century to twelfth century), the influence of Chinese culture was exceedingly powerful in government and ceremony, as well as in art and letters (Sansom 1928: 53). During this period, however, prose writing in *Kana* (Japanese phonetic scripts) was developed. Although it was considered suitable only for women (Chinese was the proper medium for men), the language of the prose of this period is considered to be very close to the language spoken then (Sansom 1928: 54–56). During the Middle Japanese period (from the thirteenth to the sixteenth century) and onward, we find the development of a written language which was born as the result of two influences: that of the colloquial, upon which the ultimate structure of the sentence depends; and that of Chinese, which provides a large part of the vocabulary, as well as a number of idioms and turns of phrase

(Sansom 1928: 60). This style is the basis for the written language used today. Although this style is widely observed in writings during and after the Middle Japanese period, other styles (Chinese, Sinico-Japanese, Japanese prose writing) also continued to be used.

Because of the complicated history and development of Japanese written language, I decided to look first at the chapter “Kiritsubo” ‘The Paulownia court’, the first chapter in a series of rewritings of *Genji Monogatari* [The tale of Genji]. Eight versions were examined, although the eighth version is so similar to the seventh that I seldom refer to it in this study. Each version of *Genji* is a translation from the original eleventh-century text, but is written in a colloquial language style appropriate to the period of its translation. In these versions, the first 400 clauses were analysed statistically as well. The eight versions are the following:

1. *Genji monogatari* (eleventh century) by Murasaki Shikibu
2. *Shibun ama no saezuri* by Hanshichi Taga (1723)
3. *Nise-murasaki inaka genji* by Tanehiko Ryuutei (1830)
4. *Shinyaku genji monogatari* by Akiko Yosano (1914)
5. *Shin-shin-yaku genji monogatari* by Akiko Yosano (1936)
6. *Genji monogatari* by Junichiro Tanizaki (1959)
7. *Genji monogatari* by Fumiko Enchi (1972)
8. *Genji monogatari* by Tadayoshi Imaizumi (1978)

The versions examined are referred to as *Genji* 1, 2, 3, 4, 5, 6, 7, or 8. This selection of *Genji* texts gives us significant control over thematic information, which is particularly important in analysing the development of the thematic particle *wa*.

Another set of data consists of three government-regulated elementary-school textbooks from 1875, 1900, and 1936. I selected texts from these periods because, as will become clear later, a significant change is observed around the turn of the century with respect to the disappearance of unmarked subjects, NP- \emptyset .

5. NP- \emptyset and its disappearance

Subjects not followed by any particles (unmarked subjects) also appear in “The tale of Heike” (thirteenth century), “Amakusa Heike” (sixteenth century), and *Genjis* written in the eighteenth and nineteenth centuries;

these are a significant proportion of the subjects. (6) is from *Genji* 2, and (7) is from *Genji* 3.

- (6) *Kono ima-miko haya mitsu ni*
 this present prince already three
narase-tamae ba
 become-RES since (*Genji* 2)
 ‘Since this prince already became three years old ...’
- (7) *Futari no onna nikoniko-gao ni uchi-unazuki*
 two women smiling-face nod-to-each-other
sono yooi o zo shitari-keru
 that preparation DO EMP do-PERF (*Genji* 3)
 ‘The two women nod to each other with smiling faces and
 make preparation for that.’

Although the occurrence of NP-*wa* in the subject position increases in *Genji* 2 compared with *Genji* 1, that of NP-*ga* is still small. For example, the introduction of Kiritsubo to the story is done with NP- \emptyset , as can be observed in the following.

- (8) *Nyoogo kooi amata*
 court-lady (high rank) court-lady (lower rank) many
owashimashikeru nakani sanomi osato no
 (RES) exist among very much family of
shina takaki go-bunzai ni wa owasenu
 rank high RES-status TOP (RES)is not
ga sugurete mikado
 but exceptionally emperor
no ki-ni-iri tokimeki hanokiki-tamau kooi
 GEN be liked prosper-RES court-lady
owashimashi-keri
 there was (RES)
 ‘Among many court-ladies, there was a lady who was particularly loved by the emperor and prospered although she was not from a family of the highest rank.’

In twentieth-century versions, the same introduction takes the form of NP-*ga* + existential verb, as can be illustrated in the following example from *Genji* 8.

- (9) *Nyoogo toka kooi toka*
 court-lady (high-rank) and court-lady and so on

okisaki ga oozei otsukae-mooshi-agete-irashita
 lady SUBJ many serve-HUM-RES-PAST
nakani tokuni oomoshii mibun de-wa-nai
 among especially high rank is-not
okata de kakubetsuni go-chooai
 (RES)person be-and particularly RES-love
o koomutte-irassharu okata ga
 DO receive-RES (RES)person SUBJ
atta-sooda.
 there was-HEARSAY

'Among many court-ladies who served the emperor, there was a lady who was not of the highest status but received tremendous love from the emperor.'

Table 1 illustrates changes in the marking of subjects in *Genji* texts.

Table 1. The occurrence of different particles after subject NPs

Particle	Genji 1		Genji 2		Genji 3		Genji 4	
	No.	%	No.	%	No.	%	No.	%
∅	54	43.9	38	29.5	40	26.1	0	0
<i>ha</i>	26	21.1	38	29.5	60	39.2	107	58.8
<i>mo</i>	25	20.3	36	27.9	21	13.7	18	9.9
<i>no</i>	8	6.5	11	8.5	4	2.6	2	1.1
<i>ni</i>	2	1.6	4	3.1	0	0	0	0
<i>ga</i>	2	1.6	2	1.6	26	17.0	54	29.7
<i>namu</i>	6	4.8	0	0	2	1.4	0	0
<i>ya/zo</i>	0	0	0	0	0	0	1	0.5
Other	0	0	0	0	0	0	1	0.5
<i>Total</i>	123		129		153		182	
Particle	Genji 5		Genji 6		Genji 7		Genji 8	
	No.	%	No.	%	No.	%	No.	%
∅	0	0	1	0.8	2	1.3	0	0
<i>ha</i>	106	53.0	42	32.3	76	48.7	88	48.9
<i>mo</i>	21	10.5	26	20.0	28	17.9	40	22.2
<i>no</i>	0	0	0	0	1	0.6	2	1.1
<i>ni</i>	1	0.5	0	0	0	0	0	0
<i>ga</i>	69	34.5	60	46.2	49	31.4	50	27.8
<i>namu</i>	0	0	0	0	0	0	0	0
<i>ya/zo</i>	0	0	0	0	0	0	0	0
Other	3	1.5	1	0.8	0	0	0	0
<i>Total</i>	200		130		156		180	

As table 1 indicates, the occurrence of *ga* after subjects was very infrequent in *Genjis* 1 and 2. It increases to some extent in *Genji* 3; and in the versions that were written in the twentieth century, *ga* is one of the particles that most frequently appears after subjects. Among the particles that frequently appear after subjects (namely *wa*, *mo*, and *ga*), *ga* is the only case marker. The two other particles are discourse particles; they can appear not only after subjects, but also after objects, oblique cases, time expressions, and *te*-clauses (gerundive clauses).

It is also important to note that unmarked subjects also disappeared in the twentieth-century versions. A few occurrences of unmarked subjects in *Genjis* 6 and 7 are in idiomatic expressions.

6. The development of the particles *ga* and *wa*

6.1. Changes in the use of *ga*

In *Genji* 1, subjects are implicit to a great extent. When they are explicit, NP- \emptyset is the neutral form. *Wa*, after subjects, conveys a specific discourse function, such as contrast, other types of local emphasis, or an episode change, as will be demonstrated shortly; and *mo* indicates emphasis, meaning ‘also’ or ‘even’. In this text, the role of *ga* is peripheral. First we notice that the frequency of *ga* as a nominative particle is extremely low: twice in subordinate clauses, and once in a relative clause. *Ga* also appears as an associative marker, linking two NPs in the text. The latter function of *ga* no longer exists in present-day Japanese, except in some idiomatic expressions.

The fact that in earlier texts *ga* is used both as a nominative particle and as an associative particle requires us to consider the functions of this particle in relation to the particle *no*, which has similar functions.⁴ I follow Akiba’s (1978) use of “associative marker” to indicate the functions of *ga* and *no* as connectors or “linkers” of two NPs that are strongly related. The following examples from *Genji* 1 and colloquial Japanese will illustrate the associative function of *no* and *ga*.

- (10) genitive/possessive
 a. *watashi no ie* (colloquial)
 I house
 ‘my house’

- b. *hito no kokoro* (*Genji* 1)
 people mind
 ‘people’s mind’
- c. *wa ga mi* (*Genji* 1)
 I body
 ‘my body = myself’
- (11) appositive
- a. *sensei no yamakawa-san* (colloquial)
 teacher [name]
 ‘(my) teacher, Mr./Mrs. Yamakawa’
- b. *chichi no dainagon* (*Genji* 1)
 father [title]
 ‘(her) father, the Dainagon’
- (12) other
- a. *natsu no oregon* (colloquial)
 summer Oregon
 ‘Oregon in summer’
- b. *mukashi no tera* (colloquial)
 ancient temple
 ‘ancient temple’
- c. *yoru no otodo* (*Genji* 1)
 night palace
 ‘the palace at night’
- d. *ichi no miko* (*Genji* 1)
 one (RES) child
 ‘the first child’

The following examples from *Genji* 1 illustrate the use of *no* and *ga* as nominative particles.

- (13) *ito nihohiyakani utsukushige-naru hito*
 very gorgeously beautiful person
no itau omoyasete ...
 SUBJ terribly emaciated
 ‘the person with gorgeous beauty is terribly emaciated and ...’
- (14) *ima made tomari-haberu ga ito uki*
 now until live-HUM SUBJ very painful
wo ...
 and therefore
 ‘that I have lived this long is very painful and shameful ...’

In present-day Japanese, the use of *no* as a nominative particle is limited to subjects in relative clauses. However, in *Genji* 1 the two particles, *no* and *ga*, seem to have very similar functions, although the occurrence of *ga* is extremely rare. However, Sansom suggests that *ga* establishes, to a greater degree than *no*, a possessive relation between the two elements which it connects (Sansom 1928: 231–233). He gives the following example to illustrate this point (1928: 232).⁵

- (15) a. *chichi no Dainagon*
 father
 ‘her father the Dainagon’
 b. *Dainagon ga chichi*
 father
 ‘The Dainagon’s father’

Konojima (1966: 40–43) also points out that *no* usually appears after common nouns, while *ga* occurs after pronouns and proper nouns. We find the following examples from *Genji* 1.

- (16) a. *hito no motenayamigusa*
 people worries
 ‘people’s worries’
 b. *wa ga mi*
 I body
 ‘my body, myself’

Table 2 shows the overall frequency of these particles, regardless of their function. Notice how infrequent the occurrence of *ga* is in *Genji*’s 1 and 2.

Table 2. The occurrence of *ga* and *no* (400 clauses)

<i>Genji</i>	1 (11th century)	2 (1723)	3 (1830)	4 ^a (1914)	5 (1930)	6 (1959)	7 (1972)
<i>ga</i>	5	6	64	80	154	125	84
<i>no</i>	124	286	148	310	339	252	305

^a *Genji* 4 has only 291 clauses.

However, *ga* gradually expands its function and develops into a nominative particle, abandoning its function as an associative particle. On

the other hand, *no* fully develops as an associative particle, and limits its function as a nominative particle within relative clauses. Table 3 shows changes in the function of *ga*, and Table 4 changes in the function of *no*. Tables 5 and 6 demonstrate the development of *ga* as a subject marker and the limited function of *no* as a subject marker in later versions.

Table 3. Changes in the function of *ga*

<i>Genji</i>		1	2	3	4	5	6	7
Genitive/ associative	No.	2	1	18	0	0	0	0
	%	40.0	16.7	27.3	0	0	0	0
Nominative	No.	3	4	42	73	129	110	70
	%	60.0	66.7	63.6	91.3	83.8	88.0	83.3
Other	No.	0	2 ^a	6	7	25	15	14
	%	0	33.3	9.1	8.8	16.2	12.0	16.7

^a Conjunctive particle meaning 'but'.

Table 4. Changes in the function of *no*

<i>Genji</i>		1	2	3	4	5	6	7
Genitive/ Associative	No.	114	238	132	256	275	190	230
	%	81.4	83.2	89.9	82.6	81.8	75.4	75.4
Nominative	No.	24	48	14	28	31	16	36
	%	17.1	16.8	9.5	9.0	9.1	6.3	11.8
Other	No.	2 ^a	0	2 ^a	26 ^b	33	46	40
	%	1.4	0	1.4	8.4	9.7	18.3	13.1

^a Nominal = *koto*, *mono*, *hito*, etc.

^b = extended predicate = *no de aru*.

Why *ga* rather than *no* developed as a subject marker requires further study. In the Okinawan dialect and that dialect area, the counterpart of *no*, *nu*, is the one which developed as a subject marker, and *ga* has a restricted use, both in number and function (Fujii – Uyeno 1985).

The process of change with respect to these particles is not yet clear. As associative markers, both *ga* and *no* occur in the following environment:

$$(17) \quad \text{NP} \begin{pmatrix} ga \\ no \end{pmatrix} \text{NP}$$

Table 5. *ga* as a subject marker

<i>Genji</i>		1	2	3	4	5	6	7
Relative clauses	No.	1	1	21	20	49	33	20
	%	33.3	25.0	48.8	27.4	38.0	30.0	28.6
Other subordinate clauses	No.	2	2	14	25	44	67	34
	%	66.7	50.0	25.6	34.2	34.1	60.9	48.6
Independent clauses	No.	0	(1)	12	27	31	10	16
	%	0	(25.0)	25.6	38.4	24.0	9.1	22.9
Total number of occurrences		3	4	43	73	129	110	70

Table 6. *no* as a subject marker

<i>Genji</i>		1	2	3	4	5	6	7
Relative clauses	No.	16	37	10	26	30	16	35
	%	66.7	77.1	71.4	92.9	96.8	100.0	97.2
Other subordinate clauses	No.	7	11	2	2	0	0	0
	%	29.2	20.1	14.3	7.1	0	0	0
Independent clauses	No.	(1) ^a	0	(2) ^b	0	(1) ^c	0	(1) ^d
	%	(4.2)	0	(14.3)	0	(3.2)	0	(2.8)
Total number of occurrences		24	48	14	28	31	16	36

^a In a direct quotation.

^b The sentences end with the participial form of the verb.

^c Subject reduction with extended predicate.

^d Direct quotation, exclamatory sentence.

Examining the environments in which *no* and *ga* occur in Old Japanese, it seems that the reinterpretation of grammatical relations of entities marked by these particles, and by the rest of the sentence, led to the development of the particles as nominative. In particular, the fact that in some cases NPs which are modified by a verb phrase can take either the form VP (in an attributive form) + NP, or VP (in an attributive form) + \emptyset (the head noun is implicit), contributed to this reinterpretation. First, consider the following example.

- (18) *haha wo hanarete yuku (∅) ga*
 mother DO leave and go
kanashiki (∅) ha ...
 sad TOP
 ‘the sadness of going away from my mother is ...’

There are two implicit nouns in the sentence; for those with a knowledge of present-day Japanese, it would be easier to understand if we were to supply such nouns as the nominalizer *koto* before *ga*, and *kimochi* ‘feeling’ before *ha*. The sentence literally means “the sad feeling of leaving my mother is ...”. However, since there is no explicit noun after the adjective *kanashiki* ‘sad’, the adjective can be taken as the predicate that corresponds to the subject, *haha wo hanarete yuku (∅)* ‘that I leave my mother’. Therefore, according to the reinterpretation, the whole phrase means, “the fact that leaving my mother is sad is ...”. The adjective, *kanashiki*, is in its attributive form and not in the sentence-final form, *kanashi*; therefore, it is usually used in modifying a noun. In general, at this stage of Japanese verbs have different attributive and sentence-final forms. In some verbs, however, attributive and sentence-final forms are exactly the same. Also, especially in poetry, we frequently find sentences in the form of exclamations (with the attributive form of a verb), rather than assertions such as:

- (19) *sumera mikoto no nori tamai- shiku*
 say-RES-PERFECT
 Lit. ‘The Sovereign’s saying’ = ‘The sovereign said’ (The Imperial Edicts on Rescripts in the Shoku-Nihongi) (Sansom 1928: 228)

Since the reinterpretation is based on an incomplete differentiation between NP and VP, it is natural that *no* and *ga*, as nominatives, appear in relative clauses where the verb phrase has the attributive form. That is, *no* and *ga* are still associated with nounness. Observe the following:

- (20) *ito yamugotonaki kiha ni ha*
 very noble status at
aranu (∅ = hito) ga sugurete tokimeki-tamafu
 not SUBJ specially prosper-RES
(∅ = koto) arikeri
 incident there was
 ‘There was an incident that a lady of not very high status particularly prospered [= was specially loved by the emperor].’

In (20), the subject of the relative clause, *ito yamugotonaki kiha ni ha aranu*, is marked by *ga*; the subject of the main clause, ... *aranu ga sugurete tokimeki-tamafu* 'the incident that a lady of not a very high status particularly prospered', is unmarked.

That *no* and *ga* started marking the subject of a verb phrase in the attributive form also triggered their occurrence in subordinate clauses. Consider the following examples from *Genji* 1.

- (21) *ima made tomari-haberu ga ito uki wo ...*
 now until live-HUM very painful and so
 'the fact that I have been alive until this moment is very painful
 for me ...'
- (22) *Tsuki no omoshiroki ni*
 moon interesting therefore
 'since the moon is beautiful ...'
- (23) *naho ohasuru mono to omofu ga ito*
 still (RES) exist EMP Q think very
kahinakere-ba
 does-not-help-therefore
 'since the feeling that she is still alive does not help ...'

What is interesting about these instances of *no* and *ga* is that, in (21) and (22), the predicate ends with the attributive form before the conjunctive particles *wo* and *ni* respectively. This is exactly the same condition for the occurrence of nominative *no* and *ga* in relative clauses. The conjunctive particles *wo* and *ni* require the predicate which precedes them to end with a participial. This peculiarity is due to their derivational history: the conjunctive particles *wo* and *ni* developed from the case particles *wo* and *ni* respectively. As case particles, they have the condition that what precedes them must be a NP (either a pure NP or a \emptyset noun NP = VP in the attributive form) (Akiba 1978). I speculate that, because of this particular environment which the conjunctive particles *wo* and *ni* require, with the stabilization of the use of *wo* and *ni* as conjunctive particles, *no* and *ga* should easily broaden their application to other types of subordinate clauses.

By the time *Genji* 3 was written, *ga* was also used as a nominative in independent clauses.

- (24) *Oo choodo yoi mono ga aru*
 Oh exactly good thing SUBJ there is
 'Oh, there is a perfect thing (for it)!'

- (25) *Omeshikae wa watakushi ga jikini*
 other clothes TOP I SUBJ right-away
totte-mairi-mashoo
 bring (HUM)-VOL
 Lit. 'For clothes for change, I will bring them right away.'

In Old Japanese, many verbs distinguished clearly between their sentence-final form and their attributive form. However, this distinction began to disappear during the Middle Japanese period (thirteenth to sixteenth century), due to frequent use of the attributive form at the end of a sentence in order to convey the special effect of suspense and/or exclamation (Nakata 1971: 122–123; Sansom 1928: 229).⁶ For example, in (24) we observe the verb, *aru* 'exist', at the end of the sentence. This verb form was originally used only in modifying a NP. In Old Japanese there was the sentence-final form, *ari*. However, this sentence-final form is no longer used in *Genji* 3. Instead, the attributive form is used at the end of the sentence. The disappearance of the distinction between the sentence-final form and the attributive form is considered to have encouraged the development of *ga* as a nominative in independent clauses.

I should also note that many of the uses of *ga* in *Genji* 3 convey emphasis or an exclamatory sense. Notice the exclamation mark in the translations of (24) and (25); *watakushi* 'I' should be emphatically read in the context. In this sense the use of *ga* in *Genji* 3 is still associated with the specific stylistic flavor I have mentioned above. The emphatic use of *ga* in present-day Japanese is described as "exhaustive listing *ga*" by Kuno (1973).

6.2. The use of *ga* and the occurrence of NP- \emptyset in textbooks

In twentieth-century versions of *Genji* texts, NP- \emptyset suddenly disappears and the use of *ga* becomes more stable. Why this sudden change? An analysis of three elementary-school textbooks also reveals that something significant took place in terms of the disappearance of NP- \emptyset around the turn of the century. The textbooks used for analysis are from 1875, 1900, and 1936, and they are designed for the teaching of the Japanese language to Japanese children (fourth to sixth grades). To a great extent, textbooks are considered to deal with a conservative variety of the language, as well as to set a norm for writing.

In the 1875 textbook NP- \emptyset plays a significant role in indicating subjects, while NP-*ga* plays no role at all. In the 1900 textbook, we find a sudden increase in the occurrence of *ga*, and some increase in the use of

wa. At the same time, the frequency of NP- \emptyset decreases. In the 1936 textbook, we observe a tendency similar to that of 1900. A quantitative analysis of the textbooks supports this observation (Tables 7, 8, and 9). Most of the chapters that were statistically dealt with are narratives. However, when there were not enough narratives in a textbook, I included essays in the count.

Table 7. Textbook analysis (1875)

Subject form	Number	%
NP \emptyset	34	22.7
NP <i>wa</i>	22	14.7
NP <i>ga</i>	0	0
NP <i>no</i>	1	0
\emptyset	86	57.3
Others	7	1.3
<i>Total</i>	150 ^a	100.00

^a 150 clauses. Relative clauses and quotations are not included.

Table 8. Textbook analysis (1900)

Subject form	Number	%
NP \emptyset	5	2.9
NP <i>wa</i>	40	23.4
NP <i>ga</i>	24	14.0
NP <i>no</i>	0	0
\emptyset	99	57.9
Others	3	1.8
<i>Total</i>	171 ^a	100.00

^a 171 clauses. Relative clauses and quotations are not included.

Table 9. Textbook analysis (1936)

Subject form	Number	%
NP \emptyset	5	3.0
NP <i>wa</i>	52	31.5
NP <i>ga</i>	27	16.4
NP <i>no</i>	0	0
\emptyset	69	41.8
Others	12	7.3
<i>Total</i>	165 ^a	100.00

^a 165 clauses. Relative clauses and quotations are not included.

Also significant is the fact that in the 1875 textbook all the lessons are written in a Classical language quite different from the spoken language of that time.⁷ The Classical style includes predicate forms (verbs, adjectives, and copulas) that do not greatly differ from those in Old Japanese. In contrast to the prose writing of the Heian period (eighth to twelfth century) in which *Genji* 1 was written, it has a considerable number of Sino-Japanese words, indicating the strong influence of Chinese in prose writing after the Heian period. In this old style, NP-*ga* does not appear in the subject position in independent clauses. The following example illustrates the style.

- (26) a. *Seiyoo no aru kuni ni arisu to yuu mono*
 West some country LOC Alice called person
arite
 there was
- b. *nan to ieru neko o kaiokitaru ni*
 called cat OBJ was keeping
- c. *arutoki oba yori kinshijaku o okurare-tari*
 one day aunt from canary OBJ be given-PERF
- a. 'There was a person called Alice in a country in the West and ...'
- b. 'he was keeping a cat called "Nan" and ...'
- c. 'One day he was given a canary from his aunt.'

In both the 1900 and 1936 textbooks, there are twenty lessons (chapters). In the textbook of 1900, 15 of these are written in Classical style and 5 in colloquial language. On the other hand, in the 1936 textbook only 5 lessons out of the 20 are written in Classical style, the other 15 lessons being in colloquial language. The colloquial grammar is quite similar to present-day Japanese, though there is some difference in the use of vocabulary. (Concerning Tables 8 and 9: in the 1900 textbook, two of the six stories dealt with statistically are written in Classical style; one of the three stories analyzed in the 1936 textbook is written in the Classical style.) In neither of these versions do the lessons in Classical language contain NP-*ga* in the subject of independent clauses, nor do those in colloquial language have NP- \emptyset . This clearly indicates that the grammaticalization of NP-*ga* is strongly related to an external factor: the unification of speech and writing, which became one of the major issues with respect to the language reform around the turn of the century.

6.3. Development of the theme marker *wa*

Another factor that contributed to the disappearance of unmarked subject is the development of the theme marker *wa*. An earlier example (5) has demonstrated that NP- \emptyset s in classical Japanese are taken over partly by NP-*wa*'s and partly by NP-*ga*'s. Table 1 also shows that the use of *wa* after subject increases in versions in the twentieth century.

De Wolf (1987: 269–270) suggests that in Man'yooshuu (eighth century), *wa* was used as an exclamatory particle, as observed in the following.

- (27) *Furu-gasumi / tanabiku toki ni / koFi no sigeki wa*
 spring-mist draw in time love thick
 'Whenever the spring haze draws in, oh, the denseness of love!'

Ueno (1987) demonstrates that in narratives of the tenth and eleventh centuries, *ha* (the counterpart of *wa* in Old Japanese) was used for local emphasis, and that it was not used to indicate thematic character in the discourse. However, with the extension and reinterpretation of its function, the marker has developed to a point where it can signal thematic characters of the story (paragraph themes) as well as local emphases, such as contrast. First, observe the introduction of one of the main characters, *Kiritsubo*, into the story.

- (28) *Izure no ohon-toki ni ka nyoogo*
 when RES-period at QUES court-lady (higher rank)
kooi amata saburahi-tamahi-keru
 court-lady (lower rank) many be(RES)-RES-PERF
nakani it yamugotonaki kiha ni ha aranu
 among very noble status at TOP is not
ga sugurete tokimeki-tamafu arikeri
 SUBJ specially prosper-RES there was
 'In a certain reign, there was (an incident that) a lady of not
 the first rank was loved by the emperor more than anyone
 else.'

- (29) *Hahagimi hajime-yori oshinabete no*
 mother(RES) from-the-beginning all regular
uwamiya-zukae-shi-tamafu beki kiha
 do-service-at-upper-court-RES should status
ni ha arazariki.
 at TOP was not

‘The mother (= Kiritsubo) does not have the status of a person who should stay near the emperor all the time and serve him.’

- (30) *sonotoshi no natsu miyasudokoro*
 that year of summer [title of Kiritsubo]
hakanaki kokochi ni wazurahite
 vague conditions suffer and

makadenamu to shi-tamafu wo ...
 leave-VOL Q do-RES however

‘That summer, the boy’s mother feels vaguely unwell, and thinks of leaving court, but ...’

In (28) Kiritsubo is introduced to the story for the first time with the form *ito yamugotonakikiha ni ha aranu* ‘a person of not the first rank’. It is followed by *ga* in the relative clause. (It would not be followed by the particle if it were the subject of the main clause.) The story proceeds, telling how the emperor’s infatuation with Kiritsubo disturbed others and how their jealousy and criticism hurt Kiritsubo. Then the author tells of the birth of Genji, Kiritsubo’s child. All this time, Kiritsubo is referred to implicitly. When she is identified explicitly, in (29) in the new paragraph that talks about Kiritsubo’s status and the emperor’s treatment of her, she is reintroduced with the form NP- \emptyset . In another explicit identification of her, forty clauses later, she is expressed with the form NP- \emptyset . This way of identifying her with the form NP- \emptyset is different from that found in modern versions, as I indicated earlier with respect to “The woodcutter’s tale”. In twentieth-century versions, once a character is established as a main character he or she is marked by *wa*, if not marked by another particle, such as the emphatic particle *mo* ‘also’. Observe the parts corresponding to (29) in *Genji*’s 5, 7, and 8.

- (31) (*Genji* 5)
Kooi wa hajimekara futsuu no...
 lady from-the-beginning ordinary
 ‘The lady was not originally a person of ...’

- (32) a. (*Genji* 7)
Hahagimi no miyasudokoro mo motomoto
 mother EMP originally
 ‘The mother of the boy, Miyasudokoro was originally not ...’

b. (*Genji* 8)

Wakagimi no hahagimi wa nyuunai no
 young prince of mother entering court of
hajime kara
 beginning from

‘The mother of the young prince is, from the beginning of her service at court, not a person of ...’

In *Genji* 1, *ha* apparently serves to shift attention from one theme to another, to add differentiation and/or contrast.

(33) a. *hajime yori ware ha to omohiagari-tamaheru*
 beginning from I TOP Q be conceited-RES
ohon-katagata mezamashiki mono ni
 RES-people(RES) presumptuous person as
otoshime sonemi-tamafu
 speak ill of feel jealous-RES

b. *onaji hodo sore yori geroo no kooi-tachi ha*
 same degree it than lower rank lady-PL TOP
mashite yasukarazu
 even more resentful

- a. ‘Ladies who are conceited and had thought, “I (should be the one who will be loved by the emperor)!” from the beginning of their service think of (Kiritsubo) as a presumptuous person.’
 b. ‘Other ladies of the same status (as Kiritsubo) and lesser ladies are even more resentful.’

Ha in (33 a) emphasizes the preceding noun *ware* ‘I’, and differentiates it from other ladies. *Ha* after *onaji hodo sore yori geroo no kooi tachi* helps the reader divert attention from the previous theme, “ladies who are conceited”, to the new theme, and to the contrast between the two.

Although *ha* is typically used to contrast between two elements, there is a case in which *ha* helps theme change in a larger discourse. After talking about Kiritsubo’s hardship, the author uses *ha* to change the theme to Kiritsubo’s apartment.

(34) a. ... *nakanaka-naru mono-omohi wo zo shi-tamafu*
 very difficult worry OBJ EMP do-RES

b. *Mitsubone ha Kiritsubo nari*
 (RES) residence is

- c. *Amatano ohon-katagata wo sugi-sase-tamahi ...*
 many RES-people(RES) OBJ pass-RES-RES
- a. '... (Kiritsubo) suffers so much.'
 b. 'Her residence is Kiritsubo.'
 c. 'Passing by many other ladies ...'

Since her residence is discussed here for the first time, *ha* helps shift the reader's attention. This example is significant because it expands the original contrastive function. There are no elements contrasted with *mitsubone* 'RES-residence'. Rather, this topic itself is contrasted. The role of *ha* is important since the original text does not have any paragraph markers such as indentation.

In *Genji* 2, there are many examples in which *wa* is used to signal a topic or episode change. Observe the following:

- (35) a. *kono kooi asa-yuu no otsutomekata*
 this lady morning-and-evening the-way-to-serve
ni-tsukete mo
 concerning even
- b. *hito no ki no tatsuyoo-naru koto*
 person GEN feeling SUBJ irritated things
nomi ni-te ...
 only and
- c. *mono-gokoro-bosoge ni-te*
 helpless-seem and
- d. *go-yoojoo no tame to te*
 RES-care of health for the sake of Q saying
osato e sagarigachi ni se-sase-tamae-ba
 home LOC tend to go back do-RES-RES-since
- e. *mikado wa iyoiyo o-kokoro-zoe mo*
 emperor more and more affection EMP
koto-taranu hodoni ...
 not enough to the extent
- a. 'Speaking of this lady, even in her daily service'
 b. 'everything evoked others' anger'
 c. '(she) looks so helpless, and'
 d. 'tends to go back home for the care of her health, and therefore'
 e. 'the emperor loves her even more and thinks of her ...'

Once the marking of the same referent at episode change occurs, *wa* can easily expand its function to mark the same referent at a minor event change in the same paragraph, or after there is an interference. In sum, we can identify the following process of development.

1. Exclamatory particle.
2. To differentiate a subject when there is a strong semantically competing referent.
3. To signal an episode change, differentiating from the preceding one.
4. To signal an episode change involving the same referent.
5. To signal the continuation of the same referent after minor episode change or interference or at the time of switch reference.

The above suggests that the particle *wa* expanded its original function gradually through history. This coincides with the systematic increase in the use of *wa* in Table 1.

7. External factors

In the previous sections I have discussed the development of the particles *ga* and *wa* that caused the disappearance of NP- \emptyset . The internal factors with respect to the development of the particles involve incomplete differentiation of NP and VP, reinterpretation, and expansion of the original function. However, these internal factors alone do not explain the phenomenon that NP- \emptyset is no longer observed in twentieth-century versions of *Genji*. In order to explain the shift in the use of particles and the shift in writing styles that is observed in the textbooks analyzed, we need to consider social factors around the turn of the century, which became the trigger for the changes.

A movement for the unification of speech and writing was stimulated by various forms of modernization influenced by contact with the West. When Japan opened the country in 1854, after almost two hundred years of isolation, it was flooded by Western influence, which created awareness that Japan needed to change in many respects in order to be competitive in the world. With regard to language, contact with Western languages made Japanese intellectuals aware of structural characteristics of Japanese, and of the differences between Western languages and Japanese. This awareness led to various changes and regularizations with respect to the language, such as the unification movement for speech and writing,

regularization of the system of punctuation, and the incorporation of many loan words. For example, the unification movement was initiated by those scholars who learned that the difference between spoken language and written language in Western languages is much smaller than that in Japanese. At the beginning of the Meiji period (1868–1912), Japan had a clear separation between spoken and written language. The written language was based on the language in the Heian period (eighth to twelfth century), whose grammar was based on that of Old Japanese as well as Middle Japanese (tenth to fourteenth century). In addition to grammar, the lexicons of formal and idiomatic expression were significantly different. This meant that the written language could be read and written only by people with extensive education (Fujii 1985: 12–21).

Since one of the goals of the new government was to raise the educational level of a wider segment of the population, this linguistic situation needed to be challenged. Many proposals were advanced toward accomplishing unification (Yamamoto 1965). This was a difficult task because not only were there several styles of writing, but the spoken language varied greatly in both regional and social dimensions. Therefore the task involved not only unification but also standardization. Many writers experimented with different styles until they found a norm. By 1908, all novels came to be written in colloquial language, and the unification movement had reached its climax. By 1923, newspapers were generally written in a colloquial language (*Kokugo-gaku dai-jiten* 1980: 769).

In the unification movement and its establishment of a colloquial writing style, the influence of Western languages was strong in many respects. First of all, many of the scholars who advocated unification were students of foreign languages, or had studied abroad. With the unification movement several aspects of the language, such as the system of punctuation, came to be regularized (Fujii 1984). That the emergence of a norm for the written language defines various uses of a language is also pointed out by Gerritsen (this volume). In discussing the stabilization of verb final (XV) in Dutch, she demonstrates that the emergence of a norm, i. e., standardization, accelerated the change that had been slowly occurring internally.

Secondly, there was a sentence style called *Oobun-chokuyaku-tai* ‘the style for direct translation from Western languages’, which was quite popular at the beginning of the Meiji period (1896–1912), and which had a great impact on writing style. Throughout the history of Japan, *chokuyaku-tai* ‘the style of direct translation’ has been used as an important means of studying foreign languages. When Chinese was the language

to learn, *kanbun-chokuyaku-tai* ‘the style of direct translation from Chinese’ was created as a method of learning. *Chokuyaku-tai* ‘the style of direct translation’ was, as the name indicates, a style created through a word-for-word translation method in which all the words in the original sentences were first translated into Japanese and then realigned to conform to Japanese word order. This translation method had meticulous rules which indicated how to translate certain words, tenses, and aspects. Subjects were always translated explicitly with a particle, mostly *ga*.

- (38) *kareno shooni-ra ga koishi kareni hanasubeku*
 His children asked him to tell
kare-ra ni hanashi o
 them a story
 ‘*kare no shooni-ra ga hanashi o kare-ra ni hanasu-beku kare ni koishi.*’ (Shibauchi – Takai 1967: 58).

Thirdly, following linguistic theories from the West, many books were written on the grammar of Japanese both by Japanese and non-Japanese. J. J. Hoffman’s *Japanese grammar* (1868), the *Grammar of the Japanese spoken language* (1872) by W. G. Aston, and *Ootsuki bunten* (1897), are only a few examples of these. According to Kasuga (1968: 129), the influence of Western linguistic theories became very strong around 1890. The concern for linguistic analysis of the language also changed the way things were traditionally analyzed. For example, Yamada points out that when it became popular to apply linguistic categories of Western languages in describing the structure of Japanese, *wa* came to be classified as the subject marker instead of as a particle of discourse, and it was argued that the particles that indicate subjects were *ga*, *no*, and *wa* (Yamada 1950: 84–87). After 1873, due to the government effort to incorporate grammar classes into the grade-school curriculum, many grammar books appeared for that purpose. The education system itself followed models from Europe, and as a consequence there were many texts written in direct translation.

The influence of colloquial language, the awareness of subject as a grammatical entity, and the influence of translation styles all seem to have triggered the further development of particles and the complete disappearance of unmarked subjects. Yet another pressure to abandon unmarked subjects seems to have existed internally. That is, by the time the unification took place, other grammatical relations such as object were consistently marked by a particle, and subject was the only category that was inconsistently marked.

In language-contact situations, a complex interplay between internal structures and external influence can cause various changes in the language, including syntactic change. This is well documented in Mithun's study of Iroquoian coordinating constructions and in the discussion of relative clauses in Tok Pisin by Aitchison (both in this volume). Although this study shows a slightly subtler influence of Western languages, it is clear that these have played a role in changes in Japanese subject marking.

8. Summary and conclusion

The disappearance of unmarked subjects in Japanese requires the consideration of both internal and external factors. I have discussed internal factors: the particles *ga* and *wa*, which played a rather peripheral role in Old Japanese, developed so that they came to occupy a central role in the shape of a sentence and discourse; *wa*, gradually but steadily, expanded its original function as a phrase marker, indicating exclamation or contrast to a theme marker that signals the theme of a paragraph and discourse and the importance of characters. The development is extensive yet natural when we consider how broadly notions such as contrast or differentiation can be defined.⁸ The development of *ga* as a subject marker seems to have been slow until the twentieth century. Its change relates to other internal factors such as unclear differentiation between *no* and *ga*, the vagueness in the distinction between NP and VP, the development of other case particles, *wo* and *ni* as conjunctive particles, and the disappearance of the distinction between the attributive form and the sentence-final form of predicates. History suggests that, between neutral description and exhaustive listing, of the two functions of *ga* indicated by Kuno (1973) in present-day Japanese, the latter developed much earlier than the former (exhaustive listing indicates that the referent in the subject position is the only entity that is applicable to the information given in the predicate, as in the sentence, *John is the one who came yesterday*). In *Genji 3* many of the subjects that fit the category of neutral description are indicated by NP- \emptyset .

In order to fully understand the sudden disappearance of unmarked subjects in twentieth-century writings, we have to consider the establishment of a new norm caused by the unification of speech and writing, in turn influenced by contact with Western languages. It seems that the

establishment of a new norm triggered further development of particles, and stabilized their usages.

It is, however, very difficult to point out precisely how the external factors pushed the development of the particles forward. This is due to the scope of the data and the complexity of the interplay between internal and external factors. Although this leaves challenges for the future, I believe that this study shows that it is important to evaluate both internal and external causes for syntactic change.

Abbreviations

ASSERT	Auxiliary of assertion
ASSOC	Associative
DO	Direct object
EMP	Emphasis
GEN	Genitive
HUM	Humble
(HUM)	= Lexical item itself conveys humbleness
LOC	Locative
NEG	Negative
NOM	Nominalizer
OBJ	Object
PASS	Passive
PERF	Perfect
POL	Polite
Q	Quotation
QUES	Question
RES	Respect
(RES)	= Lexical item itself conveys respect
SUBJ	Subject
TOP	Topic

Notes

1. When a subject is followed by a discourse particle, *ga* does not appear after the subject. Thus:
 - a. *John ga kita*
 came
 ‘John came.’

b. *Bill mo kita*
 also came
 ‘Bill came, too.’

2. According to Martin (1975: 59), in present-day Japanese subjects account for 61% of *wa*-marked elements. Furthermore, the subject is focused and thematized rather more often than not – almost 50% of the time.
3. De Wolf (1987: 269) points out that in Old Japanese the initial consonant of the particle *ha* was probably a bilabial fricative (customarily romanized as *F*-).
4. The close association of genitive function and nominative function is not unusual as can be seen in the English example: *John’s coming*.
5. Sansom further states (1928: 232):

It is not of course contended that *no* cannot be used to show a purely possessive relation, but that

(1) the function of *no* is to express a loose relationship, whether attributive or partitive, between two substantives, and so to place the second of these in the principal position in the clause where it occurs; and

(2) the function of *ga* is to establish a close relationship, primarily possessive or dependent, between two substantives, and so to place the first of these in the principal position in the clause where it occurs.

6. The following example from Sansom (1928: 229) concerning the use of *no* will give some clues to the possible development of *no* and *ga* as subject markers in independent clauses.

Shirayuki no kakareru eda ni uguisu no naku
 white snow lie branch warbler sing
 ‘in the branches on which the white snow lies the warbler sings’.

Here the first *no* is the link between subject and predicate of a relative sentence. The second connects *uguisu* ‘warbler’ with *naku* ‘sing’, which is a substantival (attributive) form of a verb, and therefore the last words might be literally translated ‘the singing of the warbler’, but by an extension of meaning the exclamation becomes an assertion, and the passage can be fairly rendered ‘the warbler sings’.

It is also the case that when a verb is preceded by such particles as *zo*, *namu*, *ka*, or *ya* (these indicate various kinds of emphasis), attributive form replaces the conclusive (sentence-final) form.

These phenomena seem to have motivated disappearance of the distinction between the attributive form and the sentence-final form. The remark by Sansom quoted in note 7 also sheds light on this issue.

7. This is apparent when we compare “Modern written language” and “Modern spoken language” at the time when Sansom wrote his book (1928: 341–344). For example, he gives the following example concerning verbs.

In the simple conjugational forms the chief difference is that the colloquial abandons the distinction between attributive and predicative

forms, retaining as a rule only the attributive. Phonetic changes have also taken place. A typical case is that of the verb *otsu* 'fall':

Language of Heian period	Modern written language	Modern spoken language
a. <i>otsu</i>	<i>otsu</i>	...
b. <i>otsuru</i>	<i>otsuru</i>	<i>ochiru</i>
c. <i>ochi</i>	<i>ochi</i>	<i>ochi</i>
d. <i>otsure</i>	<i>otsure</i>	<i>otsire</i>

(Sansom 1928: 342)

(a) indicates the predicative form; (b) the attributive form; (c) the conjunctive form, and (d) the perfect form.

8. For example, the notion of contrast in Clancy – Downing (1987) is quite broad.

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Relative clauses in Tok Pisin: Is there a natural pathway?

Jean Aitchison

1. Introduction: the internal-external debate

“This, then, is the subject which is now for some time to occupy us: an inquiry into the modes of linguistic change, and their causes nearer and remoter” (Whitney 1875 [1979]: 43–44). Language change still occupies us, as it did William Dwight Whitney more than a century ago. The difference between his researches and ours is that we are now able to formulate some of the important questions more precisely. We realise that internal and external factors are both important for understanding change, and we now need to assess how they relate to one another. Attention was explicitly focussed on this topic twenty years ago by Weinreich – Herzog – Labov (1968), as Gerritsen and Stein (this volume) both point out. But the matter is still far from solved, partly because of its complexity.

The internal vs. external debate, which surfaces under various names (e. g., linguistic vs. social causes, necessity vs. chance, innate vs. substratum), is by no means a simple dichotomy into two clear-cut but interacting factors. The term “internal” covers a range from genetically programmed in all languages, down to pattern neatening in one. The term “external” embraces not only borrowed foreign elements, but also influence from another style within the same language. Sometimes, it is unclear whether a factor is internal or external, as Giacalone Ramat (this volume) notes. Even when internal and external factors can be clearly identified, their strength and intermixing are likely to vary. We are therefore faced with many possible scenarios. For the purpose of this paper, which deals with the development of relative clauses in a pidgin/creole, we need at the very least to be aware of the following possibilities, which are set on a gradient running from “strong internal” as in 1, down to “strong external”, as in 4:

1. Strong genetic programming: the human mind is pre-set to cope with certain structures in a particular way. This presetting could either be absolute or might be parametrized (i.e., a particular construction is inevitable in a particular language type).
2. Strong natural tendency: the human mind has a preferred route for dealing with a particular construction in a particular language type, which surfaces in the majority of situations. In other words, we may speak of “unmarked options”.
3. Various natural tendencies: there are several ways in which a particular construction could be instantiated. Those which win out do so for mainly external reasons.
4. Strong external influence: “borrowing” is the route by which most major constructions are imported into a language, and external influences overcome all others.

This paper assesses which of these scenarios is most likely in relation to the development of relative clauses in Tok Pisin, an English-based pidgin/creole spoken in Papua New Guinea.

2. Internal and external factors in pidgins and creoles

A pidgin can be defined as a restricted language system used for communication between people with no common “full” language. A creole can be regarded as a pidgin which has become someone’s first language. In recent years, the mechanisms by which creoles emerge has been at the centre of a controversy over the role of internal versus external factors. Some creolists argue that we are witnessing the effects of an innate bioprogram (e.g., Bickerton 1981, 1984), while others claim that the effect of the substratum languages is all-important (e.g., Keesing 1988). Others still have tried to provide a compromise solution (e.g., Mufwene 1986).

The problem is not yet solved. One reason for its intransigence may be that a number of writers have attempted to produce “across-the-board” solutions, that is, an answer which is valid for all creoles, and all constructions. Ultimately, of course, this is the aim of everyone, to specify broad general principles which underlie human linguistic behaviour, and which reflect properties of the human mind. In the short run, however, we risk flattening out data which, if examined in depth, might provide

clues to the answers we seek, providing we avoid the alternative danger of drowning in disparate data with no principle in sight. In brief, I am suggesting that the intermingling of internal and external factors might vary, depending on the particular construction in question, and the external factors involved. Perhaps a close look at the emergence of one particular construction might lead us to understand the nature of the interplay, and help us to formulate insightful hypotheses about the mechanisms which underlie it.

This therefore is the topic of this paper. It looks at the emergence of relative clauses in Tok Pisin, and examines the extent to which the route(s) taken were inevitable and “natural”, and to what extent they were due to chance external factors. Hopefully, the insights obtained will be applicable to language change in general, since many researchers now believe that changes in pidgins and creoles are no different in kind from those in mature languages (e. g., Woolford 1979: 9: “The claim that creole languages are different in kind from ordinary languages is contradicted by years of empirical work”; cf. Thomason — Kaufman 1988, who propose an overlap, rather than an identity, between pidgins and creoles and normal language shift). Furthermore, there may even be an advantage in looking at change in a pidgin/creole, where literacy is limited: the various interacting factors become increasingly difficult to unravel when formal written styles affect casual spoken ones, as shown by the papers of Gerritsen and Stein (this volume).

3. Relative clauses

Relative clauses (RCs) have been the topic of intensive study in recent years, as researchers have attempted to specify universal constraints (e. g., the “classic” paper by Keenan — Comrie 1977; Comrie 1989) and provide a typology for the various sub-types (e. g., Keenan 1985; Lehmann 1986). The situation is by no means clear-cut: the various types shade into one another, and “true” relative clauses overlap with “pseudo” relative clauses, so that sometimes it is unclear if we are dealing with a relative clause or not (e. g., Mallinson — Blake 1981). Often, the situation is a “chicken and egg” one: we find relative clauses utilizing the same formal devices as clauses which are not relative clauses, and vice versa, and it is not always apparent which way round the borrowing occurred.

Relative clauses are traditionally divided into restrictive and appositive ones:

- (1) *Polar bears who live in zoos become neurotic.*
(Restrictive relative clause: the *who*-clause restricts the neurosis to a subset of polar bears, those who live in zoos.)
- (2) *Polar bears, who like the cold, detest hot sun.*
(Appositive relative clause: the *who*-clause is in apposition to the previous NP, and refers to all polar bears.)

Restrictive relative clauses as in (1) are usually regarded as more central (e.g., Comrie 1989), and will be the type referred to as relative clauses in this paper, even though the distinction between the two types is not always clearcut. The primary function of a relative clause, then, is to specify a subset within a larger set. Relative clauses are favoured when the subset can be described only by a verb phrase or sentence, rather than a participle or adjective, as in the following English examples:

- (3) a. *The polar bears who had acquired a taste for beer became frisky.*
b. **The beer-acquired-taste polar bears became frisky.*
(Relative clause essential.)
- (4) a. *Polar bears who drink tea are unusual.*
b. *Tea-drinking polar bears are unusual.*
(Relative clause optional.)
- (5) a. *?Polar bears who are pink are unlikely to exist.*
b. *Pink polar bears are unlikely to exist.*
(Relative clause unlikely.)

In view of the recurring need to specify subsets involving verb phrases and sentences, it is not surprising that most mature languages have evolved formal means of doing this, and that the same devices tend to recur. Syntactically, the subset is referred to as a “relative clause”, and the larger set as the “head”. Most attempted definitions of relative clauses (which vary in details) combine semantic and syntactic criteria. Below are two typical ones:

1. We consider any syntactic object to be a relative clause if it specifies a set of objects ... in two steps: a larger set is specified, called the *domain* of relativization, and then restricted to some subset of which a certain sentence is true. The domain of relativization is expressed in the surface structure by the head NP, and the restricting sentence by the restricting clause. (Keenan – Comrie 1977: 63–64)

2. A relative construction is a construction consisting of a nominal ... (which may be empty) and a subordinate clause interpreted as attributively modifying the nominal. The nominal is called the head and the subordinate clause the relative clause. The attributive relation between head and relative clause is such that the head is involved in what is stated in the clause. (Lehmann 1986: 664)

It has become increasingly clear that certain language types favour particular relative-clause structures (Lehmann 1986; Comrie 1989), even though many languages utilize more than one structure, especially when "marginal" relatives are considered. In particular, SVO languages usually have relative clauses which follow their heads, whereas in SOV languages the situation is likely to be reversed. This is in line with a general preference for modifiers to follow heads in VO languages, and for the opposite to happen in OV languages, something on which almost everyone agrees, even though the terminology and explanations differ (e. g., Chomsky 1986, talks of "parameter setting", whereas Hawkins 1983, 1988 refers to a "Principle of Cross-Category Harmony").

The formal devices used to signal relative clauses vary. The following are common in SVO languages, in which the notation NP_{rel} is used for the NP in the relative clause which most nearly duplicates the semantic information in the head. English examples (with NP_{rel} as either the subject or object of its clause) are given purely for the sake of illustration, and the resulting sentences are not necessarily well-formed in standard British English:

1. The presence of an overt relative marker, which can be invariable, or may take the form of a variable pronoun. This marker usually replaces NP_{rel}:

- (6) a. *The goat which/that ate the laundry collapsed.*
 b. *The goat which/that Bill bought escaped.*

2. Alteration of the canonical word order, with NP_{rel} being moved closer to the head:

- (7) *The goat which/that Bill bought escaped.*

3. Omission of NP_{rel}:

- (8) a. **Bill bought a goat escaped.*
 b. *The goat Bill bought escaped.*

4. The use of “resumptive pronouns” (anaphoric place markers) especially in cases where the relativization process has reordered the surface structure, splits clauses, or leaves a long gap between the head and NP_{rel}:

- (9) a. *The goat which ate the laundry, it collapsed.*
 b. *The goat Bill bought in the market last week, it escaped.*

These formal devices for signalling relative clauses are in theory independent of one another, though in practice, they are interrelated: for example, the presence of a relative marker might make a resumptive pronoun redundant, and so influence its presence or absence.

The question we need to answer is the following: which (if any) of these devices does a developing SVO language system select, and why?

4. Relative clauses in Tok Pisin

Tok Pisin (Melanesian Pidgin, New Guinea Pidgin) became established in Papua New Guinea in the nineteenth century as a lingua franca particularly in the context of religion and hospitals. It soon developed a level of sophistication which is rare in pidgins, and is usually referred to as an “extended pidgin”. In the past quarter century, there has been extensive intermarriage between people speaking mutually incomprehensible languages, and the children of these unions have grown up speaking Tok Pisin as their first language.

This paper deals with relative clauses which arose in the extended pidgin, and which have become further developed and more fully established in the creole. It takes into account data from three sources:

1. My own data collected in the coastal town of Lae. These consist of recordings of a number of creole speakers, mainly young women aged between 17 and 20 who all knew one another. Tok Pisin was their preferred means of communication with one another, though they all also knew English, and spoke at least one other language (further information on this group is given in Aitchison 1984).
2. Extracts from NBC (National Broadcasting Corporation) radio broadcasts in Tok Pisin (in the main, reports on the National Assembly, where the official language is Tok Pisin) and written material from the Tok Pisin newspaper *Wantok*, especially the correspondence columns.
3. Published scholarly work on Tok Pisin (e.g., Laycock 1970; Mühlhäusler 1985; Sankoff – Brown 1976).

In dealing with Tok Pisin, we cannot expect all incipient relative clauses to be immediately identifiable as RCs in the formal sense. We therefore need to take into consideration not only “formal” relative clauses, i. e., those which can be regarded as having an identifiable relative clause structure, but also “functional” ones, i. e., those which would be translated as relative clauses in English, though they are not overt relative clauses in Tok Pisin. Both formal and functional relative clauses are treated in the account below.

There are a number of partially overlapping ways of expressing relativization in Tok Pisin. All of them involve postposed relative clauses, as one would predict in an SVO system. In the examples below, my own informants are identified by their initials. Other sources are acknowledged as they arise. (In the examples, TRS: Transitive; PRT: particle, referring to an untranslatable “empty” preverbal marker *i*, which was possibly originally a pronoun):

(i) Zero marker. Intonation only signals the RC:

- (10) *dispela man i kam asde em i papa*
 this man PRT come yesterday he PRT father
bilong mi (Mühlhäusler 1985: 416)
 of me
 ‘The man who came yesterday is my father’

(ii) Zero marker. Omission of NP_{rel}:

- (11) *mipela raus-im ol haphap paiawut*
 we throw-away-TRS they piece firewood
i stap long mumu (H)
 PRT remain on underground-oven
 ‘We throw off the bits of firewood which remain on the underground oven’
- (12) *mi save luk-im planti kain piksa i no*
 I accustomed-to see-TRS many kind picture PRT not
gutpela insait long toilet (letter to *Wantok*)
 good inside of toilet
 ‘I customarily see a variety of dirty pictures in the toilet’
- (13) *i gat planti kain kaikai mipela sa*
 PRT have many kind food we accustomed-to
kuk-im (S)
 cook-TRS
 ‘There are lots of kinds of foods which we’re accustomed to cook’

- (14) *em i miks-im sampela kain lip ol*
 he/she/it PRT mix-TRS some kind leaf they
sa kol-im salak ia (Ja)
 accustomed-to call-TRS salak here
 ‘She mixes some kind of a leaf which they call “salak”’

(iii) Zero marker. Topicalization of head, omission of NP_{rel}, resumptive pronoun:

- (15) *ol kaikai mi sa kaikai em planti, em*
 they food I accustomed-to eat it many, it
kaukau, rais (S)
 sweet-potato, rice
 ‘The foods I eat, there are lots of them, there’s sweet-potato, rice ...’

- (16) *namba wan kaikai mi sa laik-im, em*
 number one food I accustomed-to like-TRS, it
kaukau na banana na kumu (S)
 sweet-potato and banana and greens
 ‘The foods I like best are sweet-potato, banana, and greens’

(iv) Personal pronoun as marker:

- (17) *ol man ol wok long hap ask-im ask-im (Ji)*
 they man they work in place ask-TRS ask-TRS
 ‘The men who worked in the area kept asking after me’
- (18) *dispela kain pasin em bilong pik na dok em*
 this kind way it of pig and dog it
ol i no gat tingting bilong ol (letter to Wantok)
 they PRT not have thought of them
 ‘This kind of behaviour is that of pigs and dogs who have no intelligence’
- (19) *Mr. Dibela ask-im ... ol dispela memba ol i no*
 Mr. Dibela ask-TRS ... they this member they PRT not
sapot-im dispela mosin long kirap i go long
 support-TRS this motion to get-up PRT go to
raithansait bilongen (NBC broadcast)
 right-hand-side of him
 ‘Mr. Dibela asked those members who did not support this motion to get up and go to his right’

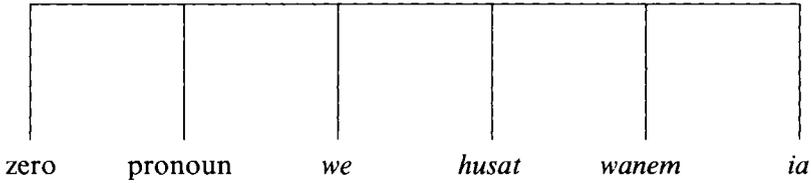
(v) *we* (usually ‘where’) as marker. Sporadic use of resumptive pronoun:

- (20) *ol kaikai we ol i sap-im long hapsait,*
 they food which they PRT peel-TRS on otherside,
em redi nau (L)
 it ready now
 'The vegetables which they are peeling on the other side are now ready'
- (21) *kaikai we mi sa laik-im tru*
 food which I accustomed-to like-TRS truly
longen em banana na pitpit (H)
 of it it banana and pitpit
 'The foods which I really like are banana and pitpit'
- (22) *klostu em laik pait-im dispela*
 almost she want/be-about-to strike-TRS this
sista hia, sista we wok (H)
 sister here, sister who work
 'She was on the point of hitting this nurse, the nurse on duty'
- (23) *bikos kaukau i olsem pikinini we papamama*
 because sweet-potato PRT like child which parents
i lukaut-im taim em i liklik manki yet
 PRT look-after-TRS time he/she/it PRT small boy still
 'Because the sweet-potato plant is like a child whom its parents look after while he is still a small boy'
- (vi) *husat* 'whoever', 'anyone who', 'who' as marker:
- (24) *Radio stesin i help-im planti manmeri husat*
 radio station PRT help-TRS many men-women who
i stap insait long bus tru (feature article, Wantok)
 PRT stay inside of bush true
 'The radio station helps numerous people who live deep in the bush'
- (25) *Mr. Dibela ask-im ol dispela memba husat i*
 Mr. Dibela ask-TRS they this member who PRT
sapot-im mosin long kirap i go long
 support-TRS motion to get-up PRT go to
lefhsansait bilong em (NBC broadcast)
 left-hand-side of him
 'Mr. Dibela asked those members who supported the motion to get up and go to his left'
- (26) *Na husat i kros o husat i laik*
 and whoever PRT angry or whoever PRT want

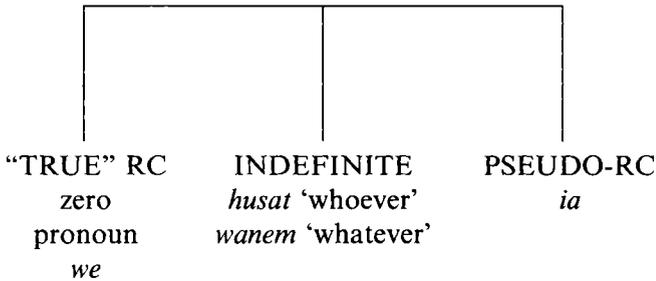
- rait* ... (letter to *Wantok*)
write
'And whoever is angry or whoever wants to write ...'
- (27) *Sapos yu husat i kros orait rait*
if you whoever PRT angry alright/then write
tasol (letter to *Wantok*)
only
'Anyone who is angry about this, please write ...'
- (vii) *wanem* 'whatever' as marker, placed after the head (head-internal relative clause):
- (28) *mipela mas sap-im ol taro na banana o wanem*
we must peel-TRS they taro and banana or whatever
kain kaikai yu laik mumu-im (S)
kind food you want cook-underground-TRS
'We must peel the taro and banana or whatever kind of food
you want to cook underground'
- (29) *mipela ken slip long ten o klok o eleven o klok,*
we can/shall sleep at ten o'clock or eleven o'clock
wanem taim mipela laik longen, mipela go slip (H)
whatever time we want of-it, we go sleep
'We go to bed at ten or eleven o'clock, whatever time we want
to, we go to bed'
- (viii) *ia (ya)* bracketing; *ia* is placed either side of the relative clause:
- (30) *na pik ia ol i kil-im bipo ia*
and pig here they PRT kill-TRS previously here
bai i kamap olsem draipela
FUT PRT come-up as huge
ston (Sankoff – Brown 1976)
stone
'And the pig they killed before would turn into a huge stone'
- (31) *ol man ia ol i kat-im saksak ia i*
they man here they PRT cut-TRS sago here PRT
sanap long em ia (Mühlhäusler 1985: 418)
stand-up by him here
'The men who cut the sago palms stood near him'

At first sight, therefore, the situation is fairly chaotic. There are at least eight partially overlapping relative-clause structures, which sometimes seem to occur in free variation: the same speaker produced sentences

(7), (18), and (25), each of which contain a different type of relative clause; (8) and (14) occurred in the same letter to *Wantok*; and (15) and (21) were adjacent sentences in an NBC broadcast. Even if the “zero marker” types are combined, there is still (apparently) a choice of six structures:



However, this plethora of constructions is not as chaotic as it appears at first sight. A closer inspection suggests that they can be placed into three broad categories:



Let us consider each of these in turn.

4.1. “True” relative clauses

The “basic” relative-clause structures are the zero-marked type on the one hand, and those marked by pronouns or *we* on the other. These turn out to be variants of one another, with the *we*-type being the newest and least common.

The zero-marked and pronominal relative clauses are well-established, and existed prior to Tok Pisin’s development into a creole. In the past, it was considered to be something of a puzzle as to how a pidgin, even

an extended pidgin, had acquired such structures. Recently, however, it has become clear that they are direct calques of an Oceanic Austronesian structure (Keesing 1988).

A notable feature of these Oceanic languages is the obligatory inclusion of a “subject-referencing-pronoun” (SRP) which must precede the verb phrase, as in the following examples from Kwaio, spoken in the North Solomon Islands (in the examples, POSS: possessive; SRP: subject-referencing-pronoun; TRS: transitive suffix):

- (32) *ma'a a-gu ka aga-si-a*
 father POSS-me he [SRP] look-TRS-it
naaboni (Keesing 1988: 75)
 yesterday
 ‘My father saw it yesterday’

If the subject of the sentence is a free pronoun, this can optionally be omitted, but the subject-referencing pronoun cannot:

- (33) (*nau*) *ku aga-si-a boo a-mu*
 (me) I [SRP] look-TRS-it pig POSS-you
naaboni (Keesing 1988: 85)
 yesterday
 ‘I saw your pig yesterday’

Kwaio, and a number of other languages, have adopted an SVO structure. However, even in those languages which have a postposed subject NP, all sentences have a surfacey SVO appearance, because of the preverbal subject-referencing pronoun.

Languages which are basically SVO such as Kwaio show widespread topicalization, with fronting of the topicalized element:

- (34) *boo a-mu ku aga-si-a*
 pig POSS-you I [SRP] look-TRS-it
naaboni (Keesing 1988: 85)
 yesterday
 ‘Your pig I saw it yesterday’

The combination of these two structural factors, subject-referencing pronouns and topicalization, allows the embedding of relative clauses without relative markers:

- (35) *boo a-mu ku aga-si-a naaboni ka*
 pig POSS-you I [SRP] look-TRS-it yesterday it [SRP]

'akwa (Keesing 1988: 86)
 ran away
 'Your pig I saw yesterday ran away'

This surface pattern is exactly paralleled in Solomons Pidgin, a pidgin closely related to Tok Pisin:

(36) *pikipiki bulong iu mi luk-im astade i*
 pig of you I see-TRS yesterday PRT
ranawe (Keesing 1988: 87)
 run-away
 'Your pig I saw yesterday run away'

There is some controversy as to whether the particle *i* in Solomons Pidgin and Tok Pisin is a meaningless preverbal marker (usually called a "predicate marker") or a subject-referencing pronoun (as Keesing maintains). It was undoubtedly originally such a pronoun, an interpretation reinforced by its superficial similarity to the English pronoun *he*, but it is now more usually treated as having been reanalysed and attached to the verb.

The Kwaio and Solomons Pidgin relative clauses quoted above have an exact Tok Pisin equivalent:

(37) *pikipik bilong yu mi luk-im asde i ranawe*
 pig of you I see-TRS yesterday PRT run-away
 'Your pig I saw yesterday ran away'

Parallel structures to this are found in the Tok Pisin data reported earlier in this paper:

(38) (= 16) *namba wan kaikai mi sa*
 number one food I accustomed-to
laik-im, em kaukau na banana na kumu (S)
 like-TRS, it sweet-potato and banana and greens
 'The foods I like best are sweet-potato, banana, and greens'

(39) (= 14) *em i miks-im sampela kain lip ol*
 he/she/it PRT mix-TRS some kind leaf they
sa kolim salak ia (Ja)
 accustomed-to call-TRS salak here
 'She mixes up some kind of a leaf which they call "salak"'

A surface Oceanic pattern, then, happened to coincide with an English one, a coincidence which easily accounts for the existence of this type of relative clause in Tok Pisin.

A similar situation accounts for the relative clauses introduced by pronouns. These clauses are calques of Oceanic ones, and the pronouns are the equivalent of subject-referencing ones. However, the pronouns can also be directly translated by an English relativizer. The Oceanic pattern is seen in the following Kwaio example:

- (40) *rua wane gala nigi naaboni ta-gala*
 two man they 2 [SRP] arrive yesterday FUT-they 2 [SRP]
suga-a (Keesing 1988: 146).
 buy-it
 'The two men who came yesterday will buy it'

A parallel structure is found in Tok Pisin example:

- (41) (= 17) *ol man ol wok long hap askim askim* (Ji)
 they man they work in place ask ask
 'The men who worked in the area kept asking after me'

This Oceanic pattern is also calqued in some zero-marked relative clauses, where the particle *i* (originally a subject-referencing pronoun, now a predicate marker) represents the pronoun:

- (42) (= 11) *mipela rausim ol haphap paiawut i*
 we throw-away they piece firewood PRT
stap long mumu (H)
 remain on underground-oven
 'We throw off the bits of firewood which remain on the underground oven'

To an English speaker, there is some difference between a relative clause which uses a personal pronoun as a means of embedding, as in (41), and one with no marker, as in (42). However, they reflect the same Oceanic construction, the use of a subject-referencing pronoun to embed sentence structures. As Keesing notes: "Such sentence structures, using SRPs to embed clauses, lie at the very heart of Oceanic syntax" (1988: 146). The reason for the apparent difference between the Tok Pisin types is that subject-referencing pronouns have been calqued in some cases as pronouns, and in others have been transmuted into the so-called "predicate marker". But if both the pronoun and the predicate marker are regarded as reflecting subject-referencing pronouns then both methods of forming relatives are basically the same.

This same pattern is seen in relative clauses introduced by *we*. The basic word order is the same as that in the relative clauses discussed

above, with *we* being inserted as a marker in the zero-marked clauses, and replacing the pronoun in those introduced by pronouns. *We*-marked relative clauses are found sporadically, and in various areas. There are intermittent signs of them in Solomons Pidgin from around the turn of the century (Keesing 1988: 150, 158), where *we* is now so common as to be the norm. However, most researchers regard them as a relatively late development in Tok Pisin (e. g., Mühlhäusler 1986).

We normally means 'where' (occasionally also 'when'). Relative clauses introduced by *we* sometimes express location, suggesting that this was the origin of the construction, especially as a number of examples are ambiguous as to whether they involve a locative or relative pronoun "proper":

- (43) *em haus sik we olgeta manmeri*
 it house sick where/which all men-women
sa go longen (H)
 accustomed-to go to-it
 'It's the hospital which everybody goes to', 'It's the hospital
 where everybody goes'
- (44) *mi dren-im aut wata we mi kuk-im*
 I drain-TRS out water where/which I cook-TRS
banana na pitpit longen (H)
 banana and pitpit in-it
 'I drain out the water in which I cooked the banana and pitpit'

The use of a word meaning 'where' to form relative clauses seems to be a universal tendency waiting in the wings, as it were. It is also found (for example) in Germanic (e. g., von Bremen 1987 notes it in Middle English). The question to ask is: "Why did it creep into Tok Pisin, when speakers seemed to be managing reasonably well without it, with their relative clauses based on Oceanic patterns?"

The influence of English *wh*-relatives is one obvious contributory factor, though had this innovation been entirely English-based, one might have expected a decrease in the resumptive pronouns which tend to accompany it. At least two other factors seem to be at work.

One is the observation that creole speakers who do not speak an Oceanic language sometimes lose track of what they are saying without markers. One seventeen-year-old who claimed not to be able to speak the language of either of her parents properly, produced relative clauses with extra repetitions:

- (45) *ol kaikai mipela kaikai long de, em mipela*
 they food we eat in day, it we
sa kaikai taro, banana (Ja)
 accustomed-to eat taro, banana
 ‘The foods we eat in a day, those we eat are taro and banana’
- (46) *kaikai mi sa laik-im tru em ... mi*
 food I accustomed-to like-TRS truly it ... I,
sa laik-im kaikai taro na banana (Ja)
 accustomed-to like-TRS eat taro and banana
 ‘The foods I really like, those ... I like to eat taro and banana’

This suggests that in the absence of a strong substratum pattern, speakers may need relative-clause markers in order to keep tabs on the structure they are using, and so have begun to generalize an already available locative relative-clause marker.

Another related factor may be an intrinsic need for creoles in particular (and perhaps languages in general) to acquire markers, so as to make constructions transparent, sometimes over-transparent: once a marker creeps in, and begins to be used redundantly, it tends to proliferate. For example, creolized Tok Pisin is in the process of acquiring a categorical plural marker, which is already obligatory with humans. However, humans are often marked not only by *ol* (the standard plural prefix), but also by English *-s*, even when a numeral is involved, so we find utterances such as *ol siks sistas* ‘six sisters’ (Aitchison 1990: 18). A need to mark relative clauses overtly may be part of a similar tendency towards transparency. The use of such a marker and a resumptive pronoun may be a typical creole type of redundancy, parallel to the double marking found in plurals. In the long run, one would predict a fading-out of such redundancy, perhaps resulting in the loss of resumptive pronouns.

In this section, then, the “basic” Tok Pisin relative clauses have been considered. The most common types – zero marked relative clauses and relative clauses introduced by pronouns turn out to be a direct calque of existing Oceanic constructions. Relative clauses marked by *we* are a later innovation, but are based on the same pattern.

4.2. Indefinite relative clauses

husat and *wanem* are used primarily as indefinites, rather than as straight relative pronouns.

husat 'whoever', 'anyone who', is particularly common as a formulaic ending in letters to the Tok Pisin newspaper *Wantok*, appealing to any readers who feel strongly about a matter to write to the editor:

- (47) (= 26) *Na husat i kros o husat i laik*
 and whoever PRT angry or whoever PRT want
rait ... (letter to Wantok)
 write
 'And whoever is angry or whoever wants to write ...'

It occurs as a straight relativizer parallel to English *who* mainly in formal, somewhat anglicized, Tok Pisin, as in the NBC account of parliamentary proceedings:

- (48) (= 25) *Mr. Dibela ask-im ol dispela memba husat*
 Mr. Dibela ask-TRS they this member who
i sapot-im mosin long kirap i go long
 PRT support-TRS motion to get-up PRT go to
lefhsansait bilong em (NBC broadcast)
 left-hand-side of him
 'Mr. Dibela asked those members who supported the motion to get up and go to his left'

wanem 'whatever' is found primarily in head-internal clauses (i. e., with the head following the relativizer), in phrases such as *wanem taim* 'whatever time' and *wanem kain* 'whatever kind'.

Neither *husat* nor *wanem* show any real signs of generalization among ordinary speakers, in spite of the attempts by journalists to spread *husat* in formal speech.

4.3. Pseudo-relative clauses

The pseudo-relative in the data is the much publicized *ia*-bracketing type (Sankoff – Brown 1976). There is no doubt that many of the *ia*-bracketed clauses would be translated by relative clauses in English, so that they function as relative clauses. But it is clear also that *ia* is a widely-used conversational particle, which can bracket any clause in parenthesis (e. g., clauses of the type "I'm talking about Peter here, the title chap here, ..."). It cannot therefore be regarded as a formal relative-clause structure (Keesing 1988).

5. Discussion

Tok Pisin, then, has at first glance at least eight different relative-clause structures. However, as has been shown, these eight can be grouped into three main categories. All three “branches” of relative-clause structures could (potentially) have taken over as the major type in Tok Pisin, since they all three fit in with the types of relative clauses found in SVO languages. In practice, *ia*-type structures have faded out of the competition: *ia* is used so widely in conversation, it was perhaps never a serious relative-clause contender. *Husat* and *wanem* have remained specialized as indefinites, ‘whoever’, ‘whatever’, and journalistic attempts to widen them out show no real signs of succeeding. The relative clauses which have survived and developed are those which happen to mimic the surface structure of both Oceanic languages and English, a fortuitous convergence, since underlyingly the structures are rather different. An overt marker is being added to this convergent structure, partly because of a need for transparent constructions. The firming-up of structural details of the “winning” construction is still underway, and may not be complete within the current generation.

Overall, Tok Pisin relative clauses suggest that the following scenario may be a typical one for a developing construction:

1. There are various incipient constructions, but these do not cover a boundless range. They are held in check by what is possible within a particular language type.
2. Some of the incipient constructions get firmed up, and start to dominate the others. The “losers” fall by the wayside.
3. The “losers” fade out partly by becoming specialized to particular minor usages, partly by being associated with other wider functions.
4. The “winners” are likely to be constructions where the base and the substratum languages converge in their surface structures.
5. The firming-up and generalization of the structural details is a fairly slow process, which may take several generations to complete.
6. There is a tendency for markers to creep in, so as to make the new construction truly transparent.

In the case of Tok Pisin relative clauses, the surface convergence of Oceanic and English relative clauses is remarkable. In situations where similarities are not so strong, one would perhaps expect a longer interim period in which the various incipient constructions competed. However, the overall situation is fairly clear: in the early stages of development of

a construction, the possibilities seem octopus-like, though on closer examination they all fall within certain bounds. The octopus tentacles gradually get narrowed down, and some of the tentacles strangle out the others. Tendencies which fit in with natural constraints, and with the surface structure of the base and substratum languages, are likely to win out. In short, a number of converging factors lead the language increasingly down one particular route. Both internal and external factors cooperate, and must be considered jointly: constructions “take off” when these coincide.

However, one final question needs to be resolved. Is the framework outlined above unique to pidgins and creoles? Since they lack certain major constructions, they might be expected to fill their gaps in numerous ad-hoc ways. Or is the skeleton plan relevant to language change as a whole? Judging by the papers in this volume, there seems to be considerable overlap between the situation described here and the changes found in mature languages. The main similarities are the following:

1. The development of seemingly basic constructions is not restricted to pidgins and creoles. Mithun (this volume) has demonstrated that coordinating conjunctions have arisen relatively recently in the Iroquoian language family.
2. Fluctuation among two or more coexisting options seems to be a normal prerequisite for language change, and the fight for power between them may last some time. Change occurs when one option acquires a dominant role. This process is seen in the papers (for example) by Denison, Ebert, and Fujii (this volume).
3. The importance of convergence of internal and external factors is demonstrated in the paper by Fischer (this volume). She has shown how an internally motivated change was accelerated and promoted by its convergence with an external factor.

The major ingredients of the Tok Pisin relative-clause development are therefore found in the course of “ordinary” language change, so the scenario outlined in this paper is likely to be widely applicable: that is, a sprouting out of options which are then narrowed down, with external factors playing a major role in the selection.

6. Conclusion

This paper started off by noting that a simple distinction between internal and external factors was naive, and that at the very least we need to distinguish between four possibilities:

1. strong genetic programming;
2. strong natural tendency;
3. various natural tendencies;
4. strong external influence.

This paper suggests that a combination of 2 and 3 may be a common compromise. A strong natural tendency lays down the framework. Within these, various natural tendencies can exist, and many of these crop up as incipient constructions. However, external factors influence which of these become dominant.

In the case considered, that of the development of relative clauses in Tok Pisin, a variety of incipient relative-clause constructions occur, all of which fit in with structures typically found in SVO languages. Some of these are becoming specialized into specific, minor relative-clause usages. Others have so many alternative functions that they are not regarded as “true” relatives. The “winners” are gradually dominating the others because of convergence: they reflect the structure of the substratum Oceanic languages, and they fit in with the structure of English. The critical characteristics of this development seem to be applicable to change in general, judging by the papers in this volume.

Finally, perhaps the overall message is that when dealing with syntactic change sudden and simple solutions are unlikely. Both internal and external factors must be considered. When convergence between natural tendencies and external factors occurs, then a language is likely to get nudged down a particular route. However, nothing in language happens instantaneously, and even in ideal convergent situations, there is likely to be a long period of fluctuation before a construction finally gets established.

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The pairing of structure and function in syntactic development

Anna Giacalone Ramat

1. Functional explanations

1.1. Linguistic tradition has considered “internal” factors to be the really linguistic ones (Martinet 1955), while “external” factors have been taken to be extralinguistic, socially determined, and more superficial factors. The distinction is not, however, always clear.

Many internal principles commonly referred to in linguistic research are based on cognitive operations such as ease of perception and production: the principles of Dressler’s Natural Morphology or Haiman’s Natural Syntax are of this kind. These principles are part of the constraints imposed on natural languages by the way the human mind and perception mechanisms function. Thus they are internal, but extralinguistic factors: their effect is to favour or disfavour conceivable properties of linguistic structure (Dressler 1987: 11). Another source for internal factors is represented by universals of human communication, such as Theme/Rheme articulation.

In this paper I shall consider the extralinguistic internal basis of linguistic structures, i. e., universal linguistic preferences or tendencies, in their relationships with extralinguistic social factors. I want to argue that diachronic change in syntax is commonly motivated by functional considerations (iconicity principles, etc.) which, however, can conflict with, or be disturbed by, extralinguistic social factors, such as language contact or speakers’ attitudes.

1.2. Functional explanations have for a long time been present in the history of linguistics. They were part of the theoretical equipment of the Prague School and have been widely used in the current practice of historical linguistics. Criticism of several kinds has, however, been directed at them, focusing in particular on the shallowness and lack of explanatory power of the principles involved. R. Lass (1980) has underlined the non-

predictivity and invulnerability of functional explanations. As regards the first criterion, one cannot predict how and when a certain change will take place, even if facilitating circumstances are present. As regards the second criterion, functional explanations are not falsified by cases of non-implementation or by counter-examples, because they are based on tendencies rather than on absolute rules. Following the principles of functionalism I shall assume that predictive power in the sense of physics or philosophy of science is simply impossible in a theory of linguistic change (see also Samuels 1987) because languages live and develop in time. They are cultural phenomena which are exposed to the influence of external historical factors.

Functional explanations have recently been formulated in a formal theory by Dik (1986), who has given a principled account for the lack of predictive power they show. Dik (1986: 18) states that “there is no single optimal solution for grammatical organization”. He argues, convincingly, that there is competition between different requirements and constraints imposed on natural languages. There is rather a set of possible solutions which define a “solution space”.

Dressler (1987) and other exponents of Natural Morphology also recognize the principle of relative autonomy of language components such as phonology, morphology, syntax, each with its own naturalness principles. Both conflicts in naturalness and multiplicity of solutions are the necessary consequence of the fact that each component follows its own principles. Language improvement in one component may result in solutions which in other components do not conform to the principles of naturalness (see also Vennemann 1989).

The set of possible options which a language can take is not, however, very large and is partially predictable on the basis of internal factors and functional principles, in accordance with the particular language type. To take just one example, if a language distinguishes plural and dual, it has the possibility in the case of change of dropping the dual (this would be the most frequent, unmarked solution, as Latin and Greek show) or of further complicating the system by introducing a trial.

As Aitchison (1987: 19) states, “a really interesting task facing historical linguistics may be to find out the circumstances under which particular tendencies are likely to be implemented”.

1.3. At this point an important question arises: are naturalness principles such as isomorphism, iconicity, and transparency valid for all languages or are they, rather, idiolinguistic, namely relative concepts to be defined

in relation to the linguistic structures under examination and by means of different criteria? One answer, relating to the field of flexional morphology, has come from Wurzel (1987) who maintains that each language has its own "system-defining structural properties" which make up a "system-dependent naturalness". These properties can, in certain instances, conflict with "system-independent naturalness principles" which refer to biologically determined preferences of the human brain such as uniformity of codification and iconicity of codification (Mayerthaler 1987; Dressler 1987).

Put in somewhat different terms, I think that in order to predominate a construction has to fit in with the general typological structure of that language, the fact that it is, for instance, an SVO or an SOV language.

Discussing the functioning of perhaps the most widely known of such natural principles, namely the isomorphism principle (Anttila 1989; Haiman 1985, etc.), S. Dik (1986: 37) states that "form-meaning relations which conform to the one form—one meaning correlation will be favoured, and those which do not conform to this correlation will be disfavoured. By 'disfavoured' I mean: avoided where possible, and preferably eliminated where they arise." Isomorphism does not favour relations 1) where one form is associated with more than one meaning (examples are paradigmatic homonymy and fused expressions of two or more distinct semantic/grammatical units of meaning), 2) where one meaning is associated with two or more distinct forms (examples are synonymy and allomorphy on the paradigmatic level and idiomatic expressions at the syntagmatic level). Hence relations where a meaning has no corresponding form at the surface level (zero morphemes) or vice-versa where a form has no corresponding meaning (empty morphemes) are equally disfavoured.

In the literature on historical linguistics many examples are found of the processes mentioned above (see also Lass 1980). In Giacalone Ramat (1989 a) I have discussed cases which conform to the principle of isomorphism along with cases which do not conform but are, all the same, tolerated by languages.

1.4. In his (1986) contribution S. Dik also considers the role of external social factors in linguistic change. He reaches the conclusion that such factors, to be broadly understood as the socio-cultural circumstances in which we speak, may favour the introduction of more complex, marked, unnatural forms. If we accept this view, we come to an interesting difference between internal factors, which are thought to privilege un-

marked, simpler, natural changes and external factors which are considered to be responsible for complications in the system.¹

Some further remarks are, however, in order.

All changes in language involve some kind of social motivation because they arise in the gradually spreading choice of one of the optional variants in the linguistic community. It is true, however, that changes where such considerations as prestige and stigmatization are involved, e. g., expressions which serve to convey politeness, deference, and social distance (Dik 1986; 43 ff.) easily run counter to the tendency toward simplicity or transparency: politeness is usually coded in more elaborate linguistic expressions than less polite forms of address.

With regard to the different effects of internal and external factors I am not implying that there is always a conflict between natural tendencies and socially determined changes. Even if social circumstances impose restrictions on language that may favour marked changes, this markedness is not independent of the workings of natural tendencies. It is plausible that the range of variants from among which a social group is likely to make a choice will follow a naturalness scale, though from a linguistic point of view this is an arbitrary choice.

To conclude this section, external factors seem to operate in an irrational way, introducing irregularity and inconsistency, while internal factors strive toward regularity and functional economy in changes. Harris (1982), following Itkonen (1981), has proposed considering these systematizing and ordering tendencies the manifestation of an “unconscious rationality”, a general tendency of human beings toward the coherent and rational organization of linguistic data as well as of the data of social experience. This would be a language-independent principle endowed with true explanatory power.

Much of what has been said holds for language change at all levels: syntactic change is not different from phonological or morphological change as far as explanation principles are concerned, although the evaluation of the factors involved may present specific problems, as I will try to show in the following pages.

2. The case of language death

2.1. The theoretical framework I have briefly sketched is, in my opinion, an appropriate tool when investigating several aspects of language change. I believe that real progress toward a theory of linguistic change can be

reached by studying what possible conflicts can arise in languages as the result of external factors and competing tendencies in different parameters. In addition we need to study what kinds of solutions are found. And finally we should be aware that suggesting an external explanation, either alone or in conjunction with an internal motivation, requires the establishment of past or present contact and the identification of how the innovated structures in the recipient language have been reinterpreted and generalized as a result of interference (Thomason – Kaufman 1988: 63).

In the following sections I want to investigate some cases of syntactic changes which illustrate these theoretical positions. I have chosen situations where the impact of foreign contact and social factors can be easily predicted, namely language death in a German-speaking community in Northern Italy and language change in modern spoken Italian.

2.2. Several phenomena which accompany the gradual death of a language have attracted the attention of linguists. Language decay typically occurs in multilingual communities with changing socio-economic conditions, where a dominant language takes over and the recessive language gradually loses speakers and occasions when it is used (Gal 1979; Dorian 1981; Dressler 1988, etc.).

Massive lexical loans from the dominant language (Dressler – Wodak-Leodolter 1977), radical simplification in inflectional morphology (see, e. g., Dorian 1981 for reduction of plural allomorphs in the Gaelic of Scotland) and generalization of periphrastic forms in the verb system (see Giacalone Ramat 1989 b for such a case in the Walser dialects in Italy) are among the phenomena repeatedly observed in different areas.

2.3. Having sketched the broad context of language-decay phenomena, I want to discuss some changes taking place in the German spoken by Walser communities in north-west Italy. In these communities, located in the southern valleys of the Monte Rosa massif (Aoste Valley and Piedmont), the German language has been preserved for centuries due to sustained contact with Switzerland, but is now being replaced by Italian (Giacalone Ramat 1979, 1989 b).

One of the major word-order characteristics of German, both of the standard language and of the dialects, is the verbal brace (*verbale Klammer*) in main sentences, whereby the finite verb takes the second position while all the non-finite verb forms come in final position, embracing verb complements and adverbials:

- (1) *Peter hat vorhin den Ball ins
 Peter has just now the ball into the
 Tor geworfen* (Heidolph – Flämig – Motsch 1984)
 goal thrown
 ‘Peter threw the ball into the goal just now.’

If we examine the word order in the Walser dialects as they are spoken today (see particularly Giacalone Ramat 1986 for Gressoney and Formazza, Bauen 1978 for Rimella) we observe a strong tendency to place the finite and non-finite verb forms strictly adjacent to each other and consequently to move verb complements and adverbials rightward to the end of the sentence.²

- (2) *der wurum is kangud under e štäi* (Bauen 1978: 73)
 the snake is gone under a stone
 ‘The snake has gone under a stone.’
- (3) *de pappa òn d mamma hein gmacht ds chriz*
 the father and the mother have made the cross
dem chénn
 to the child
 ‘The father and mother made a cross for the child.’

This strongly recalls the word-order patterns in Romance languages, and indeed influence from the neighbouring Italian dialects and Italian language has been suggested (Bauen 1978).

The situation is, however, more complex, and external factors are likely to represent only one side of the coin. As is often the case, syntactic change seems to be the result of the interplay between contact and internal elaboration.

Indeed, the rightward movement of nominal and adverbial elements from within the brace (“exbraciation”) is a stylistically and pragmatically governed phenomenon which occurs in spoken German, including the dialects (*Duden Grammatik* § 1217 ff.; Braun 1987). More generally, rightward-movement rules are commonly found in languages with an OV order and represent the usual path of development along which OV order may be replaced by VO order (Aitchison 1987; see also Wanner 1987 for the case of Latin).

Rightward-movement rules in the German dialects examined here give rise to more consistent SVO patterns because they allow a strict unity inside the verb complex, with all nominal and adverbial complements following the verb. Bilingual speakers may have transferred a Romance

pattern to their German dialect, but this transposition, assuming it really has occurred, was not an *ex nihilo* creation, but strengthened and extended existing pragmatic options. That there is no straightforward or blind reproduction of Romance models is confirmed by the position of pronominal objects that cannot be moved to the right of the non-finite verb, but which, on the contrary, remain inside the brace construction, preserving the older German order. This order differs from the Romance pattern where the clitic pronoun is preposed to the whole verb complex:

- (4) Gressoney *hännene* *gsé*
 have-I-him seen
 Italian *l'ho* *visto*
 him have-1sg seen
 'I have seen him.'

It is to be noted that a partial retention of the traditional brace construction occurs also with negation and with inverted subject:

- (5) *wenn sibber ganget dörch d wäga, géeld*
 when are-we gone through the paths, money
en der buschò heiber nit khät fer z goa
 in the pocket have-we not had for to go
em wertschhus
 to the inn
 'When we went along the paths, we had no money in our
 pockets to go to the inn.'

Hence the brace construction has not been totally replaced in the South Walser dialects. Presumably there is a scale of probabilities in the actuation of change, with particular categories, such as NEG-markers, being especially resistant to being moved outside the brace.

To return to the sociolinguistic dimension of such developments, it should be noted that the change gradually spreads through the linguistic community showing a correlation with age, young speakers being more inclined than older ones to avoid using the brace construction.

Finally a psycholinguistic remark: discontinuous constituents like the brace construction are highly marked, difficult to acquire, and easily abandoned. The notion of conspiracy (Lass 1980) between internal and external factors may in fact account for the disappearance of the brace.

2.4. Brief mention needs to be made of a related change (see Vennemann 1984 on the relationship between verb-late syntax and clausal brace in

German) concerning the assimilation of subordinate clauses to main clauses. The familiar pattern for subordinate clauses in Swiss dialects allows two alternatives for final positioning of the verb complex, one with $V_{\text{non-fin}} + V_{\text{fin}}$ (similar to Standard German) and another with $V_{\text{fin}} + V_{\text{non-fin}}$:

- (6) *das er es hus het ghouft* / *das er het*
 that he a house has bought that he has
es hus ghouft
 a house bought
 'that he has bought a house' (Hodler 1969: 691)

Both alternatives were present in the Walser area, but are now being abandoned in favour of a pattern similar to Romance languages where the verb, or the verb complex, immediately follow the subject or the subordinating conjunctions (in case the pronominal subject is postposed, as in 7):

- (7) Rimella:
ix he trugxt melx wän henex hebed
 I have drunk milk when have-I had
der turšt (Bauen 1978: 80)
 the thirst
 'I drank milk when I was thirsty.'
- (8) *òn doa éscht gsid eswas Chréschtésch wip*
 and there is been a (certain) Christopher's wife
woa hät khät en par chénn
 that has had a pair children
 'and there was a woman, wife of a certain Christopher, who had two children'

Another major syntactic feature of German, namely the difference in constituent order between the main and the subordinate clause, is decaying. Here too I am concerned with the role of Romance languages as the external causation in this process: I think that a persuasive explanation must consider the typological drift of Germanic languages as a leading factor in this process (Giacalone Ramat 1986). The tendency of South Walser dialects to become an SVO language is not an isolated phenomenon. Other Germanic languages (English, Scandinavian languages) have undergone this process, the mechanism of brace reduction probably being similar (Stockwell 1977; Gerritsen 1984; Vennemann 1984). Thus the

possible interference of Romance order coincides with an internal tendency of the German dialect.

2.5. Another interesting case of change in progress from the same area is represented by the postposition of the pronominal subject (cf. 5, 7, 9, etc.) and its reanalysis as a verb ending. As in the case discussed above, both internal and external factors are at work. The process of change can be reconstructed as follows:

a) Generalization of postposed subject pronouns: first of all it should be stated that postposition of pronominal subjects occurs regularly in German in interrogative and in imperative sentences (1st pl., 3rd pl.). But what I am dealing with here is its occurrence in main declarative sentences with no fronted constituents in first position. In such cases, subject inversion would not be expected³ in German, but it is widely attested in the Walser area for speakers of all ages (see also Bauen 1978 for Rimella). Virtually none of the younger speakers use preposed pronouns:

- (9) *tieber schribe e bréf*
do-we write a letter
'We are writing a letter.'

b) Another ongoing change observable in younger people, but also in non-fluent or inaccurate adults is the omission of pronominal subjects.

- (10) *òn din pappa was tuet? macht de poschttreger*
and your father what does? does the postman
'And what does your father do? He's a postman.'

Although sentences like (10) are possible in other German dialects (Hodler 1979) and also in colloquial German, since a topical subject can easily be omitted, their incidence is very high in the contact area we are dealing with, where bilingual speakers generally now have a more developed Italian than German competence. One example from Rimella:

- (11) *pi šid ens bät tswen taga* (Bauen 1978: 71)
(I) am been in bed two days
'I have been in bed for two days.'

The surface structure of Italian, which does not express the pronominal subject in non-emphatic sentences, has probably favoured this tendency and has opened the possibility for a change in parameter setting in the grammar of Walser dialects. Stated in terms of Generative Grammar (Chomsky 1986) the language would be shifting from the non-pro-drop

option to the pro-drop option, a change ultimately triggered by the external influence.⁴

It is interesting to note that according to Bayer (1983–1984) Bavarian, too, is partially a pro-drop language: the following example is grammatical:

- (12) *Kummt noch Minga, dann muasst me b'suacha*
 come (2 sg.) to Munich, then must (2 sg.) me visit
 'If you come to Munich, then you must visit me.'

Bayer, however, considers this a marginal variation and maintains that on the whole Bavarian conforms to the general syntactic pattern of German.

c) At this point a further development in the Walser dialects is likely to have taken place: if subject pronouns are no longer felt as compulsory, a reanalysis of the postposed subjects as a verb ending becomes possible.

It is known that reanalysis is a faulty processing of linguistic data whose occurrence is not explicit but must be inferred from indirect clues. Redundant forms like:

- (13) *wier tieber goa*
 we go-we go
 'We go.'

seem to confirm that the enclitic pronoun (*-ber* < *mir* 'wir, we') has been interpreted as a verb ending.⁵ Cases where an atonic pronoun attached to the verb may co-occur with a nominal subject seem to point in the same direction:

- (14) *Peter hätter angfanget wéercho*
 Peter has-he begun to work
 'Peter has begun to work.'
- (15) *ds gròschte tuets*
 the eldest (of the speaker's sisters) does-it (she)
wéercho doa em bar von "i ghiacciai del Lys"
 work there in the bar "i ghiacciai del Lys"
 'The eldest works in the bar ...?'
- (16) *jeza chents Bruno*
 now comes-it (he) Bruno⁶
 'Now Bruno is coming.'

To recapitulate the changes I have dealt with: 1) under Italian influence, the Walser dialects are acquiring an alternative main-constituent order (cf. examples 2, 3, 7, 8); 2) postposed clitic subjects tend to be first generalized and then reinterpreted as verb endings. These changes may be considered instances of grammaticalization: a pronoun which was formerly a free morpheme is first reduced to a clitic and undergoes phonetic reduction and finally ends up as an inflection.⁷ The morphologization cycle is not completed in Walser dialects because tonic preposed pronouns and atonic postposed pronouns are still in complementary distribution, at least in the speech of older speakers, even though the second option is predominant. As far as I am able to establish, this alternation, formerly syntactically motivated, cannot, at the present stage, be reduced to any syntactic or pragmatic rule: it seems to be a matter of idiosyncratic variation correlated with age.

Indeed, major changes are under way in the South Walser area where German dialects are gradually decaying under the pressure of Italian. The superficial and not yet completed changes may have important consequences for the typology of the language. They allow for verb-initial declarative sentences (not always pragmatically motivated) and ultimately for the loosening of the verb-second constraint, which is a typical feature of German. I hope to have shown that for some changes a contribution from outside cannot be excluded, but an internal pathway has channelled the realization of change:⁸ syntactic change is thus the result of a combination of both internal factors and external factors.

2.6. To summarize, syntactic borrowing can be triggered by the external influence of bilingualism in the community; besides this, the speaker's attitudes toward the traditional German language and toward the dominant, more prestigious, Italian language play a role in introducing a new pattern.

It has been often claimed that external influences are more frequent in phonology and the lexicon than in syntax (see, however, Thomason – Kaufman 1988: 118). Nevertheless, the evidence from the cases discussed above points to a fairly wide extension of syntactic borrowing. As Gerritsen and Stein (this volume) state, although we know less about syntactic change, reanalysis caused by syntactic borrowing is in no way exceptional.

Finally I want to emphasize the role of imperfect learning of the decaying language in contact-induced syntactic change: this social factor is likely to be among the major determinants of structural interference.

The importance of the imperfect learning theory in the pidginization process may be recalled in this respect (Appel – Muysken 1987; Thomason – Kaufman 1988). In the Walser speech communities, among the various phenomena which usually accompany language shift it seems to me worthwhile to focus on the lack of family control on recessive language acquisition by the young generation. Parents consider the traditional language worthless for social improvement and abandon its transmission. This attitude produces a relaxation of sociolinguistic and linguistic norms (Dressler 1988) and a free implementation of changes in structure and function.

3. Syntactic change in the social setting

3.1. In what follows, the focus of my investigation will be on the divergence between spoken Standard Italian and other varieties of Italian: in particular I will look for internal and external constraints on the variation which can be observed.

I shall deal first with some changes taking place in a variety of Italian usually called “italiano popolare”. This may be considered a sociolect spoken by non-educated dialect-speaking people (for further information see Cortelazzo 1972 and Berruto 1987). Many of these changes may ultimately be subsumed under the general category of tendencies based on naturalness principles. However, it is important in our approach to show that these principles do not operate independently of the social settings in which the changes occur.

Many features of “italiano popolare” can be described as instances of simplification with respect to more elaborate morphosyntactic structures of Standard Italian. This is the case in reductions of the personal pronoun system (Berretta 1985). Some reductions, however, are not limited to “italiano popolare”, but show convergence with the standard variety. Regularizations of paradigms and avoidance of redundancy represent a simplification of grammar which is indeed widely accepted in spoken Italian. One example is the conflict between the subject pronouns *egli/esso/lui* ‘he’, *ella/essa/lei* ‘she’ that has been resolved in spoken Italian in favour of *lui/lei*.

But in the case of oblique pronouns the interconnection of registers, socially-marked varieties, and stylistic choices is even more complex. Oblique pronouns have the following distribution in Standard Italian,

which is, however, respected only in written language and in formal speech:

masc. sg.	<i>gli</i>	fem. sg.	<i>le</i>
masc./fem. pl.	<i>loro</i>		

In spoken varieties the form *gli* is ousting *loro*, while an analogous tendency for *gli* to substitute *le* is more stigmatized.

Finally, in “italiano popolare” there is a form *ci*, originally a locative adverb, which is generalized for all oblique pronouns. This use is widely recognized as a characteristic feature of “italiano popolare” and is excluded from the Standard language:

- (17) *io ci (= le, gli, loro) ho detto*
 I to her, him, them have said
 ‘I said to [her, him, them] ...’

One might ask whether these changes are induced by strict and continuous contact with Italian dialects. Most dialects have a simpler pronoun system and use the same form for a locative adverb and an oblique pronoun (Rohlf's 1968: § 457 ff.). Considering the large number of bilingual speakers it is conceivable that dialect structures have influenced the system of Italian: the deep interpenetration of Italian and dialect in low varieties like “italiano popolare” has often been pointed out (Berruto 1987; Sanga 1984). Thus, external interference would in this case have the result of simplifying the grammar and would run counter to the opinion of those linguists who believe that change under external influence may only complicate the system (cf. 1.4.).

3.2. A similar issue that I cannot treat at length here is that of multifunctionality of connectors and subordinators in “italiano popolare”. The case of *che* whose uses range from a relative particle to a generic subordination marker has been repeatedly studied (Berruto 1987; Giacalone Ramat 1982).

3.3. What we find in contemporary Italian is, then, the coexistence of ongoing changes spreading from below (simplification in the pronoun system) and of forms which still stand in their stigmatized status (*ci*). Taking such cases as the starting-point one might consider “italiano popolare” as a simplified variety, a kind of pidginized Italian: in it we find, however, other features that seem to introduce complications in the system.

A good example is *a me mi piace* (lit.: ‘to me me[clitic] pleases’ for ‘I like’) which is apparently a case of pronominal redundancy. Children are taught at school not to use this form, but, in actual fact, this type is not restricted to “italiano popolare”: it may also be heard in unmonitored colloquial speech of educated people. It is not the result of accumulation of two alternative forms *a me piace e mi piace*, both belonging to a more formal style, but rather a third variant with left dislocation of the indirect object *a me* (Lepschy 1983; Sabatini 1985; Berruto 1987).

3.4. In the case discussed above the preposition *a* is required by the verb *piacere* ‘to please’; there is, however, in contemporary Italian an interesting phenomenon which deserves more attention by linguists, namely the occurrence of objects marked by the preposition *a*. The prepositional accusative is a well-known pattern in Ibero-Romance languages and in Romanian, but it is also widespread in South Italian dialects and even reaches some Central and Northern areas [Rohlf 1968: § 632]:

- (18) *ho visto a ttuo babbo* (Isola d’Elba)
 (I) have seen to your father
 ‘I have seen your father.’

Differential marking of objects, leading in Ibero-Romance to the accusative marked by the preposition *a*, is, Bossong (1985) argues, a widespread feature among the world’s languages, “ein bevorzugtes transitorisches Optimum” (1985: 295) which arose in Romance languages from the phonetically conditioned decay of the case system. In Standard Italian it is not accepted and is commonly considered a marker of southern low varieties. However, even in the northern and Tuscan varieties of Italian, the preposition *a* can precede the dislocated object, frequently, but not exclusively, with tonic pronouns of the first and second singular, thus resulting in the dual possibility:

- (19) *me, non mi vogliono*
 me, (they) not me want
 ‘They do not want me.’
- (20) *a te, non ti vogliamo* (Renzi 1988: 156)
 to you, (we) not you want
 ‘We do not want you.’

Furthermore, there is a group of verbs which require the preposition *a* both with preposed tonic pronouns (21 a, b) and with preposed nominal

objects (21 c). They belong to the “psychological verbs” class, including verbs like *preoccupare* ‘to worry’, *commuovere* ‘to move’, *spaventare* ‘to frighten’ whose objects are animate and experiencer and thus lack the typical properties of objects (Belletti – Rizzi 1988; Benincà 1986; Berretta in press).

- (21) a. *a me non stupisce il tuo silenzio*
to me not amazes the your silence
‘Your silence does not amaze me.’
b. *a me non mi stupisce il tuo silenzio*
to me not me [clitic] amazes the your silence
c. *a Giovanni non stupisce il tuo silenzio*
to John not amazes the your silence
‘Your silence does not amaze John.’
d. *il tuo silenzio non stupisce Giovanni*
the your silence not amazes John
e. * *me non stupisce il tuo silenzio*
me not amazes the your silence⁹

As to the motivation for prepositional accusative, preserving the distinctiveness of subjects and objects has been proposed as an explanation for Spanish (Green 1988: 107) and also for Italian (Rohlf s 1968: § 632). Green observes that this solution has, however, the disadvantage of removing any overt distinction between direct and indirect objects and this would be an anti-iconic result. On the other hand, Bossong considers the advantage of distinguishing nominative and accusative and would take prepositional accusative as a clarifying strategy.

Both proposals ultimately arise from the conviction that it is the structure of a language, together with typological universal principles, that determines its subsequent development. I do not reject this approach, but I believe that discourse rules have to be taken into consideration when evaluating the prepositional accusative in spoken Italian. The phenomenon is crucially dependent on left dislocation, which seems to be a condition for its appearance (compare the simple accusative in 21 d, an unmarked sentence with postposed object). Furthermore, it does not concern all objects: inanimate objects are excluded and among animate objects personal pronouns are favoured. The motivation for this phenomenon is apparently to solve the conflict between the inanimate grammatical subject and the animate experiencer by shifting the experiencer to the sentence topic (Benincà 1986). Thus it belongs to those grammatical processes which cannot be described on purely formal grounds without

referring to such pragmatic operations and functional categories as left dislocation and object hierarchies (typical/atypical objects). The prepositional accusative still has uncertain status and is not recognized even in recent descriptions of Italian (with the exception of Renzi 1988), although it is expanding from colloquial speech to Standard Italian.

As far as the issue of simplification is concerned, one might argue that the prepositional accusative involves linguistic complication, introducing a marked rule for a subclass of objects. I would like to claim, however, that marking of non-prototypical objects by means of the preposition *a* represents a natural trend in spoken Italian because such objects are experiencer to which the dative case is frequently assigned (cf. *a me (mi) piace*). Being a natural trend, we expect that the change will keep expanding along preference scales such as those outlined above, with personal pronouns and proper names at the top of the scale. But we have not yet answered the question of why the change has been initiated in Standard Italian: although one might argue that implementation of a more rapid analysis of case relations is a plausible internal explanation, we should mention the influence of southern and central dialects as possible triggers of the process. Again, we would be faced with the contribution of external factors to change. In this case, however, an external explanation does not seem likely to me: the extension of this phenomenon in Romance languages (Zamboni in press) and in a wide area of object-marking languages (Bossong 1985) favours an internal explanation based on universal tendencies of natural languages.

4. Final remarks

In the last group of cases examined, the common ground is represented by the social dimension of changes which emerge in spoken varieties and even in stigmatized varieties.

It is not possible, however, to reach a uniform conclusion as to the effect on the grammar of socially motivated changes. The claim that such changes are the major source of complication in grammar is not supported by our investigation; on the contrary, they seem to produce equally "natural", i. e. simpler, outcomes (see the simplification of the pronominal system).

In particular, what is needed is a more accurate definition of what is intended by the notion of complication and what levels of grammar are

involved. If avoiding ambiguity between subject and object is a desirable goal in language change, then the prepositional accusative cannot be considered a complication on the basis that a new rule is added to the grammar. It is, rather, an improvement of the information retrievable from linear ordering, a strategy which languages can adopt to cope with the conflicting forces of syntactic, semantic and pragmatic needs.

As a further conclusion, not only of my paper, but of the entire workshop, I would like to underline, with Aitchison (this volume), the variety of results that syntactic change may produce, depending on different external factors but also on the different internal paths a language may follow. This variety of results is one of the reasons why syntactic change played a minor role in traditional historical linguistics. As I said above, however, the direction and the degree of syntactic evolution and syntactic borrowing are not totally unpredictable. The problem can be attacked by investigating more deeply the intermingling of social and internal factors which reflect the complexity of the process of change, and by refining the very general predictions that can be made on the grounds of current information. The difficulties we are faced with should induce caution in investigative methods rather than abandonment of this line of research.

Notes

1. The claim that foreign interference complicates the grammar and involves the development of marked features has been made, among others, by Traugott (1973) and Campbell (1980); for a discussion see Thomason – Kaufman (1988). The opposite claim has also been made by Givón (1979) who considers contact as a simplifying force because, if conflicts of grammar arise, the speakers are more likely to revert to the Universal Grammar shared by all humans (Givón 1979: 26–27). This claim may be restricted, however, to pidgins and creoles, which deserve (at least partially) separate consideration.
2. If not stated otherwise, the examples quoted in this section derive from conversations with speakers of the Walser dialect of Gressoney recorded during my fieldwork in this area.
3. Actually, postposition of subject pronouns can occur in spoken German, particularly in question and answer sequences, as a pragmatically conditioned phenomenon. See Lehmann (this volume) for some considerations on the possibility of initial verb in German in sentences like:
 - (i) *Ham [haben] wir ja noch nie gesehen*
have we yet never seen
'We have never yet seen that.'

4. A Romance pattern may also be responsible for cases such as the following, where the subject is postposed after an intransitive verb:

(ii) *on te sin chemet d pura*
 and then are come the peasants
 'And then the peasants came.'

Italian: *e allora sono arrivati i contadini*

(The structure is however ambiguous: it could reflect the German V/2 [verb second] order with subject inversion and brace reduction.) More convincing is the following:

(iii) *jeza wenn éscht fort de schné*
 now when is gone the snow
 'now that the snow is gone'

5. The evolution from pronoun to verb ending already occurred in Old High German in the case of the second singular pronoun *du* : *stiges du* > *stigestu* > *stigest* 'you go up' (Jolivet – Mossé 1959).

Haiman (in press) postulates a similar process for northern Italian dialects and for Swiss Romansch dialects: the reduction of subject pronouns to bound affixes marking agreement originated in inverted word order, starting from the second person singular.

6. In this and in similar cases there is no intonational break after the pronoun, a fact which excludes the interpretation of the following noun as an afterthought.

-s is the third singular neuter pronoun which is frequently used in place of the masculine or feminine pronoun with reference to friends or younger persons.

7. In the literature on the acquisition of German, reference has often been made to the existence of "pronominal copies", i. e., of redundant pronouns which are treated by the child as a kind of verbal inflection, as in:

(iv) *Daniel tuter immer* (Clahsen 1986)
 Daniel does-he always
 'Daniel always does [that].'

This child-language feature is interesting insofar as it shows a correlation (which might also have diachronic implications) between verb inflections and anaphoric pronouns.

8. In my (1986) article I took a more cautious position on the likelihood of a Romance influence for both changes under discussion here. Admittedly, the contact hypothesis is not open to complete verification. However, the point I want to make here is that interference is not a matter of simple transposition of morphemes or syntactic patterns: the receiving language may also evolve along paths which are internally determined and can be partially predicted.

9. The difference between the two prospected cases is given by the fact that with psychological verbs the preposition before the preposed object is compulsory (21 e), while with other transitive verbs it is optional.

Finally, the possibility of right dislocation, a kind of afterthought preserving an emphatic value, is not excluded in colloquial speech:

non mi stupisce il tuo silenzio, a me
not me amazes the your silence, to me

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The history of subordinating conjunctions in some Romance languages

Brigitte Schlieben-Lange

0. Some preliminary remarks

0.1. Conjunctions is a subject mostly neglected by linguists. If we want to find information on the development of the French conjunctions system, we can find some remarks in traditional historical grammar and syntax (Tobler, Gamillscheg). But we cannot find anything inspired by more recent theoretical work. This fact is easy to explain: European structuralists who are interested in paradigmatic structures and in semantics normally prefer lexematics, where semantic structures are more evident, or, in the field of grammatical paradigms, those paradigms which are clearly defined, forming closed systems (e. g., tense, case). Generativistic linguists try to understand the mechanisms of coordination and subordination without caring very much about the different types of subordination and the semantics of conjunctions.

0.2. Nevertheless conjunctions deserve our attention. This has been stressed by early sociolinguists. Bernstein's elaborated/restricted distinction is partly based on a different use of conjunctions. Furthermore the importance of conjunctions was a topic of general grammar around 1800. In this period we can observe a strong interest in some parts of speech which had been neglected up to this time: pronoun, article, and conjunction. It is not possible to explain this interest in detail here: as for the conjunctions, there is no doubt that the linking functions, the possibility to constitute texts, begin to interest grammarians around 1800. Humboldt stresses the verb and the conjunction as the parts of speech that render the act of synthesis possible.

0.3. Another 1800 general grammar, Destutt de Tracy's second volume of his *Elements d'idéologie*, also pays much attention to conjunctions. His central idea, regarding French but at the same time general grammar, is that the French conjunction *que* or its equivalent in other languages is

something like the original and basic subordinating conjunction and that all other subordinating conjunctions are nothing but modifications of that basic *que*. In Destutt's view this would be a genetic and synchronic description as well. From a genetic point of view the ideal of subordination expressed by *que* would have been successively differentiated into *parceque*, *quoique*, *pourque*, and so on. From a synchronic viewpoint there would be different modifications of the idea of subordination. Let us state as a beginning that the synchronic description furnished by Destutt is quite convincing, especially for French, where the subordinating conjunctions are all formed in the same way:

modification + subordinating <i>que</i>	
<i>afin</i>	<i>que</i>
<i>pour</i>	<i>que</i> etc.

For other languages this would only be true, if at all, in a covert way. We might suppose the covert existence of a subordination marker that directs some syntactic choices. From an historical point of view the genetic reconstruction formulated by Destutt is not true. We should mention that genetics and history are not the same thing. Destutt does not mean that in the sense of empirical history, in French there would first have been *que* and then, in the further history, a differentiation. He only wants to say that the general grammar's idea of subordination is logically antecedent to its modifications.

We could begin to speculate on the reasons for this new interest in conjunctions in linguistics around 1800. Is it due to the increase in literacy in eighteenth-century society? (See Schlieben-Lange – Ivo 1989.)

1. The Romance conjunction system: Quantitative research

Our proposal is to examine the development of conjunction systems and conjunction use in some Romance languages from the Middle Ages to the eighteenth century. The Latin conjunction system was highly developed, but not very transparent, whereas the French conjunction system is clearly structured: we find, on the one hand, some morphemes for coordinative relations and, on the other, the *Mod + que* paradigm alluded to by Destutt de Tracy. Other Romance languages show a similar development, though less clearly. We will limit ourselves to a segment of all possible junctive relations, examining in particular:

- causative relations
- adversative relations
- concessive relations
- final relations

The eighteenth-century *Encyclopédie* supplies the following items for the different types of relations:

- causative/final: *afinque, parceque, puisque, car, comme, (aussi, attendu que, d'autant que)*
- adversative (including concessives): *mais, quoique, bien que, cependant, pourtant, néanmoins, toutefois*

But we shall have to add other conjunctions en vogue before the eighteenth century or simply forgotten by the *Encyclopédie*, like:

alors que, tandis que, vu que, neporquant, por ce (que), ainz, encore que, pourque

The conjunctions found will be submitted to two types of historical investigation:

- a) lexicographical treatment;
- b) quantitative text research for three periods.

After having supplied the lexicographical and quantitative raw material I shall give an interpretation of the conjunction used in the three periods, and finally I shall analyse the factors involved in the change of the conjunction system.

1.1. Lexicographical treatment

My aim in this part of the historiographical investigation is to establish a chronology of the development of the conjunction inventory.

The following are some serious drawbacks of lexicographical research of this type:

- the lexicon entries rarely allow a decision on the degree of grammaticalization of a conjunctive syntagm;
- the functional interpretation is hardly possible on the basis of the short quotations furnished by the dictionaries;
- chronological information is not so very precise in this domain, perhaps due to the fact that conjunctive syntagms are submitted to a slow process of grammaticalization.

Nevertheless the – problematical – results are presented in table 1 below.

1.2. Quantitative text analysis

Text analysis permits one to complete inventory data with information on use.

I have analysed six texts for French. These six include two texts for each period (thirteenth century, fifteenth to sixteenth century, eighteenth century), an argumentative text and a narrative one. In all cases I have related the results obtained to an average of 100 pages in order to guarantee comparability.

Further research would have to deal with many more texts in order to avoid the use of a specific author or a specific text tradition falsifying the results. I can nevertheless state, on the basis of my further reading, that the results are not wholly unreliable.

Table 1 gives a synoptic view of the results of our lexicographic and quantitative research for French and some provisional results for Spanish and Portuguese.

We have obtained some results, one of them very surprising:

1. In every period, the scientific text contains significantly more conjunction uses than the contemporary belletristic text.
2. The number of conjunctions used is constantly decreasing in the course of the history of French. This is a very surprising result, because the picture of French language history suggests a constant increase of language differentiation and henceforth clarity.
3. Scientific texts use more subordinative conjunctions than contemporary belletristic texts do.
4. The relation coordinating vs. subordinating conjunction changes in favour of subordinating conjunctions.

1.3. Contrastive analysis on the Spanish and Portuguese data

The Spanish and Portuguese data need to be completed by further text analysis; nevertheless, they allow a first insight. The Spanish data largely confirm a hypothesis that would argue in favour of an increase in conjunctions, above all in subordinating conjunctions, throughout history. They show the development of the Romance *Mod + que* type for subordinating conjunctions and an increase of conjunction tokens. They thus represent a historical development that seems much less puzzling than the results for French:

1. The argumentative text generally shows more conjunction use than the contemporary narrative text, with the exception of medieval texts. This deviation can perhaps be explained by the fact that the argumentative text is a translation from Arabic whereas the narrative text belongs to the highly developed Alfonsian historiography.
2. The number of conjunctions used is constantly increasing.
3. Argumentative texts generally use more subordinative conjunctions than contemporary narrative texts.
4. The relation coordinative vs. subordinative conjunction changes in favour of subordinative conjunctions.

Table 1. Narr. = Narrative text; Arg. = Argumentative text;
CO = coordinative; SO = subordinative

Lex			Middle Ages		Renaissance		18th century	
			Narr.	Arg.	Narr.	Arg.	Narr.	Arg.
<i>afin que</i>	SO	XIIth cent.			8	5		
<i>ainz</i>	CO	Xth—XVIIth cent.	6	12		10		
<i>alors que</i>	SO	1422					4	
<i>bien que</i>	SO	XIVth cent.					5	
<i>car</i>	CO	Xth cent.	69	105	34	14	6	30
<i>cependant</i>	CO	1580						50
<i>comme</i>	SO	1275			3			5
<i>encore que</i>	SO	XIIth cent.			4			
<i>mais</i>	CO	Xth cent.	28	69	29	63		10
<i>néanmoins</i>	CO	XIIIth cent.						
<i>neporquant</i>	CO	XII—XVIth cent.	13					
<i>parce que</i>	SO	ca. 1200			4		8	5
<i>por ce</i>	CO	Xth cent.	6	51	5			
<i>por ce que</i>	SO	Xth cent.	30	62		30		
<i>pour que</i>	SO	1244					3	
<i>pourtant</i>	CO	1445					4	
<i>puisque</i>	SO	1160	10	17				
<i>quoique</i>	SO	XIIth cent.					3	10
<i>tandis que</i>	SO	1160						10
<i>toutefois</i>	CO	1363	12	5	13	9		
<i>vu que</i>	SO	1421			12	43		
Total			174	311	123	174	43	110
Total	CO		134	191	92	87	20	80
Total	SO		40	120	31	87	23	30

Table 1. (continued)

			Middle Ages		Renaissance	
			Narr.	Arg.	Narr.	Arg.
b. Spanish						
	Lex					
<i>aun</i>	CO	XIIth cent.				9
<i>aunque</i>	SO	XIVth cent.				15
<i>ca</i>	CO	Xth cent.	30			
<i>como</i>	CO	950			9	6
<i>como que</i>	SO	XVIth cent.			6	
<i>emperoque</i>	SO	XIIIth cent.		5		
<i>magner que</i>	SO	Xth cent.	21	7		
<i>mas</i>	CO	950	17		17	11
<i>para que</i>	SO	XVIth cent.			9	10
<i>pero</i>	CO	XIIIth cent.	19	6	7	35
<i>porque</i>	SO	XIIth cent.	12	25	8	107
<i>pues</i>	CO	XIIth cent.			15	42
<i>puesque</i>	SO	?	9			
<i>que</i>	SO	?			10	
<i>sino</i>	CO	XIIth cent.			5	
Total:			108	43	86	245
CO:			66	6	53	103
SO:			42	37	33	142
c. Portuguese						
			Renaissance			
			Narr.	Arg.		
<i>ca</i>		12				
<i>com tudo</i>				10		
<i>comoquer que</i>		7				
<i>mas</i>		14		44		
<i>porem</i>		11				
<i>por que</i>		28		36		
<i>por + rel.</i>		4		26		
<i>pois</i>				5		
<i>todavia</i>				6		
Total:			76	127		

As for the Portuguese texts, we observe something very strange: there are a great deal fewer conjunction types in use than in Spanish or French. There seems to be an equivalence with French medieval use of *por* + syntagmatic choice which we did not find at all in Spanish texts. Furthermore, the coordinative/subordinative distinction is much more difficult than in the case of French and Spanish. But nevertheless the texts submitted to analysis seem to be highly elaborate. The fact that there is less use of conjunctions does not seem to be a symptom of primitive, orally-constituted texts. On the contrary: conjunction use is completed by other procedures of linking propositions, i. e., gerundial constructions and, above all, typical Portuguese personal infinitive constructions.

2. Interpretation of the different periods: French

The quantitative analysis has shown some very interesting results. Nevertheless they need to be completed by a systematic and synchronic interpretation of the different periods which would allow insight into the (re-)structuring processes at work.

The starting point is quite clear: the complete breakdown of the Latin conjunction system containing items such as: *quod*, *quia*, *quoniam*, *nam*, *cum*, *sed*, *ut* and *quamquam*. The reasons for this breakdown are known: on the one hand we have the phonetic alterations, on the other, the decay of classical scholarship, which could have constituted a counterpart to phonetic change.

Therefore, Romance languages have to restructure the conjunction system on the basis of *que* (result of *quia* × *quem*), on the one hand, and other procedures such as comparative constructions (*magis* — *mais*, *antius* — *ainz*), interrogative constructions (*quomodo* — *comme*, *quare* — *car*) and other gerundial or adverbial constructions (*cependant*, etc.) on the other hand.

A more detailed analysis would have to take into account the fact that the conjunction system had already begun to change in late Latin. Latinists have shown in the 1950s and 1960s that many conjunctions of the type *pro eo quod*, *propter quod* which could have supplied the basis for the Romance restructuring processes already appear in late Latin (Herman 1963). So late Latin would have been a period characterized by the coexistence of classical conjunctions on the one hand and conjunctions of the new type on the other (cf. Stempel 1964).

This is the basis on which a new Romance type of conjunction system establishes itself: analytic constructions of the type “modification + *que*” for subordinating conjunctions and the synthetically formed coordinating conjunctions. This differentiation between relational (in this case: subordinating) and non-relational (in this case: coordinating) categories corresponds to a general “tendency” in Romance languages as compared to Latin. Eugenio Coseriu (1988: 213) has developed this idea of a Romance language type:

Das Gestaltungsprinzip des Vulgärlateinischen und Romanischen lautet also in diesem Falle so: *innere, paradigmatische materielle Bestimmungen für gleichfalls innere, nicht-relationelle Funktionen und äußere syntagmatische materielle Bestimmungen für gleichfalls äußere, relationelle Funktionen.*

Beyond this general description of the restructuring of the conjunction system in Romance languages, we may observe some significant differences concerning the different periods and languages.

2.1. The Middle Ages

The qualitative analysis of medieval texts shows that there are very few subordinating conjunctions, but rather a very strong axis of restructuring, which is the paradigm of possible syntactic constructions. For example, the preposition *por* is the basis of different syntactic constructions (see Gamillscheg 1957):

por + Inf.
por ce (coordinative)
por ce que (subordinative, causal)
por que (subordinative/final)
por quoi (subordinative and interrogative, because/why)

This is also true of the basic *par*

par
par cui
par laquelle etc.
 and *a* / *a fin*

a fin + Inf.
à ce que etc.

It is quite obvious from the text that the paradigmatics of syntactical choice were very conscious ones:

Por ce avenoit il au viel tens que quant aucuns hom saluoit les angles, il ne li rendoient salu, ains le desprisoient; mais au Novel Testament lisons nos que Gabriel salua Marie. Et quant Jehans salua l'angle, il respondi en tel maniere: Garde, fist il, ne faire, car je suis tes sers et de tes freres.

Or vos ai devisé dou Viel Testament et dou Novel, et de la divine loi et de l'umaine; mais *porce que* commander ou establir loi po vaut entre les homes, se il ne fust aucuns qui les peust contraindre à garder la loi, covint que, *por* essaucier justice et *por* mortefier les tors fais, fussent establi roi et seignor de maintes manieres. *Por ce* est il bon à deviser le commencement et la naissance des rois de la terre et de lor roiaumes. (Brunetto Latini, p. 25)

2.2. Renaissance

The consciousness of the paradigmatics of syntactical constructions is lost. Instead we find a lot of different gerundial and infinitive constructions, probably taken from Latin authors. So we are faced with manifold possibilities of syntactical junctioning which are not restructured completely. We can only state that the medieval regularity of relations is lost. So we find causal *par ce que* as opposed to interrogative *pour quoy*. On the other hand the number of subordinating relations expressed by mod. + *que* increases: *afin que*, *ou que*, *encore que*, but there is no restructuring axis such as that stated in medieval texts.

2.3. The eighteenth century

The organisation of re-structuring changes completely in the eighteenth century. The paradigmatics of syntactic choice, the restructuring axis of the Middle Ages, have disappeared. Instead we can observe a new paradigmatics of different modifications of the subordinating relation (see figure 1).

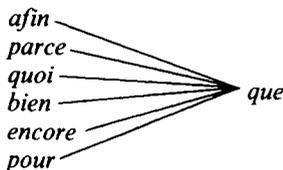


Figure 1.

The constant element now is the subordinating relation expressed by *que*; the paradigmatic choice concerns the type of relation (adversative, causal etc.).

So we have two totally different types of paradigmatics in the Middle Ages and in the eighteenth century, with a complete reversal of constant element and paradigmatically organised choice, as shown in figure 2.

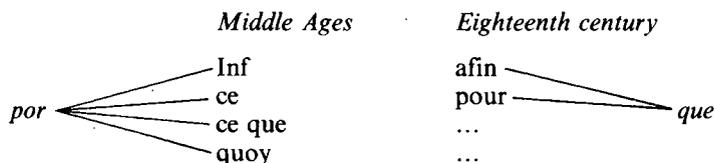


Figure 2.

I suppose that the regularity of eighteenth-century paradigmatics is also an effect of grammarians' activities. But there can be no doubt that authors used this type of paradigmatics quite consciously.

2.4. On the way to the twentieth century

I suppose that we might observe further alterations of French conjunctions in the twentieth century. I am quite convinced that the paradigmatic transparency so obvious in eighteenth-century texts and descriptions is almost completely lost. Conjunctions have become lexicalised. There may be a set which can be analysed into "mod. + *que*", but normally conjunctions are interpreted as entities. Further research into contemporary interpretation would be necessary.

The history of the conjunction system could very roughly be systematised as in figure 3.

3. Internal and external factors

Let us suppose that this reconstruction of the history of the Romance conjunction system is not completely erroneous and that further research on more text material can confirm it. Then how could we interpret it in terms of theory of language change?

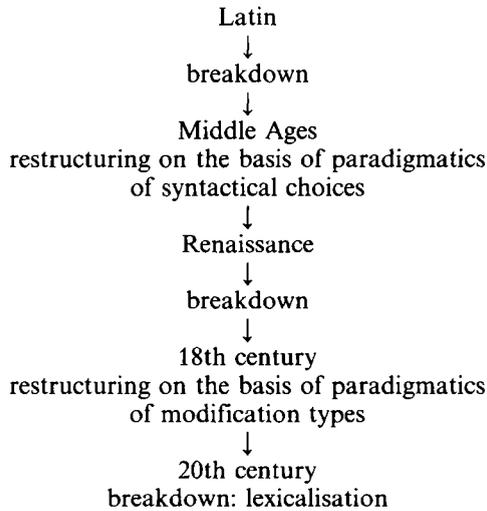


Figure 3. The history of the conjunction system

3.1. Breakdowns

The historical research into Spanish and Portuguese shows a constant increase in conjunction inventory and conjunction use (with some differences, however). There is a breakdown of the Classical Latin system, but nothing equivalent to the Renaissance breakdown in French.

For French we have found three periods of breakdown: the transition from Classical Latin to Old French; the Renaissance; and Modernity. Let me suppose that breakdowns are largely due to external factors, e. g., the decay of Latin scholarship after the end of the Roman Empire and the imitation of Latin authors in the Renaissance. These events produce a destabilisation, the co-occurrence of elements that derive from different systems. Nevertheless, some internal factors, e. g., phonetic changes, can also contribute towards producing destabilised language stages.

3.2. Restructuring

I suppose that one of the principal motives for language change is the need for re-interpretation of the re-structuring. Every generation tries to interpret the language elements transmitted to it by its parents as systematically organised (this fact has been stressed above all by Coseriu 1958, but also in research in Vulgar Latin and on Creole languages). In this

respect the history of a language is the history of subsequent re-interpretations. Therefore it is absolutely necessary to complete a serial quantitative analysis by synchronic interpretation of language stages. I consider the re-structuring of the French conjunction system to have the following two culminating points:

- re-structuring on the basis of the paradigmatics of syntactic types in the thirteenth century;
- re-structuring on the basis of the paradigmatics of modifications of subordination in the eighteenth century.

Beyond this we should take into consideration a hierarchically superior type of re-structuring: the constitution of language types. In this regard, Coseriu's ideas of a Romance language type constituted by the systematic differentiation between relational and non-relational categories, expressed by analytical or synthetic procedures, could correspond to the results in all Romance languages submitted to investigation.

The second important motivation, apart from the need for re-structuring, is the very finality of language, namely to design things and relations between things by sensually perceptible means, that is by means of articulated voice. So there can be no doubt that the necessity of distinguishing different types of relations between propositions is the central motive for the development of conjunction systems. Obviously this need is more central for scientific and written texts. Scientific texts aim at that very differentiation: written texts have to avoid the ambiguities that may be tolerated in orally constituted texts. In my opinion this is the central aim of language: allowing and guaranteeing distinctions in the multiformity of world and thought is the most important motivation for language change and without any doubt an internal one, inherent to the very nature of language.

3.3. The puzzling case of Old French

When interpreting the results of the quantitative analysis, we must take into account the fact that we have expectations of the direction of language development which go beyond the mere explanation in terms of external and internal factors. We have in mind some assumptions on modernization and we thus suppose that the conjunction system becomes more and more elaborate due to the increase in scientificity and literacy of modern societies.¹ This assumption is largely confirmed by the development in Spanish and Portuguese. It is also confirmed in French for

the inventory. But as for the use, we are irritated by the fact that in Old French there is a significantly greater use of conjunctions than in the language of more modern periods. Should we then revise our hypothesis on modernity? I would prefer to try and find another solution.

First of all, we have to ask ourselves if this surprising feature of Old French is not in reality a feature that characterises some text traditions. The fact that in the German prose Arthur romance there is the same hypertrophy in conjunction use seems to confirm this explanation (see Betten 1984). Let us emphasize the importance of this question for research in language change: it is absolutely necessary to distinguish between language traditions and text traditions. Nevertheless the necessities of text traditions may very often be the motive for development in languages. On the other hand, the feature that interests us, the hypertrophy of conjunction use, is general in both argumentative and narrative texts. It seems to be common in thirteenth-century French.

This leads us to another suggestion, which we need to examine. We have already stressed the connection between the development of literacy and the differentiation of conjunction systems. Relations have to be made explicit in written texts; therefore conjunctions become more and more differentiated. This relationship has already been alluded to in the sociolinguistics of Bernstein (without a clear insight into the role of orality); R. Ludwig (1987) has described Creole syntax as an orally constituted syntax characterised by aggregation (vs. integration). The research on spoken Rumanian and on "italiano popolare" show an almost complete lack of conjunction differentiation. On the basis of this relationship we could formulate the following idea: thirteenth-century French authors perhaps have very clear insight into the functioning of literacy, to a degree that leads them to a constant and most abundant use of conjunctions, a sort of hyper-correctness of literacy.

The two questions discussed at the end of this paper seem to be very important for language change. Are text traditions and orality/literacy external or internal factors? I think that we have to distinguish between the question of medium and the traditions of genre on the one hand and language and its finality on the other. But there can be no doubt that these are the grounds on which the problems that language has to solve are constituted.

Note

1. Von der Gabelentz (1901: 464 ff.) gives a list of techniques for linking propositions, in the sense of increasing perfection:
 - propositions without connecting elements
 - connection by means of stereotyped “and”
 - participial and gerundial constructions
 - real construction by means of a developed conjunction system and modal and temporal interdependence.

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Internal and external factors in the stabilization of verb-last order in Dutch infinitive clauses

Marinel Gerritsen

0. Internal and external factors in syntactic change

Explanations of syntactic changes have traditionally concentrated on internal factors. The possibility of external causation is only proposed when all efforts to find an internal motivation for a syntactic change have failed (Thomason – Kaufman 1988: 57). As a result our knowledge of the internal linguistic factors that might cause a syntactic change is much greater than our knowledge about external ones. Of course, we know that the major external factor in syntactic change is contact with other languages, but *de facto* we do not know more than that. It is still unclear how important variables of a contact such as its intensity, the number of bilingual speakers, the structural resemblance between receiving and giving language, have to be filled in in order to bring about syntactic change. Although there seems to be a recent rise of external explanations in syntactic change, judging by the present volume and Thomason – Kaufman (1988), we are still far from an elaborated theory about the external factors that might affect changes on the level of syntax, let alone the interaction of internal and external factors in such a change. In view of such limitations of our knowledge we have to be careful in proposing external explanations if internal ones are not yet fully explored. Nevertheless I agree with Thomason – Kaufman (1988: 57) that it is wrong to resort to external explanations only if internal explanations fail. It is very well possible that a change is caused by both kinds of factor. Many of the articles in this volume support this view (Aitchison, Ramat, Fujii). Therefore one has to study syntactic change in such a way and with such a design that it is possible to discover both the internal and the external factors that might have caused it. I have tried to do so in this paper, in which I study the internal and external factors that might have been involved in the change from VX/XV in Middle Dutch to XV in modern times.

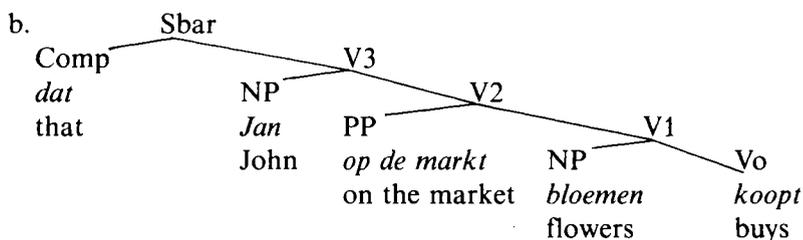
1. The problem

It is well-known that the Modern Dutch standard language and all modern Dutch dialects have a word order that is intermediate between OV and VO. Main clauses in simple tense have VO-order (1), main clauses in compound tense have VfOV-order (2) and relative (3), subordinate (4) and infinitive clauses (5) have OV order (Gerritsen 1980, 1984).

- (1) *Ik zie Peter*
I see Peter
- (2) *Ik heb Peter gezien*
I have Peter seen
'I have seen Peter'
- (3) *Peter, die de jongen heeft gezien*
Peter, who the boy has seen
'Peter, who has seen the boy'
- (4) *omdat Peter een huis heft gekocht*
because Peter a house has bought
'because Peter has bought a house'
- (5) *om thee te drinken*
in order tea to drink
'in order to drink tea'

For the sake of convenience I have given only examples with Nominal Phrases (NPs). Adverbs and Adjectival Phrases (APs), however, also only occur in preverbal position in (2) to (5). Prepositional Phrases (PPs) can also occur postverbally if language production factors require this, for example when there are many constituents in the clause, or a very long PP, but they occur mostly in preverbal position. Sentential elements must occur postverbally. The base rules for Modern Dutch are as in (6 a), in which PPs are extraposed optionally and Sbar's obligatorily. (6 b) represents the structure of a sentence with constituents on all levels.

- (6) a. Sbar → Comp V3 (= S)
V3 → NP (Adv)* (PP)* (Sbar)* V2
V2 → (Adv)* (PP)* (Sbar)* V1
V1 → (NP) (NP) (PP) (AP) (Sbar) V0



It is generally assumed that Modern Dutch is basically verb final.¹ In the remainder of this paper I will refer to this as XV.

In the period between the Middle Ages and the present day an intriguing change took place in the order of constituents relative to the verb. All clauses that are currently strictly verb final had in the Middle Ages constituents after the verb that cannot occur postverbally in Modern Dutch: NPs and APs. The verb-final order stabilized itself in the period between the Middle Ages and today. A similar change took place in German and Frisian, but not in the other Germanic languages, English and the Scandinavian languages (Gerritsen 1984). These languages developed from XV in the Old English and Old Scandinavian period to XV nowadays. In these languages only one change took place: the change from XV to VX. Because there are good reasons for believing that the old variants of Dutch, German, and Frisian had XV-order (Lehmann 1972; Hopper 1975), we have to consider two changes with regard to the position of constituents relative to the verb in the three languages:

- (a) the change from Proto-Germanic XV in the direction of VX in the Middle Ages;
- (b) the change from more or less VX in the Middle Ages back to XV today.

We lack a detailed analysis of the occurrence of VX- and XV-structures in the course of mediaeval Dutch, Frisian, and German, and therefore we do not know the route that these changes took. Consequently, the explanations of the changes (a) and (b) are largely theoretical. It is the purpose of this paper to obtain a deeper insight into the internal and external factors that might have played a part in these changes by trying to unravel the linguistic and stylistic route of the changes.

2. Design of the study

2.1. Linguistic aspects of the design

Owing to the complex stylistic design of my study I can for the moment only investigate one type of clause, the so-called infinitive clauses. A Modern Dutch example has already been given in (5), Middle Dutch examples are given in roman type in (7).²

- (7) a. *De cause was dat hy int land van Vlaender*
 The reason was that he in the country of Flanders
ghebracht hadde valsche munte om tvolc
 brought had forged coins in order the people
 mede te bedrieghene (15th c., Chronicle: 58)
 with to deceive
 ‘The reason was that he had brought forged coins into the
 country of Flanders in order to deceive the people’
- b. *De voors. Jhane ontkende de worden ende hiesch*
 The named Jhane denied the words and demanded
 den heesch over te hebbene in
 the sentence again to have in
 gheschriften (15th c., Trial: 1026)
 writing
 ‘The named Jhane denied the words and demanded to have
 the sentence again in writing’

The infinitive clauses have the following characteristics:

- they lack tense;
- the comp-position is not always filled;
- they have no subject in surface structure, but a pro-subject in deep structure.

From a generative point of view there are no differences between infinitive clauses and other dependent clauses in the position of constituents relative to the verb. From a pragmatic point of view, however, we can expect that the performance mechanisms that might lead to extraposition of constituents occur less in infinitive clauses than in other dependent clauses. The former lack a subject in surface structure and therefore they do not have the span between subject and verb that we find in the latter (cf. sentences 2–4). As a consequence there is no need in infinitive clauses to relieve this span by extraposition of elements. This means that infinitive clauses probably give a better picture of the order

of constituents relative to the verb than dependent clauses, since the picture is probably not obscured by performance mechanisms.

I have investigated changes and stability in position of PPs (8), APs (9), NPs (10), and Adverbs (11) relative to the verb. In the examples below, the relevant constituents are printed in roman.

- (8) a. *omme over the vaerne*
in order to over to cross
in Engheland (14th c., Chronicle: 278)
to England
‘in order to cross to England’
- b. *om in de stadt te commen* (16th c., Diary: 73)
in order in the town to come
‘in order to come into the town’
- (9) a. *te wesene breed .ij. elnen* (13th c., Statutes: 358)
to be wide two yards
‘to be two yards wide’
- b. *de steede goet ende ghetrauve te*
the town well and faithful to
wezen (16th c., Chronicle: 12)
be
‘to be good and faithful to the town’
- (10) a. *te doene huer werc* (15th c., Trial: 1033)
to do her work
- b. *om den prys te vynnen* (16th c., Diary: 82)
in order to the prize to win
‘in order to win the prize’
- (11) *hier te scryven* (16th c., Chronicle: 1)
here to write
‘to write here’

For all the linguistic aspects that I have investigated, I have always taken into consideration the potential of occurrences. For example, I looked at how often NPs occurred after the verb and how often they could have occurred in that position, in other words at how often NPs occurred before the verb. The occurrence of VNP-constructions was always seen in relation to that of NPV-constructions, the occurrence of VPP-constructions in relation to that of PPV-constructions and the occurrence of VAP-constructions in relation to that of APV-constructions.

One may wonder whether infinitive clauses with, for example, an NP before the verb and those with an NP after the verb can be considered

to be two variants of one syntactic variable, since we are not sure that they would have the same communicative value if the same words were used (cf. Lavandera 1978). Theoretically it is of course possible that postverbal constituents may be afterthoughts (cf. Ebert, this volume). However I have good reason to believe that postverbal occurrence of elements is mostly not a result of afterthought, since a large number of the postverbal constituents are obligatory (12). It is highly implausible that one has forgotten such a constituent and inserted it at the end of the clause later on.

- (12) a. *te copene saye* (14th c., Statutes: 366)
 to buy cloth
 b. *te jaeghen zeeven ossen* (16th c., Diary: 81)
 to hunt seven oxen
 c. *om te treckene*
 in order to to move
 t'Sinte Homaer (15th c., Chronicle: 34)
 to Sinte Homaer
 ‘in order to move to Sinte Homaer’

2.2. External linguistic aspects of the design

2.2.1. Dialect

I have decided to restrict my study to one dialect of Dutch. Since there is quite a lot of dialect variation of the level of syntax in the Dutch-speaking language are today (Gerritsen in prep.), we can expect that there was also quite a lot of areal syntactic variation in older periods of Dutch. If one does not control the factor “dialect” in studies on syntactic change, one runs the risk of interpreting dialect variation mistakenly as syntactic change.

I have chosen to restrict my study to the West Flemish dialect of Bruges. First, because two-thirds of the oldest records reasonably suitable for the study of syntactic change originate from the city of Bruges. Second, because I was able to take advantage of the study of source material that Willemys (1971) performed for his investigation of spelling phenomena in the dialect of Bruges in the fifteenth and the sixteenth centuries. The dialect of the city of Bruges was furthermore attractive for my study because it is considered representative of Middle Dutch: the majority of the Middle Dutch sources were written in a dialect from the southern part of the Netherlands and it is assumed that the dialect of flourishing

cities such as Ghent and Bruges functioned as a standard for the dialect speakers of the countryside. A dialect from the southern part of the Dutch language area is all the more interesting since these dialects have contributed greatly to the evolution of Received Standard Dutch.

2.2.2. Period and points of time

I have chosen to investigate the period between 1277 and 1600. The last quarter of the thirteenth century was chosen as a starting point because it is the beginning of the period in which we find texts reasonably suitable for the study of syntactic change in the Dutch-speaking language area. I chose to conclude my investigation at the end of the sixteenth century because the standard language arose around that time and it is believed that syntactic change proceeds faster in a period in which the standard language does not yet play an important role. My investigation is limited to four small parts of this long period: the last quarters of the thirteenth, fourteenth, fifteenth, and sixteenth centuries.

2.2.3. Social and stylistic factors

2.2.3.0. Social and stylistic embedding of language change

Labov (1966, 1972) has shown that language change and language variation on the phonological level is socially and stylistically embedded. Whether or not a new phonological variant occurs is highly affected by external factors such as the income, profession, education, sex, and age of the speaker (social factors) and the attention that he or she pays to language use (stylistic factors). It appears from his and many other studies that insight into the effect of these factors on phonological variation deepens our understanding of the external factors that affect a sound change. According to the uniformitarian principle – we posit that the forces operating to produce linguistic change today are of the same kind and order of magnitude as those which operated in the past five or ten thousand years (Labov 1972: 275) – we could extrapolate those findings for the present to the past. Theoretically speaking it would therefore be possible to obtain insight into the external factors involved in a change in the past by studying its social and stylistic embedding.

A first problem with this way of reasoning is that the uniformitarian principle is for the moment no more than a hypothesis. It is certainly true for the internal factors that affect linguistic change, but it is ques-

tionable whether it also holds for the external factors that affect a change. Precisely on the level of external factors great changes have taken place in the last centuries. It is not implausible that recent developments in the mass media, in technology and means of transport and communication, democratization, and the almost complete elimination of illiteracy have affected the linguistic variation in present linguistic communities. Therefore, it is not sure that the external factors that affect language change in the present will also have affected it in the past. As a consequence a stylistic or social pattern in the past is not necessarily caused by the same external factors as a similar pattern in the present. I agree, however, with Ebert (this volume) that we can adapt the research tools of traditional sociolinguistics to historical linguistic studies as long as we remain sensitive to the possible differences between the present and the past.

A second problem with the application of a traditional sociolinguistic model to the study of the internal and external causes of syntactic change in the past is that the model is mainly developed, tested, and refined for variation and change on the morpho-phonological level. It is questionable whether the external factors that affect phonological variation and change will affect syntactic variation and change in a similar way. I will come back to this in section 2.2.3.2.

In spite of the theoretical problems with the application of the traditional sociolinguistic model for gaining insight into the external factors that might have affected syntactic change, I have made an effort to apply this model to my study on the stabilization of verb-final order in Dutch.

2.2.3.1. Social factors

I have tried to control social factors such as education and sex of the authors of the different texts in my investigation in the same way as Ebert (1980, 1981, this volume) did in Nuremberg. Due to the scarcity of data available in Dutch for the period under investigation, I have not been able to find sufficient data to do this. There was less interest in family and local history and less efficient official record-keeping in the Dutch-speaking language area than in the German-speaking area. As a result there are many more or less official German documents written in the fifteenth and sixteenth centuries than in Dutch in the same period. I have the feeling, however, that the fact that I have not been able to control factors like social class and sex in my study will not skew my results. After all, in the period under investigation only a limited number of people mastered the act of writing: educated men. That does not alter

the fact, however, that it is unfortunate that I cannot trace whether the social differentiation of a certain word order backs up the causes of differentiation that we can deduce from stylistic embedding.

2.2.3.2. Stylistic factors

It is evident that the stylistic continuum must be incorporated differently in historical sociolinguistic studies than in traditional ones. Whereas in the latter speech differing in the attention to language use can be elicited, in the former one has to determine in retrospect in which texts more attention was probably paid to language use, and in which less. Another difference regarding style between traditional sociolinguistic studies and historical sociolinguistic studies is that one seldom finds one particular individual who has clearly written some texts with more attention to language use than in others. As a consequence the stylistic differentiation that one finds in a socio-historical linguistic study could be caused by individual differences or by differences in attention to language use. The few socio-historical linguistic studies in which the factor style has been incorporated often show, however, a clear stylistic differentiation, which indicates that stylistic differences overrule individual differences.

I introduced the following styles of writing into my survey: Public Trials, Diaries, Chronicles and Statutes. I have taken the position that these styles show a stylistic continuum from those in which less attention is paid to language use to those in which the attention paid to language use is greater. In my opinion Public Trials manifest the most informal style, because they concern reports in direct speech of sessions in which the subjects themselves did most of the talking and in which they had more important things in mind than their use of language, as harsh punishments were to be expected. Since Diaries do not reflect direct speech in a tense situation I have considered them more formal than Public Trials, but – since they are not written for the general public – they are less formal than Chronicles and Statutes. The latter are clearly written with the intention of their being read by other people; we can therefore expect that more attention has been paid to the use of language. I have considered Statutes to be more formal than Chronicles, because the latter are mostly relatively noncommittal descriptions of events that occurred in Bruges in the period under investigation. The laws that are given in the Statutes, however, are not at all free of obligations. The members of the guild had to follow these laws strictly, or they would lose

their money, goods, or membership in the guild. We can therefore expect that the statutes are written with optimal attention to language use.

A problem with the introduction of the variable *Style* in a study on syntactic change is that our knowledge of the stylistic variation of syntactic change is very sparse. Interestingly enough, this is a result of the fact that we do not yet know much about the internal and external factors that affect syntactic change. A change that is caused by internal linguistic factors only will show a different stylistic pattern from one that is caused exclusively by external linguistic factors. Additionally, different kinds of external factors will result in different stylistic patterns. By analogy with what we know about the stylistic embedding of phonological change, we can assume that syntactic changes that are caused by internal linguistic factors will proceed without speakers being aware of them. Although the new variant is used differently by members of different social groups, people will not be aware of this difference and they will not use a certain variant more often in one style than in another. The syntactic variable has in that case the status of an indicator. Phonological variables that are indicators at first do not show any stylistic differentiation. As a consequence, we can expect that syntactic changes that are caused by internal linguistic factors will show no stylistic differentiation in the beginning. Syntactic changes that are caused by external linguistic factors, however, will proceed in such a way that people will be aware that they are using a new syntactic variant. In that case the syntactic variable has the status of a marker. Phonological variables that are markers do show stylistic differentiation. If the new variant is introduced by a medium that has prestige, we find the new variant more often in formal than in informal styles, but if the new variant is introduced by a medium that does not have overt prestige, we find the new variant more often in informal than in formal styles. We can assume that syntactic changes that are caused by prestigious factors (for example prescriptive grammars) will occur more often in formal styles, while those which are induced by less prestigious factors (imitation of television speakers for example) will occur more often in less formal styles. We know from phonological studies that indicators can become markers. Therefore we have to reckon with the possibility that a change from indicator to marker may also occur on the level of syntax.

During a period in which there is a standard language, the style differences take place on the continuum of dialect – standard language. In a period in which there is not yet a standard language or a written norm, stylistic differences must occur on another continuum. By analogy

with the style differences that occur nowadays in styles in which the continuum dialect-standard language is not involved, such as differences between officialese and the language of newspapers, I suggest that syntactic change in such a period takes place on the continuum modern-archaic language. If the change is induced by unprestigious factors we will find the new variant more in informal styles, but if it is induced by prestigious factors we will find the new variant more often in formal styles. If the change has been caused by internal linguistic factors, we will not find any stylistic differentiation. As soon as speakers become aware of the new variant, however, they will avoid using it in styles in which greater attention has been paid to language use. In that case an indicator has developed into a marker. One can wonder of course whether Middle Dutch writers had knowledge of such dimensions as modern-archaic use of language. There are good reasons, however, to believe that there is no speech community, literate or otherwise, whose members are not consciously sensitive to language quality in one form or another (Joseph 1987: 4). Bloomfield (1927) shows for example that Menomini Indians of Wisconsin, who do not have a written language, will say that a particular form of speech is archaic, the way the old, old people talked. From such a perspective we can expect that Middle Dutch writers were well aware which forms were archaic and which ones not and that they could use the one or the other according to the style they employed.

2.2.4. Problems

It is clear from Table 1 that I did not succeed in finding different styles for all the four periods under investigation. The problems for the thirteenth century are due to the fact that in that period there are few non-literary texts written in Dutch: most of the non-literary texts were written in Latin. There is some thirteenth-century Middle Dutch poetry, but poetry is less suitable for the study of syntax since it is often not clear when and where it was written. Also, the syntax of poetry can be affected for metrical reasons. The first non-literary texts that are written in a

Table 1. The design of the study of syntactic change in Bruges prose texts

Period	c. 1275–1300	c. 1375–1400	c. 1475–1500	c. 1575–1600
formal	Statutes	Statutes	Statutes	Statutes
	—	Chronicles	Chronicles	Chronicles
	—	—	Diaries	Diaries
informal	—	—	Public Trials	Public Trials

Dutch dialect are statutes of 1277 from Bruges. As I mentioned earlier (2.2.1.), that is exactly the reason why I decided to study the dialect of Bruges. I wanted to study the oldest sources of Middle Dutch available, and those are written in the dialect of the city of Bruges.

Furthermore, I had difficulty obtaining data from the last quarter of the fourteenth century. This is due to the fact that Flanders was at that time under strong influence from France and there were political reasons for writing in French. I tried to overcome this problem by relaxing the condition of “texts written in the dialect of Bruges” to “texts written in the dialect of West Flanders”, and the condition of the period being the last quarter of the fourteenth century to include a decade before and after. However, since the political reasons for writing in French hold for all of West Flanders and for a long period, this did not provide me with many more suitable texts.

Due to the influence of France, I was not able to find diaries and trial records for the fourteenth century and due to the fact that there are hardly any data left for the thirteenth century, I could only study statutes for that period. For this reason the study of the stylistic embedding of the stabilization of verb-last order could be performed only for the fifteenth and the sixteenth centuries (see Table 1).

3. Results

3.1. Linguistic embedding

3.1.0. Introduction

In this section I will deal only with combined results of all the styles. The stylistic differentiation will be dealt with in section 3.2. Table 2a shows the results of the investigation of the position of PPs, APs, NPs, and Adverbs relative to the verb in the different points of time (see the sentences 8–11).³ Figure 1 reflects the results of Table 2a. It is clear that I do not have enough data for some phenomena. In Gerritsen (1987) I deal in detail with these problems, but I will leave them aside here.

Table 2a and Figure 1 clearly show that there is no change in the position of adverbs relative to the verb: adverbs always occur before the verb. There are, however, enormous changes in the occurrence of VPP, VAP, and VNP structures. With regard to PPs, APs, and NPs it is very clear that there is an increase of verb-final order. In the remaining part of this section I will try to trace the linguistic factors that play a part in

Table 2a. The position of PPs, APs, NPs and Adverbs relative to the verb in the thirteenth, fourteenth, fifteenth, and sixteenth centuries

Period	c. 1275–1300		c. 1375–1400		c. 1475–1500		c. 1575–1600	
	%	N	%	N	%	N	%	N
VPP	100%	19	70%	30	83%	75	65%	130
VAP	100%	4	—	—	—	—	12%	8
VNP	39%	44	24%	21	28%	54	15%	115
Vadv	0%	12	0%	9	0%	40	0%	73

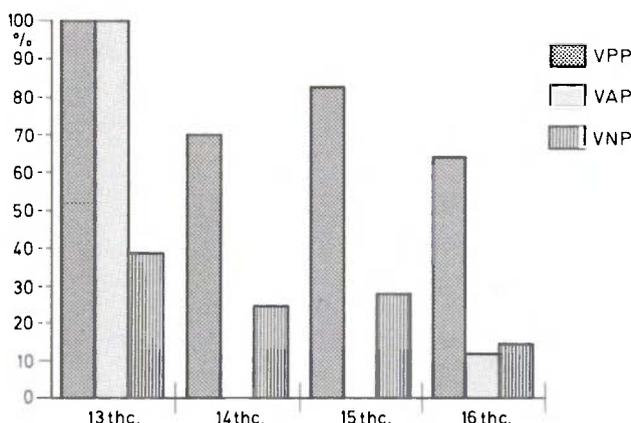


Figure 1. The position of PPs, APs, NPs, and Adverbs relative to the verb in the thirteenth, fourteenth, fifteenth, and sixteenth centuries (see Table 2 a for raw data)

this change. Owing to the fact that APs hardly occur in my corpus I cannot go into the linguistic factors that play a part in the decrease of VAP-structures. The decline of VAP-structures has been shown here only since it nicely consolidates the stabilization of verb-final order. I will first go into the linguistic aspects that are related to the decline of VNP-order (3.1.1.) and subsequently into those that are related to the decline of VPP-order (3.1.2.). Finally, I will discuss in section 3.1.3. what our knowledge about the linguistic embedding of the change in the direction of verb-final order shows us about its causes.

3.1.1. Decrease of VNP-structures

I have tested a number of factors that could have affected the occurrence of VNP-structures: length of the infinitive clause, relation of the NP to the verb, function of the NP, length of the NP, complexity of the NP,

case-marking, and lexical representation of the verb. Only the length of the infinitive clause, either counted in words or in constituents, did not have any statistically significant influence on the position of the NP relative to the verb.⁴

3.1.1.1. Factors that play a part in the whole period

The influence of the relation of the NP to the verb on its position relative to the verb is noticeable during the whole period. In the entire period under investigation, NPs that are sisters of V0 (NPs that have a very close relation to the V; see 6), (13), occur less often in VNP-structures than NPs that are sisters of V1 (14) or V2 (15) (see 6).

- (13) a. *alle de witte sayen te zieden in*
 all the white cloth to boil in
schoon water (16th c., Statutes: 375)
 clear water
 'to boil all the white cloth in clear water'
- b. *hetselve de deken ende eedt ofte twee syne*
 this the dean and master or two of his
vinders te kennen te geven (16th c., Statutes: 373)
 officials to desire to give
 'to let the dean and master or two of his officials know this'
- c. *te zine duerwaerder* (15th c., Chronicle: 71)
 to be process-server
- (14) *te laten ligghen in de passe den termyn van acht*
 to let lie in the position the period of eight
heuren (16th c., Statutes: 374)
 hours
 'to leave lie in the position for the period of eight hours'
- (15) *te schieten met blauwe lyste gaerne twee*
 to thread through with blue border thread two
schoten neffens den anderen (16th c., Statutes: 368)
 measures next to each other
 'to thread through with blue thread two measures next to each other'

Table 2b shows the occurrence of VNP- and NPV-structures for NPs that are sister of V0 and NPs that are sisters of V1 and V2. Although V1 and V2 NPs scarcely occur, it is very clear that they occur more often

after the verb than the V0 – NPs. The difference is significant for the thirteenth (X^2 , $p < .03^*$) and for the sixteenth century (X^2 , $p < .02^*$).

Table 2b. The position of NPs that are sisters of V0 and NPs that are sisters of V1 and V2 relative to the verb

Period	13th century			14th century			15th century			16th century		
	NPV	VNP	% VNP									
V0 – NPs	28	11	28%	32	12	27%	59	24	29%	126	40	22%
V1 + V2 NPs	1	6	86%	0	1	100%	2	2	50%	1	4	80%

With regard to the function of the NP it is hard to say whether V0 – NPs in the function of Direct Object (13 a) occur less often post-verbally than those in the function of Indirect Object (13 b) or Predicate Noun (13 c), since the majority of the V0 – NPs have the function of Direct Object (93%). Between the V0 – NPs with the different functions, however, there is no statistically significant difference in position relative to the verb.

3.1.1.2. Factors that play a role in a part of the period

Three factors affected the occurrence of VNP-structures only in a part of the period under investigation: length of the NP, case-marking and lexical representation of the verb.

The length of the NP determines its position relative to the verb in the fifteenth and sixteenth centuries: NPs in VNP-structures contain significantly more words than those in NPV-structures, but that is not the case for the thirteenth and the fourteenth centuries (Table 3). The

Table 3. The influence of the length of the NP in words on the position of NPs relative to the verb with the significances according to analysed of variance

Period	13th century		14th century		15th century		16th century	
	NPV	VNP	NPV	VNP	NPV	VNP	NPV	VNP
number	29	17	32	13	62	26	127	43
mean	1.9	1.6	4.1	5.8	2.1	4.8	2.3	5.7
SD	1.0	0.7	6.9	5.0	1.6	5.4	1.9	4.2
p-value	p = .31		p = .43		p = .001**		p = .000**	

influence of the length of the NP on its position relative to the verb increases significantly between the thirteenth and the sixteenth centuries (ANOVA $p < .0002^{**}$). My study shows that the occurrence of VNP-structures becomes more and more restricted by the length of the NP between the thirteenth and the sixteenth centuries.⁵

The question that arises is, of course, whether or not the greater length of the NPs after the verb in the fifteenth and sixteenth centuries results from a more complex structure of those NPs. Stockwell (1977) shows for example that in Old English – which is a verb-final language – NPs with a complex internal structure can occur partly or entirely after the verb. If the greater length of the NPs after the verb were a result of greater complexity of the NPs, this would imply that the position of the NP is affected by its complexity, not by its length. In order to investigate this I have made a distinction between three kinds of NPs:

- a. NPs with the structure (Det) (AP) N (cf. sentences 13 a, 13 c). I call these structures “simple NPs”;
- b. NPs with the structure (Det) (AP) Pro (16). I call these “pronominal NPs”:

(16) *hem te ziene*
 him to see
 ‘to see him’

- c. NPs with the structures (Det) (AP) N Sbar (19), (Det) (AP) N en/of (Det) (AP) N (18), (Det) (AP) N PP* (19), Sbar (20), (Det) (AP) N PP* Sbar apposition (23). I call these structures “complex NPs”:

(17) *begrepen te wesen de sayen die ghevonnist*
 included to be the clothes that judged
sullen worden (16th c., Statutes: 372)
 will be
 ‘to be included the clothes that will be judged’

(18) *sonder te moghen (...) hebben in sijn huise (...) enighe*
 without to may have in his house any
arne ofte saghelinghe (16th c., Statutes: 376)
 harvest or sawdust
 ‘without being allowed to have any harvest or sawdust in his house’

(19) *om de wed van der stede te*
 in order the law of the town to
vermakene (15th c., Chronicle: 43)

- remake
 'in order to remake the law of the town'
- (20) *om te bezyene* of men daer ene messe doen
 in order to look whether one there a mass do
zoude (16th c., Chronicle: 13)
 would
- 'in order to look whether one would hold a mass there'
- (21) *om te zyene die scoene sprynghende fonteynhen*
 in order to see the beautiful spouting springs
die zoe hoeghe op de gheborchten stonden ende
 which so high in the mountains stood and
zoveel scoen waters hudt sprynghende vas
 so much clear water out spouting was
eevelyck durende (16th Diary: 89)
 perpetual during
 'in order to see the beautiful spouting springs which stood
 high in the mountains and which produced so much clear
 water perpetually'

Table 4 shows the occurrence of VNP- and NPV-structures for simple, pronominal, and complex NPs.

Table 4. The position of simple, pronominal, and complex NPs relative to the verb

Period	13th century			14th century			15th century			16th century		
	NPV	VNP	% VNP	VPN	VNP	% VNP	NPV	VNP	% VNP	NPV	VNP	% VNP
simple NPs	27	17	39%	16	5	24%	39	15	28%	98	17	15%
pron. NPs	0	0	0%	8	0	0%	13	0	0%	13	0	0%
compl. NPs	2	0	0%	8	8	50%	10	11	52%	16	26	62%

It is clear from Table 4 that NPs with a complex structure occur both before and after the verb. As a consequence we can state that the greater length of NPs after the verb in the fifteenth and sixteenth centuries is not only a result of greater complexity. This is supported by the fact that analyses of variance with only simple NPs also showed that NPs after the verb contained significantly more words than those before the verb in the fifteenth and sixteenth centuries (fifteenth century, $p < .05^*$, sixteenth century, $p < .03^*$).

Table 4 shows further that the decrease in VNP-structures is related to the internal structure of the NP. The change does not take place in pronominal NPs. These occur invariantly before the verb. The decline of VNP-structures also does not take place in NPs with a complex internal structure, only in NPs with a simple structure. The tables show a statistically significant decrease in occurrence of VNP-structures (between the thirteenth and the sixteenth centuries X^2 , $p < .0001^{**}$ and between the fifteenth and the sixteenth centuries X^2 , $p < .04^*$).

Furthermore, my data indicate a relation between the case-marking of the NP and its position relative to the verb. Although case-marking disappeared fairly quickly in Dutch compared with, for example, German, many NPs in Middle Bruges have an unambiguous case-marking: it can be seen from the ending of an article, adjective, and/or substantive whether an NP is in the nominative, accusative, dative, or in another case. In order to investigate the relationship between case-marking of the NP and its position relative to the verb, I have distinguished unambiguous and ambiguous case-marking.⁶ Column A in Table 5 shows the position relative to the verb of NPs with unambiguous case-marking and column B the position of those with ambiguous case-marking. Only in the thirteenth century is there a statistically significant difference in position relative to the verb between NPs with ambiguous and unambiguous case-marking. The latter occur invariantly before the verb, whereas the former have that position in only 58% of the cases.^{7,8}

Table 5. The relationship between case-marking of the NP and its position relative to the verb with the significances according to Chi-squares^{7,8}

	A Unambiguous		B Ambiguous		Significancy differences A vs. B
	NPV	VNP	NPV	VNP	
13th c.	6 (100%)	0	23 (58%)	17	.04*
14th c.	3 (60%)	2	29 (73%)	11	.57
15th c.	9 (64%)	5	53 (72%)	20	.76
16th c.	22 (76%)	7	105 (76%)	33	.92

These data corroborate an old and often rejected theory that the loss of case-marking in Germanic has affected the change from OV to VO (Vennemann 1974). I shall come back to this in section 3.1.3.

A last factor that affects the position of NPs that are sisters of V0 (see 8 b) relative to the verb is the lexical representation of the verb. The

shift from NPV to VNP seems to have taken place in a lexically diffuse way: verbs with VNP-structures (22) never have NPV-structures (23) in the thirteenth century and vice versa.

(22) VNP: let weave (2 ×), guard (1 ×), buy (6 ×), forfeit (2 ×)

(23) NPV: pursue (5 ×), pay (1 ×), do (10 ×), keep (4 ×), tolerate (1 ×), shear (1 ×), improve (1 ×), say (1 ×), set (2 ×), search (2 ×)

Most of the verbs occur too infrequently for us to be sure that the NP will always occur at the same side of the verb. It is striking, though, that verbs with a higher frequency, such as 'buy' and 'do', always have the NP on the same side of the verb. My fourteenth-century data show the same tendency as those from the thirteenth century: most of the verbs with VNP-structures do not have NPV-structures, and vice versa. There are only two verbs in the fourteenth century that have NPs both to their left (24) and to their right (25). The fifteenth- and sixteenth-century data do not show any relationship between the lexical representation of the verb and the position of the NP.

(24) a. *die deken te daghen ten like* (13th c., Statutes: 156)
the dean to summon to the corpse
'to summon the dean to the corpse'

b. *enich werc te vercopene* (14th c., Statutes: 96)
some work to sell
'to sell some work'

(25) a. *te daghene sine zorghers elken up*
to summon his inspectors everyone for
xij d. (14th c., Statutes: 154)
xij d.

'to summon all his inspectors for xij d.'

b. *te verkopene binder stede ende*
to sell in town and
scephendomme
region under alderman's jurisdiction
van Brugge eneghe nieuwe fortciere (14th c., Statutes: 98)
of Bruges some new chests

'to sell some new chests in the town and in the region under the jurisdiction of the alderman of Bruges'

I have tried to find differences between the thirteenth/fourteenth-century verbs with the NP before the verb and those with the NP after the verb that could explain the difference in positioning of the NP. I have consid-

ered among other things whether pragmatic factors could be at work here. One could assume that some verbs require that their objects receive much attention and other verbs do not. Since constituents occurring in a relatively unusual position get more attention than those occurring in a relatively usual position, the difference in the position of the NP with different verbs could be related to a difference in the communicative value of the NPs that the verbs require. I have, however, not found evidence for this. Another reason for the difference between verbs in the position of the NP could be that some verbs constitute an idiomatic expression with the NP and that those expressions have retained an archaic word order. Pinkster (in press), for example, shows for Latin that the OV order occurs especially in pragmatic units as *bellum gerere* 'war to wage', in which the VO order never occurs. My data, though, do not give any evidence for this. It is clear that further research is required in order to unravel the lexically diffuse way in which the variation in position of the NP relative to the verb is determined in the thirteenth and the fourteenth century.

Summary. The decrease in VNP-structures has taken place only in NPs with a simple internal structure. The factors that are related to the position of the NP relative to the V change between the thirteenth and the sixteenth century. Case-marking of the NP plays a part in the thirteenth century, lexical representation of the V in the thirteenth and the fourteenth centuries and the length of the NP in the fifteenth and the sixteenth centuries. The influence of the length of the NP to its position relative to the verb increases in the period under investigation. I shall discuss in 3.1.3. what this knowledge about the linguistic embedding of the change tells us about its causes.

3.1.2. Decrease of VPP-structures

I have tested a number of factors that could have affected the occurrence of VPP-structures: length of the infinitive clause, relation of the PP to the V, function of the PP, length and complexity of the PP. Since the thirteenth century only has PPs after the verb (cf. Table 2), the investigation of the factors that play a part in the position of the PP relative to the verb had to be limited to the fourteenth, fifteenth, and sixteenth centuries. Nevertheless, I have also taken into consideration the data for the thirteenth century, because I wanted to be sure that not all the PPs of the thirteenth century had a characteristic stimulating positioning after the verb. Three of the four factors that I have investigated did not play

a part in the occurrence of the PP after the verb: the length of the infinitive clause, the relation of the PP to the verb and the function of the PP.⁹

The length of the PP is the only factor that affects the position of the PP relative to the verb. It plays a part in its position relative to the verb in the fourteenth, fifteenth, and sixteenth centuries: PPs in VPP-structures contain more words than those in PPV-structures (Table 6). The difference is statistically significant for the fifteenth and the sixteenth century and for the fourteenth century it is almost significant ($p < .07$). My study shows that the occurrence of VPP-structures becomes restricted by the length of the PP between the thirteenth and the fourteenth centuries. Note that many of the thirteenth-century PPs contain so few words that they should occur before the verb, if they occurred in the fourteenth century or later.

Table 6. The influence of the length of the PP in words on the position of PPs relative to the verb, with the significances according to analyses of variance

	13th century		14th century		15th century		16th century	
	PPV	VPP	PPV	VPP	PPV	VPP	PPV	VPP
number	0	19	9	21	13	62	45	85
mean	—	3,7	3.0	5.7	2.1	5.6	3.0	5.7
SD	—	1.2	1.5	4.2	0.6	5.3	1.1	6.4
p-value	—		p = .07		p = .02*		p = .006**	

In order to investigate whether or not the greater length of the PP is caused by a more complex internal structure, I have made a distinction between three kinds of PPs:

- a. PPs with the structure P (Det) (AP) N (cf. sentences 8 a, b). I call these structures simple PPs
- b. PPs with the structure P (Det) (AP) Pro (26). I call them pronominal PPs

(26) aen hem *te ghevene*
to him to give
'to give to him'

- c. PPs with the structures P (Det) (AP) N Sbar (27), P (Det) (AP) N en/of (Det) (AP) N (28), P (Det) (AP) N PP* (29), (Det) (AP) N PP* Sbar apposition (30). I call these structures complex PPs

- (27) *de schult te verhaelene* aen den meester die sulck een
 the debt to recover to the master that such a
 cnape te wercken geven sal (16th c., Statutes: 369)
 fellow to work give will
 ‘to recover the debt to the master who will give work to such
 a fellow’
- (28) *ende alle deze voorseide cueren te meersene ende te*
 and all these foresaid statutes to multiply and to
minderen biden heer ende bider
 reduce in the name of God and in the name of the
 wet (14th c., Statutes: 99)
 law
 ‘and to multiply and to reduce all these foresaid statutes in
 the name of God and in the name of the law’
- (29) *vonnesse te zegghen* met sinen vinders van
 sentence to say with his officials of
 den saien (13th c., Statutes: 358)
 the cloth
 ‘to pronounce sentence with his officials of the cloth’
- (30) *omme te verantwordene* upden heesch ghemaect ende
 in order to to account for the demand made and
 overghегheven voor Ulieden mijne voors.
 given in front of you my foresaid
 heeren bi
 masters by
 Jacoppe uten Poele jehens ende in prejudicie van
 Jacoppe uten Poele to and in prejudice of
 Jehanne Andries, joncwijf ende dienstbode wesende
 Jehanne Andries, young woman and servant being
 vander weduwe vanden
 of the widow of the
 Wijnghaerde (15th c., Public Trials: 1032)
 Wijnghaerde
 ‘in order to account for the demand made and given in front
 of you, my foresaid masters, by Jacoppe uten Poele to and in
 prejudice of Jehanne Andries, young woman and servant of
 the widow of the Wijnghaerde’

Table 7 shows the occurrence of VPP- and PPV-structures for simple, pronominal and complex PPs.

Table 7. The position of simple, pronominal, and complex PPs relative to the verb

	13th century			14th century			15th century			16th century		
	PPV	VPP	% VPP									
simple PPs	0	16	100%	7	10	59%	10	32	76%	41	59	59%
pron. PPs	—	—	—	—	—	—	2	0	0%	—	—	—
compl. PPs	0	3	100%	2	11	85%	1	30	97%	4	26	87%

It is clear from Table 7 that PPs with a complex structure occur after the verb more often than those with a simple structure. However, the greater length of PPs after the verb is not always a result of greater complexity of the PP. Analyses of variances with only simple PPs showed that in the fifteenth century PPs after the verb contained significantly more words ($m = 3.1$) than those before the verb ($m = 2.1$) ($p < .001^{**}$). The sixteenth-century simple PPs after the verb, however, were not statistically significantly longer ($m = 3.2$) than those before the V ($m = 2.8$). This implies that the postverbal position of sixteenth-century PPs is related to their complex internal structure. Due to the lack of native speakers, we can unfortunately not determine whether these sixteenth-century PPs owe their postverbal position to their complex internal structure or their greater length.

Summary. The only factor that is related to the position of the PP relative to the verb is the length of the PP. The length of the PP does not affect its position relative to the verb in the thirteenth century, but it does in the fourteenth, fifteenth, and sixteenth centuries. PPs after the verb contain more words than those before the verb. This greater length is not caused by greater complexity in the fourteenth and the fifteenth century, but it is in the sixteenth.

3.1.3. Internal causes

In section 1 I indicated that there are two changes in Dutch with regard to the position of constituents relative to the V:

- a. The change from Proto-Germanic XV to XV/VX in the Middle Ages.
- b. The change from XV/VX in the Middle Ages to XV in the present.

My study reports *de facto* only on the last change. I have shown that verb-final order stabilized in the dialect of Bruges between the thirteenth and the seventeenth centuries (cf. 3.1.0.) and I have indicated which

linguistic aspects are related to this change (cf. 3.1.1. and 3.1.2.). It is the purpose of this section to determine whether the knowledge of the linguistic factors that played a part in this change give us more insight into its causes. The bulk of this section will deal with the change that I could document well, change (b). Nevertheless, I shall also go into the possible causes of the change that I could not document (a), since my data shed some light on its causes and since this change has probably had some influence on change (b). I shall first deal with change (a) and subsequently with change (b).

3.1.3.1. The change from Proto-Germanic XV to XV/VX in the Middle Ages

We have seen in 3.1.1.2. that in the thirteenth century NPs with unambiguous case-marking occur before the verb significantly more often than those with ambiguous case-marking. As pointed out above, this result agrees with an old but often rejected theory that erosion of the case-system results in word-order change. Vennemann (1974) claims that languages with the so-called SOV-order can only exist if subject and object have distinctive case-marking (31 a). Topicalization of the object (31 b) does not result in an ambiguous sentence in such a language since the case-marking shows which NP has to be interpreted as object and which as subject. Topicalization of the object in an SOV-language without clear case distinctions between subject and object results, however, in ambiguous sentences. The sentences in “normal” order (SOV) and those with a topicalized object (OSV) both have the same sequence of NPs: NP NP V. If case-marking is lacking, it is not clear which NP is the object and which is the subject. SOV languages that lose their case-marking will therefore change into SVO-languages – according to Vennemann, because topicalization of the object produces a structure that is quite different from the normal structure (NP V NP, cf. 32 a): NP NP V (32 b).

- (31) a. *Pater filiam amat*
 S O V
 NP NP V
- b. *Filiam pater amat*
 O S V
 NP NP V

- (32) a. *The father loves the daughter*
 S V O
 NP V NP
- b. *The daughter the father loves*
 O S V
 NP NP V

For a language that loses its case-marking, this theory predicts that constituents with case-marking will occur before the verb and those without after. My data do not completely confirm this theory since there are NPs with ambiguous case-marking that occur before the verb (cf. Table 5). The fact that NPs with unambiguous case-marking (column A) occur without exception before the verb in the thirteenth century is, however, strongly in line with Vennemann's hypothesis.¹⁰ It looks as if the loss of case-marking has indeed affected the change from Proto-Germanic XV to Middle Bruges XV/VX. This change seems to be caused by an internal linguistic factor. Whether external factors also played a part unfortunately can not be investigated in this so badly documented period of Dutch.

I have shown in 3.1.1.2. that the position of NPs that are sisters of V0 (see 6 b) relative to the verb is also determined by the lexical representation of the verb that governs the NP in the thirteenth century. The question is now whether these data give us some insight into the causes of the change under discussion. Unfortunately, I have not been able to establish whether all verbs with an NP to their right (22) in the thirteenth century have a feature that the verbs with an NP to their left (23) do not have. Therefore, I do not know which characteristics of the verb determine whether the NP is placed to its left or to its right. It is, however, plausible that there is a relationship between the lexical representation of the verb that governs an NP and its case-marking. It could be that case-marking of the NP is lost sooner in NPs governed by some verbs than in NPs governed by other verbs. This might have led to the fact that the change from XV in the direction of VX proceeded more quickly in some verbs than in others. The thirteenth-century data fully corroborate the hypothesis that the change from Proto-Germanic XV in the direction of VX proceeded in a lexically diffuse manner and my fourteenth-century data offer support for this idea.

I realize that my finding that some verbs seem to govern to the left (those with the NP to their left) and some to the right (those with the NP to their right) in one and the same period do not at all fit in with

Government-and-Binding theory, since the direction of government is category-bound. The data are so clear, though, that I believe that this theory has to be changed in this respect for a language in change. Furthermore, I would like to indicate that my findings on the lexically diffuse character of a syntactic change are completely in line with Bickerton's Lexical-Learning Hypothesis (Bickerton 1988). Apart from that, we also find in other languages that the change from OV to VO occurs sooner with some verbs than with others. Marchese (1984) shows, for example, that this change in Dewoin, one of the Kru languages, commences with one verb: *gwe* 'to finish'.

My last remark in this section is not about the possible internal causes of the change from Proto-Germanic XV to VX, but about the remarkable fact that this change did not fully materialize in spite of the occurrence of so many structurally ambiguous surface structures. The route to reinterpretation of XV as VX seemed to be paved. Table 2 shows that in the thirteenth century 100% of the PPs, 100% of the APs, 39% of the NPs and 0% of the adverbs occur after the verb. The mean occurrence of constituents after the verb is 59%. It seems as if the language had already moved more than halfway in the direction of a VX language, but we know that it changed back to XV. These data give us some insight into the extent to which language learners have to be exposed to structurally ambiguous surface structures before reanalysis takes place. They show that very ambiguous surface structures do not always lead to reanalysis. My data also provide some insight into which structures are relevant for the emergence of reanalysis. It seems that the position of V0 – NPs (which was already known) and the position of adverbs are very important here.

3.1.3.2. The change from XV/VX in the Middle Ages to XV in the present

We can assume that the change from XV/VX in the thirteenth century to almost verb-final at the end of the sixteenth is to some extent related to the change from Proto-Germanic XV to XV/VX. The fact that the latter change was not completely implemented may have sown the seeds for the change back to verb-final. In order to understand why Dutch changed back from XV/VX to XV it is therefore of great importance to trace why the change to verb-final was not realized. I will show below that there are two internal linguistic factors that could have had a restraining effect on this change.

I have shown in Gerritsen (1984) that the most important of the six internal factors that (according to Stockwell 1977) would have led to reinterpretation of Old English structures such as (33) to structures such as (34) did not occur as frequently in Dutch as in English.

- (33) S Vf X V structures
- (34) SVf V X structures
- (35) S Vf X structures

This concerned the occurrence of single-unit verbs, i. e., single finite verbs (Vf) without auxiliaries. The frequent occurrence of single-unit verbs in Old English resulted in a high frequency of sentences with structure (35). As a consequence the child acquiring its language deduced that English was not a verb-final language. I have indicated that single-unit verbs probably did not occur as frequently in Old Dutch as in Old English since the change from a synthetic to periphrastic verb system had taken place much quicker in Dutch than in English. As a result, structures (such as 35) that could lead to reinterpretation as a non-verb-final language, occurred less often in Dutch than in English. The difference in rapidity of change from a synthetic to a periphrastic verb system not only (partially?) explains why English developed into a VX language and Dutch into a XV language, but also (partially?) explains the whole split in the Germanic languages in this respect: the development to VX in English and the Scandinavian languages and the development to XV of German, Frisian, and Dutch. The possible causes of this difference in the development of verb systems are discussed in Gerritsen (1984).

The results of my present study suggest that another internal factor that according to Stockwell (1977) would have led to reinterpretation of Old English structures such as (33) to structures such as (34) did not occur as frequently in Dutch as in English. It concerns the position of adverbs. Stockwell indicates that the frequent occurrence of adverbs after the verb (29% in Old English according to Canale 1976) might have led to the destruction of the verb-final appearance of Old English. Marchese (1984) has shown that the postverbal position of adverbs was indeed a factor that played a part in the change from XV to VX in the Kru languages. We have seen in Table 2 and Figure 1 (3.1.0.) that adverbs always occur preverbally in my corpus of Middle Dutch, never postverbally. This implies that there is another internal linguistic factor that played a part in the change from XV to VX in English, but that was not present in Dutch. It is striking that the data of Ebert (1980) for fifteenth- and sixteenth-century German support this idea. Adverbs occurred post-

verbally in his data only in 3% of all the possible cases. Since the change in the direction of VX did not continue either in German, this sustains the hypothesis that the change from XV/VX back to XV was caused not only by the fact that the change from the synthetic to the periphrastic verb system took place sooner in German and Dutch than in English, but also by the fact that adverbs in the former occurred practically always preverbally and in the latter frequently postverbally.¹¹ The question that arises now is why in the period during which structures such as (34) are produced adverbs occur postverbally in English frequently, but not in Dutch and German. I do not have an answer to this question.

I have indicated that two internal linguistic factors might have influenced the fact that the change from Proto-Germanic XV to VX did go ahead in English, but not in German and Dutch: the difference between the languages in the tempo of the change from the synthetic to the analytic verb system and in the position of adverbs relative to the verb. These factors might have sown the seeds for the change back to verb-final.

In 3.1.1.2. we saw that the position of the NP relative to the verb depends on the lexical representation of the verb in the thirteenth and the fourteenth century. Unfortunately, I have not been able to ascertain which features of the verbs determine the position of the NP. The lexically diffuse character of the change therefore cannot give us insight into the internal causes of the change. The changes in the factors that affect the position of the NP relative to the verb, however, cast some light on the possible internal causes of the change. The two fourteenth-century exceptions (24, 25) may become clearer if we realize that the length of the NP affects its occurrence after the verb in the fifteenth and the sixteenth centuries. The two verbs that have NPs both to their left and to their right have the relatively long NPs to their right (25) and the relatively short NPs to their left (24). The following is a tentative explanation for the fact that the occurrence of VNP-structures is determined by case-marking and lexical representation of the verb in the thirteenth century, but in the fifteenth and sixteenth centuries by length of the NP. It could be that the fourteenth-century child acquiring its language had difficulty discovering which verbs had the NP to the left and which to the right. Subsequently language-production factors interfered. They caused NPs that had to occur before the verb to occur after the verb if they were long. The child acquiring its language subsequently deduced that the position of the NP relative to the verb was determined by the length of the NP and not by the lexical representation of the verb. As a result,

only long NPs occurred postverbally in later stages of Dutch. By analogy to the influence of the length of the NP on its position relative to the verb, length also began to play a part in the position of the PP relative to the verb. This hypothesis is fully confirmed by my data.

3.1.3.3. Summary

I have indicated that the erosion of the case system seems to have played a part in the change from Proto-Germanic XV to VX/XV in Dutch, and that the lexical representation of the verb probably had some impact on case-marking and consequently also on the position of the NP relative to the verb. Furthermore, I have shown that the change from XV/VX back to XV seems to be related to the fact that the change from XV to VX did not proceed well in Dutch. I have attributed this failure to two internal linguistic factors: the fact that the Dutch verb system changed from synthetic to periphrastic sooner than the English one, and the fact that adverbs only occurred preverbally in Dutch. The change to almost completely verb-final order occurred by reinterpretation. It was difficult for children to learn which verbs had an NP to their right and which ones to their left. Therefore, it was deduced that the position of elements after the verb was related to its length: long NPs and PPs occurred after the verb.

3.2. Stylistic embedding as an indicator of the internal and external factors involved in the stabilization of verb-final order

Owing to problems of data gathering, the stylistic embedding of the change could be studied only for the fifteenth and the sixteenth centuries. I shall first go into the stylistic embedding of the changes in the position of the NP relative to the verb (3.2.1.) and secondly into the stylistic embedding of the change in the position of the PP relative to the verb. In the last paragraph of these sections I shall discuss what our knowledge about the stylistic embedding of the changes shows us about its causes. 3.2.3. deals with the causes of both the changes in a wider perspective.

3.2.1. VNP-structures

In Table 4 we saw that complex NPs occur after the verb significantly more often than simple NPs do. Since it is possible that complex NPs occur more often in one style than in another, it could be that a stylistic

difference in the occurrence of VNP-structures is not *de facto* a stylistic difference in the occurrence of VNP-structures but a stylistic difference in the occurrence of complex NPs. In order to avoid such misinterpretations I have investigated the stylistic differences in the occurrence of VNP-structures in the fifteenth and sixteenth century separately for simple and complex NPs. Table 8 shows the raw data.

Table 8. The position of complex and simple NPs relative to the verb in different styles

	Complex NPs			16th century			Simple NPs			16th century		
	15th century						15th century					
	NPV	VNP	% VNP									
Statutes	5	4	44%	21	8	28%	12	4	5%	28	1	3%
Chronicles	2	2	50%	1	1	50%	5	3	38%	22	5	19%
Diaries	11	2	15%	3	11	79%	8	4	33%	30	8	21%
Trials	5	3	37%	4	6	60%	14	4	22%	18	3	14%
<i>Total</i>	23	11	32%	29	26	47%	39	15	28%	98	17	15%

It appears that there are, for both categories of NPs, no statistically significant (X^2) stylistic differences in the occurrence of VNP-structures in the fifteenth century. In the sixteenth century, however, we find the VNP-structures significantly more often in Diaries than in Statutes (X^2 , $p < .03^*$ for only simple NPs, X^2 , $p < .002^{**}$ for complex NPs), almost significantly (X^2 , $p < .06$ for simple NPs) more often in Chronicles than in Statutes and almost significantly more often (X^2 , $p < .06$ for complex NPs) in Trials than in Statutes. The stabilization of verb-final order with both complex and simple NPs has clearly taken place quicker in Statutes (the most formal style) than in the less formal styles. Postposition of NPs occurs in sixteenth-century Statutes almost only with complex NPs. Whereas the majority of the complex NPs occurs postverbally in other styles, the majority occurs preverbally in Statutes. It seems that the writers of Statutes were already well aware of a constraint against postposing NPs. They hardly violated it for simple NPs and, compared to other styles, only rarely for complex NPs. By the end of the sixteenth century the current norm with regard to the position of NPs relative to the verb seemed to be already established in Statutes. These results are to a great extent the same as those of Ebert (this volume). He also found that verb-final order was favored in the language of the chancery.

In Table 3 we saw that the occurrence of VNP-structures is related to the length of the NP in the fifteenth and sixteenth centuries. The question

is now whether the influence of the length of the NP on its position relative to the verb is similar for all styles. In order to investigate this I have assembled the data in Table 9.

Table 9. The influence of the length of the NP on its position relative to the verb in different styles with the significances according to analyses of variance

Statutes	15th century				16th century			
	N	M	SD	p-value	N	M	SD	p-value
NPV	17	2.9	2.3		49	2.9	2.3	
VNP	8	4.3	2.4	.20	9	6.9	3.1	.0001**
Chronicles								
NPV	7	2.2	1.9		23	1.7	0.7	
VNP	5	5.0	5.8	.27	6	3.2	1.9	.006**
Diaries								
NPV	19	1.6	1.0		33	1.6	0.5	
VNP	6	3.0	1.1	.009**	19	6.2	5.3	.0001**
Public Trials								
NPV	19	1.9	0.7		22	2.5	2.9	
VNP	7	6.7	9.2	.03*	9	5.1	3.2	.04*

In the fifteenth century, we find a stylistic difference in the influence of the length of the NP on its position relative to the verb. Length only plays a part in the informal styles such as Diaries and Public Trials. In those styles, NPs after the verb are significantly longer than those before it. The length of the NP does not, however, influence its position relative to the verb in the more formal styles (Statutes, Chronicles). The occurrence of the archaic VNP-construction is, in the more formal styles of the fifteenth century, not yet restricted by the length of the NP, but it is in the informal styles. In the sixteenth century the length of the NP affects its position relative to the verb in all styles. In all sixteenth-century styles NPs after the verb are longer than those before it. The NPs in VNP-structures in Chronicles, however, are significantly (4×2 ANOVA, $p < .05^*$) shorter than those in all the other sixteenth-century styles (M = 3.2 in Chronicles, compared with 6.9 in Statutes, 6.2 in Diaries, and 5.1 in Public Trials).

The stylistic embedding of the change from NPV/VNP to NPV is complex. The fifteenth-century data show that the change has proceeded further in informal than in formal styles, since the occurrence of VNP-structures is restricted by the factor "length" in informal but not in formal styles. This stylistic differentiation indicates that the stabilization of verb-final order is caused by internal linguistic factors, and that language users

were not yet aware of the fact that the occurrence of VNP-structures becomes more and more restricted by the length of NP. Therefore, they do not apply this mechanism in styles with much attention to the use of language.

The stylistic differentiation in the sixteenth century shows that the change in the direction of NPV creeps into the language via two paths. In the first place it comes through the most informal styles. The length of the NP has a less prominent effect on its position relative to the verb in Chronicles than in Diaries and in Public Trials. This indicates again that what we have is a change caused by internal linguistic factors. The change, however, also creeps into the language via the style with the most attention to the use of language, the Statutes. Statutes have the new order significantly more often than Diaries, and the length of the NP plays a more prominent part in its position relative to the verb in Statutes than in Chronicles. This indicates that we are dealing with an external factor that affects the use of the new construction in a style in which much attention is paid to the use of language. I shall come back to this in 3.2.3.

3.2.2. VPP-structures

Table 7 shows that complex PPs occur after the verb more often than simple PPs. Since it is possible that complex PPs occur more in one style than in another, we again have to make a distinction between complex and simple PPs in order to avoid misinterpretations. Therefore I have investigated the stylistic differences in the occurrence of VPP-structures in the fifteenth and the sixteenth century for simple and complex PPs separately. Table 10 shows the raw data.

There are no significant stylistic differences in the position of the PP relative to the verb for complex PPs. They occur almost invariantly

Table 10. The position of complex PPs and simple PPs relative to the verb in different styles

	Complex PPs 15th century			16th century			Simple PPs 15th century			16th century		
	PPV	VPP	% VPP	PPV	VPP	% VPP	PPV	VPP	% VPP	PPV	VPP	% VPP
Statutes	0	14	100%	4	19	83%	1	11	92%	18	20	53%
Chronicles	0	2	100%	0	2	100%	4	11	73%	2	15	88%
Diaries	1	4	80%	0	3	100%	4	7	64%	12	14	54%
Trials	0	10	100%	0	2	100%	3	3	50%	9	10	53%
<i>Total</i>	1	30		4	26		12	32		41	59	

postverbally. There are, however, revealing stylistic differences for simple PPs. Verb-final order occurs significantly more often in the fifteenth-century Public Trials than in the fifteenth-century Statutes (X^2 , $p < .04^*$). This suggests that the change creeps into the language via the most informal style. The sixteenth-century data show a similar pattern to the one we found for the position of NPs relative to the verb. The archaic VPP structures occur significantly more often in Chronicles than in less formal styles like Diaries (X^2 , $p < .02^*$) and Public Trials (X^2 , $p < .02^*$), but also more often in Chronicles than in documents of the most formal style, the Statutes (X^2 , $p < .01^{**}$). This shows that the change from postverbal to preverbal position of the PP creeps into the language via two paths: both the less formal styles and the most formal style. This stylistic embedding indicates that the change is caused by both internal and external factors. There must be an external factor that affects the use of PPV in a style with much attention to the use of language. I will come back to this in 3.2.3.

I have shown in 3.1.2. that the postverbal occurrence of PPs was related to both the length and the complexity of the PP in the fifteenth century, but in the sixteenth century only to its complexity. In order to investigate whether there is a stylistic differentiation in the influence of the length of the PP on its position relative to the verb I have therefore only taken into consideration simple PPs. Table 11 shows the results.

Table 11 shows that PPs after the verb are always longer than those before it in almost all styles, but that the influence of the length of the

Table 11. The influence of the length of simple PPs on their position relative to the verb in different styles with the significances according to analyses of variance

Statutes	N	15th century			p-value	N	16th century		
		M	SD				M	SD	p-value
PPV	1	2.0	.00	.16	18	2.7	.91	.01**	
VPP	11	3.0	.63		20	3.6	1.1		
Chronicles									
PPV	4	2.2	.95	.10	2	2.5	.71	.66	
VPP	11	3.3	1.01		15	2.7	.70		
Diaries									
PPV	4	2.3	.50	.25	12	3.1	.29	.23	
VPP	7	3.0	1.15		14	2.8	.80		
Public Trials									
PPV	3	2.0	.00	.11	9	2.9	.78	.22	
VPP	3	3.3	1.15		10	3.5	1.26		

PP on its position relative to the verb plays a significant role only in the sixteenth-century Statutes. The occurrence of the archaic VPP-construction is more restricted to the length of the PP in the Statutes of the sixteenth century than in the other styles.

The stylistic differentiation in the distribution of VPP-structures in the fifteenth century shows that the change from VPP in the direction of PPV occurred unconsciously. The variable seems to be an indicator since there is no stylistic differentiation. This suggests that the change is caused by internal linguistic factors. In the sixteenth century, however, we have a complex stylistic differentiation. The change seems to creep into the language via two paths. In the first place unconsciously via the most formal styles. We have seen that the archaic VPP-construction occurred less in Diaries and Public Trials than in Chronicles. The change in the direction of PPV seems, however, also to occur consciously. We have seen that the incidence of VPP-structures was only affected by the length of the PP in the Statutes. Furthermore we have seen that VPP-structures occur more often in Chronicles than in Statutes. This indicates that there must be an external factor increasing the use of PPV in cases in which much attention is paid to use of language.

3.2.3. External causes

We have seen above that the stylistic embedding of the change in the direction of verb final is similar for PPs and NPs in the sixteenth century.¹² Until the sixteenth century, the change seems to proceed relatively unconsciously and it enters the language slowly via the informal styles. This part of the change seems to be induced by internal linguistic factors. In the sixteenth century, however, it looks as if the change is also induced by another factor, since the new variant, XV, is found more often in the most formal style, and since the occurrence of the old variant in that style is highly restricted by the length of the constituent. We have to discover now which external factor may have had such an influence in this period that it affected the occurrence of verb-final order in the most formal style.

The stabilization of verb-last order in German has been attributed to the imitation of Latin patterns (Behaghel 1932). In principle this external factor could also have played a role in the rise of the same orders in Dutch. However, it is very unlikely that the rise of this order could be due to the influence of Latin. Firstly, it has not been demonstrated that Latin is verb-final (Pinkster in press). Secondly, it is improbable that a

nearly dead language like Latin could influence the syntactic development of a spoken language in a period like the Middle Ages when the majority of the people were illiterate. Thirdly, Ebert (1980, this volume) has shown that authors who had learned Latin did not use more verb-final constructions than those who had not learned Latin. This indicates that the stabilization of verb-final order is not due to the influence of Latin. As a consequence we must look for another external factor that could have affected this change.

I suggest that it might be due to the emergence of a norm for the written language. Standardization of the written language took place in the whole of Europe after the invention of the art of printing (ca. 1450). One of the characteristics of the standardization of a written language is the attempt to make it more systematic: variation is experienced as undesirable and is eliminated (Joseph 1987: 108 ff.). We find numerous examples of this in the last quarter of the sixteenth century. In that period the first grammars and dictionaries of the national languages of Europe appeared and these presented preferences for certain variants of phonological, morphological, lexical, and syntactic variables. The fact that we find the archaic VX-constructions less in the style in which most attention has been paid to language-use indicates in my opinion that the occurrence of NPs and PPs on both sides of the verb was seen as unsystematic and that therefore one variant was chosen, the most frequent one: XV.

The hypothesis that the stabilization of verb-final order in Dutch is caused by the emergence of a norm for the written language is supported by Ebert's (1980, this volume) data on the stabilization of verb-final order and other standard variants in Middle High German. He found that they occurred most often in the writings of people with a higher education and/or profession and in the language of the chancery, also styles in which writers probably tried to meet a norm.

The problem with these external factors is, however, that we have no proof. Grammars of sixteenth-century Dutch rarely speak of syntactic phenomena, let alone mention that verb-final constructions are preferred to non-verb-final ones. However, the stylistic differentiation of the changes in both German and Dutch indicate strongly that the influence of a norm must play a part. In this respect I agree completely with Thomason – Kaufman (1988: 57 ff.) that an explanation should be as complete as possible. If a change cannot be explained fully by internal causes and if external ones are plausible, we can postulate external causation. This certainly holds in the stabilization of verb-final order in this period, since we find it in both German and Dutch in a number of different constructions, in the same period and in the same styles.

4. Internal and external factors in a theory of syntactic change

I hope to have shown in this paper that the stabilization of verb-final order in Middle-Dutch infinitive clauses is entangled in a complex network of internal factors of syntactic change (development of the verb system from synthetic to periphrastic, occurrence of preverbal adverbs, the language-production factor that long constituents occur at the end of the construction) and one external factor, the norm. At this moment it is difficult to evaluate the precise interaction of internal and external factors in the change under discussion. I suggest, though, that there is a relation. I believe that if the art of printing had been invented much earlier, let's say in the thirteenth century, Dutch would have developed into a VX language. The moment at which an external factor begins to affect a syntactic change initiated by internal linguistic factors is of great importance to its development. Other papers in this volume show that internal factors pave the way for the different routes that a change can follow, but that the route that is taken is often determined by external factors (Aitchison, Fuji, Giacalone Ramat, this volume). The data presented in this paper support this hypothesis.

At the conclusion of this study I have to state that the actuation of a syntactic change is still a problem hard to handle (Gerritsen – Stein, this volume). It is extremely difficult to unravel the internal and external factors of a syntactic change in the past and my study shows this well. It might be that it is somewhat easier for languages that are better documented, such as German and English, and it might be easier if data about more similar constructions are studied (I hope to substantiate my claims in the future with the results of a study of the stabilization of verb-final order in sentences like 2–4). Nevertheless, it will remain difficult to identify the causes of an historical syntactic change. This is also due to the fact that we do not yet have a theory of internal and external factors of syntactic change that can be used to evaluate the possible causes of a change. I believe that it is therefore of great importance to study syntactic change and its causes in the present. This will help us to achieve more insight into the causes of syntactic changes, to build a theory of internal and external causes of syntactic change, and to evaluate claims made about causes for syntactic changes in the past.

Notes

1. These base rules can account for the structure of relative, subordinate, and infinitival clauses. The structure of the main clause is deduced by applying a rule that moves the finite verb to the position of the Comp in cases in which it is empty, followed by WH-movement.
2. Gerritsen (1987: Appendix) gives a detailed analysis of the sources that are used for this survey.
3. Pronominal NPs and NPs with a complex structure are left out of consideration in Table 2 since the former always occur before the verb and the latter always after it. I shall come back to this later.
4. Significance levels under .05 are considered significant. Significance levels between .05 and .09 are always taken into consideration as showing important tendencies.
5. Since the position of the NP relative to the verb is related to the length of the NPs in the fifteenth and sixteenth centuries, I have always introduced the variable length as a co-variable in my investigations of the factors that could determine the occurrence of VNP-structures in those centuries. It appeared, however, that this factor never played a part.
6. NPs that can never have a clear case-marking such as NPs in the form of a sentence are left out of consideration.
7. Pronominal NPs never occur in my thirteenth century data (see Table 4). As a consequence, this factor cannot interfere in the relation between unambiguous case-marking and preverbal position of the NP.
8. There is good reason to believe that the relation between case-marking of the NP and its position relative to the verb is even stronger. NPs with accusative-nominative case-marking have, in infinitive clauses, an unambiguous case *de facto*, since these constructions never have a subject (cf. 2.1.). As a consequence, an NP with an accusative/nominative case-marking is unambiguous in an infinitive clause since it can never be a subject. The relationship between case-marking of the NP and its position relative to the verb in the thirteenth century is much stronger if we consider NPs with accusative-nominative casemarking unambiguous ($p < .0018^{**}$). In that case too, there are no significant differences for the fourteenth, fifteenth, and sixteenth centuries (see notes 4 and 5).

Table. The relationship between case-marking of the NP and its position relative to the verb with the significances according to Chi-squares

	Unamb. + amb. acc./nom		Ambiguous		Significancy differences
	NPV	VNP	NPV	VNP	
13th c.	25 (100%)	7	4 (29%)	10	.0018**
14th c.	28 (60%)	9	4 (67%)	2	.78
15th c.	51 (64%)	22	11 (79%)	3	.52
16th c.	109 (76%)	37	18 (86%)	3	.27

9. Since the position of the PP relative to the verb is related to the length of the PPs in the fifteenth and sixteenth centuries, I have always introduced the variable length as co-variable in my investigations of the factors that could determine the occurrence of VPP-structures in those centuries. It appeared, however, that this factor never played a part.
10. If we consider NPs with accusative/nominative case-marking unambiguous (see note 8) the data confirm Vennemann's hypothesis even more strongly, namely that the disappearance of case-marking has played a part in the change from Proto-Germanic OV to VO, for in that case there are only 4 NPs with ambiguous case-marking that occur before the verb.
11. The other factors that would have destroyed the verb-final appearance of Old English according to Stockwell — extraposition of relative clauses, conjuncts, and appositives and postdeposition of afterthoughts — also occur in Middle Dutch (cf. Table 4). This implies that the postverbal position of adverbs and the occurrence of single-unit verbs must have played the major part in the change to VX.
12. It could be the case that the stabilization of verb-final order is not a real syntactic change but an artefact of the fact that thirteenth-century Dutch reflects the spoken language more than sixteenth-century Dutch. In that case the frequent occurrence of postverbal constituents in the thirteenth century could have been caused by discourse factors (cf. Ebert, this volume). However, this does not seem to hold for my data, since the most informal styles, which should reflect the spoken language best, show fewer postverbal constituents than the more formal styles.

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Word order change by grammaticalization

Christian Lehmann

1. Introduction

In traditional historical-comparative linguistics, syntactic change played a relatively minor role. What is now seen to form the center of syntax by many linguists, viz., order of words or constituents, figures but marginally in the works of K. Brugmann, B. Delbrück, H. Paul, and also of most of the modern Indo-Europeanists. This has various reasons. One of them lies in the prevailing interest of received Indo-European linguistics in the reconstruction of Proto-Indo-European. For reasons that have been discussed repeatedly in the literature (cf. Vincent 1980), reconstruction in the area of syntax is less certain than in the other areas of the linguistic system. Moreover, most of the ancient Indo-European languages have free word order. The most simple and probably correct hypothesis is that this was also true of Proto-Indo-European. This, however, entails that no revolutions in the rules of word order took place in the span bridged by reconstruction, namely the span between Proto-Indo-European and the specific Indo-European languages, which is of greatest interest to researchers. Crucial changes took place only at stages with which historical-comparative linguistics is but marginally concerned, namely on the way from the ancient to the modern Indo-European languages. These historical changes are relatively well-known individually, but not yet sufficiently integrated into a general-comparative theory of language change.

A completely new approach to the investigation of word-order change was taken in the sixties in general-comparative linguistics. In his epochal work of 1963, J. Greenberg showed that the sequential position of linguistic signs, in particular main constituent order, is subject to implicational laws. In Greenberg 1969, he demonstrated how these laws can be dynamicized, i. e., how they are to be applied not only in synchrony but also in diachrony. These so-called diachronic universals appeared to many linguists to be an appropriate basis for a principled description of

syntactic change, especially word-order change. Diachronic basic word-order typology was promoted especially in various articles by Th. Vennemann (1974) and W. P. Lehmann (1973). In diametrical contrast to traditional historical-comparative linguistics, these authors saw the syntax, especially word order, in the center of the functioning of the language system. They tried to base language types on order types and to reduce grammatical change to order change.

Today, these attempts may be considered to have failed; cf., e. g., Comrie (1981: ch. 10.3) and Ch. Lehmann (1982) for a thorough criticism. One of their methodological mistakes was over-simplification paired with immunization against falsification. For the present purpose, a theoretical mistake is of greater interest. It lies in the isolation and hypostatization of one grammatical phenomenon, namely word order. There was practically no reflection on the role of word order in the linguistic system, on its conceptual and systematic status and, further, on its connection with other grammatical phenomena.

2. Word order in the syntactic system

In traditional interpretation, word order is one of the devices for the expression of grammatical meanings. I will assume that grammatical meanings are meanings and need not be called functions or anything else. H. Paul (1920: 123) gives the following list of devices for the “linguistic expression of the connection of ideas”, which I render in slightly modernized terminology:

1. juxtaposition of words;
2. sequential order of words;
3. sentence stress;
4. intonation;
5. tempo;
6. grammatical words;
7. inflection.

E. Sapir (1921: 61) sets up the following six main types of grammatical processes:

1. word order;
2. composition;

3. affixation;
4. internal modification;
5. reduplication;
6. stress and pitch.

The differences between the two lists derive partly from the fact that Paul refers only to the means for the linguistic expression of the connection of ideas, whereas Sapir deals, more generally, with grammatical processes. It should be noted that Paul distinguishes, inside sequencing, between mere juxtaposition and order. What is important at the moment, however, is that both authors class sequential order as one of the grammatical expression devices beside others like prosody and morphological modification (inflection). Even today it is customary to say of particular syntactic relations such as the relation of the direct object that they can be expressed either by word order (for example, in English) or by inflectional morphology (for example, in Latin).

If we consider the syntagmatic position of linguistic signs in a broader context, this conception becomes questionable (cf. Ch. Lehmann 1985: § 1). Commonly a distinction is made between fixed and free word order. By fixed word order an order is meant that is determined by purely grammatical rules, i. e., by rules that refer exclusively to the categories of the linguistic signs involved and their mutual syntactic relation. By free word order an order is meant which is not subject to grammatical rules, but determined by more semantic considerations or by considerations of functional sentence perspective (called "pragmatics" by some). For example, the position of the main verb in declarative sentences is fixed in German, as it is completely determined by rules which refer to the categories of the sentence (the sentence type) and of the verb. In Latin, on the contrary, it is free, because it is not determined by such rules and instead depends essentially on the theme-rheme structure and the focus-background structure.

However, it should be clear that the distinction between fixed and free word order is not an absolute one. On the one hand, there are possibilities in German of varying the verb position even within one and the same sentence type – I will come back to this in section 6. On the other hand, even in Latin there is a tendency, which is independent of functional sentence perspective, towards final position of the verb. The basic idea of this division must therefore be that a word-order pattern is the more fixed the more it is subject to rules of grammar.

Expression of meaning is bound up with the possibility of choice. If I am forced by the rules of the system to use a certain expression, then I

cannot convey a meaning by this expression because it does not contrast with any other expression. Hence it becomes doubtful in which sense it shall be said of a fixed word order that it serves the expression of some meaning. In this framework this appears to be possible only with free word order. However, a moment ago we saw that free word order does not, by definition, express grammatical relations, but instead semantically specific relations or relations of functional sentence perspective. In other words, it is inappropriate to say of fixed word order, which is bound up with grammatical relations, that it serves the expression of meanings; and at the same time free word order, although capable of expressing meanings, is not at the service of grammar. Hence the status of word order, be it as a device for the linguistic expression of the connection of representations (Paul), be it as a grammatical process paired with grammatical concepts (Sapir), becomes questionable.

We can now briefly come back to the two aspects of word order which were distinguished by H. Paul. It is easy to see how limited the possibility of expressing anything by mere juxtaposition of signs (Paul's no. 1) is. The signs cannot but follow each other in the chain, whether or not they bear a direct grammatical relation to each other. Therefore, contiguity in the chain cannot by itself signify grammatical relatedness. Instead, the categories of the words in question and their relational potential have to be taken into account. For instance, a noun and an adjective carry their categories qua lexical entries and bring them into play when they are actualized. An adjective has, moreover, the relational potential to combine, as an attribute, with a noun. Only after all this is presupposed can we interpret a sequence of an adjective and a noun, for instance in English, as a nominal containing an attribute. Contrariwise, we will never interpret a sequence of an adjective and a conjunction as a phrase, because the grammatical presuppositions are not met.

In other words, the juxtaposition of two signs *a* and *b* cannot tell more than this: the grammatical relation to a sign of category *B* which is set up in sign *a* is actualized in the case where a sign of category *B* is positioned immediately beside *a*, otherwise not. Positioning of *b* beside *a* therefore means only the presence or availability of *b* for the grammatical relation set up in *a*; it cannot express the relation itself. This is true both if the relative order of *a* and *b* is invertible and, *a fortiori*, if it is fixed.

We have thus arrived at Paul's second aspect, relative order. If the order of *a* and *b* is invertible, two cases have to be distinguished. Either the grammatical relation between *a* and *b* remains constant under inver-

sion. This means, of course, that the grammatical relation is independent of order and, consequently, is not expressed by order. The order of adjective and noun in Italian would be an example. Or else the grammatical relation becomes a different one under inversion. Only in this case does the order express, or rather help to express, the grammatical relation. I am aware of only one case of this kind, viz., the position of an NP vis-à-vis the verb in languages like English. Here the NP is subject if it precedes the verb, and object if it follows. But even in this case it is not word order alone which signals the grammatical relation; with most verbs, selection restrictions bear the main burden in the assignment of actant functions.

The conclusion to be based on this argument is that word order does not have a positive expressive function, but much more a negative, oppositive function. It does not, like a grammatical affix, signify a particular grammatical relation; instead it functions rather like a phoneme by admitting or excluding a given grammatical relation.

3. Word order and inflectional morphology

Ever since one started comparing ancient and modern Indo-European languages, in particular Latin and the Romance languages, the commonplace has perpetuated itself that a rich inflectional morphology allows free word order and that lack of inflectional morphology requires fixed word order and is, in regard to expressive possibilities, compensated for by the latter. It is said that the relative weight of the two expressive devices was reversed in the development from Latin to the Romance languages. For a long time, this view has been generalized in linguistic typology. Thus Mallinson — Blake (1981) repeatedly speak of a “trade-off” between inflectional morphology and word order in the expression of syntactic relations.

Given what we have seen in the preceding section, this conception cannot be true as it stands. On its way into the Romance languages, word order became indeed more fixed in many respects. Limitation of alternatives, however, means reduction of conveyable information. Far from word order taking on the tasks of the lacking morphology, its own expressive capacities — if indeed it has any — were confined, too.

At the typological level, there is another disconcerting observation to be made. The following can be established as an implicational tendency:

if a language has free word order, then it has rich inflectional morphology. This is empirically confirmed in most cases (see Mallinson – Blake 1981; ch. 3.4 for possible exceptions). The converse of this law, however, is invalid: it is not the case that if a language has rich inflectional morphology, it has free word order. This would be falsified by numerous languages with dominantly agglutinative morphology, e. g., by Turkish and Yucatec Maya. It thus becomes evident that there can be no question about a mutual compensation between word order and inflectional morphology. The unilateral implicational relationship between the two phenomena indicates that they are not hierarchically equal, but instead in a dependency relationship.

On the diachronic axis, the problem presents itself as follows: Assuming that loss of inflectional morphology goes hand in hand with fixation of word order, and acquisition of inflectional morphology allows the introduction of freer word order, what then are the mechanisms by which this comes about? If this problem is solved, answers to more specific questions like the following can be expected: If free word order is lost, do the functions it formerly fulfilled become lost too? If free word order is acquired, are formerly rigid phrases broken up, becoming variable? Or how else is the acquisition of free word order to be conceived?

4. Grammaticalization

There is one mechanism chiefly responsible for the acquisition and loss of inflectional morphology, grammaticalization. This is clearly shown by the well-known stock examples of grammaticalization. The Romance languages have replaced the inherited future by a new one and introduced a completely new verbal category, the conditional, both of which are based on the infinitive and whose inflectional morphemes are grammaticalized from Latin *habere* ‘have’; see (1). These are therefore cases of the evolution of inflection by grammaticalization.

- (1) a. Vulgar Latin *cantare habet* ‘he has to sing’
 > Italian *canterà* ‘he will sing’
 b. Vulgar Latin *cantare habuit* ‘he had to sing’
 > Italian *canterebbe* ‘he would sing’

Moreover, the Romance languages have, along with the grammaticalization of prepositions, reduced the inherited case paradigm and finally

lost it; cf. (2). French and, to a lesser extent, other Romance languages have, together with the grammaticalization of free personal pronouns, reduced the paradigm of the verbal personal endings; cf. (3). These cases therefore illustrate the loss of inflection by grammaticalization.

(2) Latin *flos/floris/flori/florem/flore* > Italian *fiore*

(3)	Latin	>	French
	<i>canto</i>		/ʃātə/
	<i>cantas</i>		/ʃātə/
	<i>cantat</i>		/ʃātə/
	<i>cantamus</i>		/ʃātō/
	<i>cantatis</i>		/ʃāte/
	<i>cantant</i>		/ʃātə/

In several agglutinative languages such as Yucatec Maya, it can be shown historically or by internal reconstruction that inflectional morphology has developed by grammaticalization and coalescence of formerly free words or morphemes. (4) exemplifies the grammaticalization of terminative aspect.

(4)	Yucatec	<i>ts'óok</i>	<i>u</i>	<i>k'ay</i>	>
		finish (PAST. 3. SG)	SBJ. 3	sing	
		<i>ts'u</i>	<i>k'ay</i>		
		TERM: SBJ. 3	sing		
		'his singing finished' > 'he has sung'			

On the other hand, the advanced loss of inflectional morphology such as that observable in English, but also in some Slavic languages, is based on a continuation up to the zero point of the reduction by grammaticalization.

Grammaticalization is a phenomenon that has been subject to intensive study, especially in recent years. To the extent that morphological change can be taken as a case of grammaticalization, the chances are favorable that its mechanisms will be understood. Our initial question, however, was how change of word order is related to morphological change. If grammaticalization is the transformation of a lexical morpheme into a grammatical one and the further reduction of the grammatical morpheme to the point of loss, what then does this have to do with word order? A narrow conception of grammaticalization which is limited to the fate of

morphemes obviously does not help us in the attempt to pin down the relation between word order and inflectional morphology.

And indeed, grammaticalization is not something that just affects a morpheme in isolation. Grammaticalization concerns linguistic signs as wholes, i. e., in their paradigmatic and syntagmatic relations. A linguistic sign may be relatively autonomous, i. e., it may have relatively few or loose paradigmatic and syntagmatic links, or it may be more subject to grammatical rules, i. e., it may be confined in its paradigmatic and syntagmatic relations. Grammaticalization is, in fact, loss of autonomy in this sense.

This conception does not neglect the palpable characteristics of grammaticalization, viz., loss of concrete semantic content and of phonological substance. Limitation of the paradigmatic relations of a sign actually means that it contracts such relations to even fewer other signs. This entails that its distinctive features, on both the semantic and the phonological sides, decrease.

Hence, the conception of grammaticalization as the reduction of a lexical to a grammatical morpheme is only part of the truth.

- (5) a. Latin *cantare habeo* 'I have to sing'
 b. French (*je*) *chanterai* '(I) will sing'

If Latin *cantare habeo* is grammaticalized to French *chanterai* ([5]; cf. also [1 a]), then this does not boil down to a reduction of *habeo* 'have to' to *-ai* FUT. 1. SG. Instead, the former *habeo* becomes, viewed paradigmatically, an element of the paradigm of tense elements, and viewed syntagmatically, the construction is grammaticalized as a whole, i. e., a new synthetic verb form arises.

One of the aspects of the autonomy of a linguistic sign in its syntagmatic relations is its syntagmatic variability, i. e., its order freedom. From what was said above it is evident that this gets lost through grammaticalization. In Latin, one could say either *habeo cantare* or *cantare habeo*. In French, there is only (*je*) *chanterai*, not (*j'*)*ai chanter*. The same can be shown for the grammaticalization of the Latin demonstrative *ille* to the definite article and to the clitic personal pronoun in Romance languages. The demonstrative adjective could precede or follow the determined nominal; the definite article of the Romance languages is bound to one side of the nominal. The demonstrative pronoun of Latin had the entire order freedom of any NP; the clitic personal pronoun of the Romance languages is bound to the verb, and even the position either before or after the verb is subject to grammatical rules. To the extent

that a morpheme is grammaticalized, its order freedom is reduced. By the time it has become an inflectional affix, its position is completely fixed within the morphological slots of its host.

5. Fixation of word order

However, when we speak of grammatical order, we are generally not referring to the sequencing of grammatical formatives. Instead, we mostly refer to the sequencing of full words or even of complex phrases. Thus, it remains to be seen whether this, too, has any relation to grammaticalization. Here, again, the broader context has to be taken into account. Let us consider the grammaticalization of adpositions as an example. As I lack sufficient historical evidence from one language, I will have to put the argument together from various languages.

An adposition such as German *wegen* 'because of' has a primary syntagmatic relation to the NP governed by it and a secondary relation to the controlling phrase — in the most simple case a VP — that is modified by the adpositional phrase. (6) is an example:

- (6) German:
Wegen seines Argwohns / seines Argwohns wegen glückt dem Alten nicht viel.
 'Because of his mistrust, the old man does not succeed in much.'

In its primary relation, this adposition has a certain syntagmatic variability insofar as it can be used alternatively as a pre- or as a postposition. It shares this property with some other German adpositions such as *nach* 'after' and *entlang* 'along'. These have a relatively low degree of grammaticalization in common. All of the more strongly grammaticalized adpositions of German, such as *von* 'from, of', *zu* 'to', *an* 'at', *in* 'in', etc., are exclusively prepositions.

There are, of course, other structural correlates to this differing degree of grammaticalization of the German adpositions. First, the strongly grammaticalized adpositions coalesce with the definite article to such forms as in (7), while the weakly grammaticalized adpositions such as *wegen*, *nach*, *entlang* do not do this. This is another clue to the greater syntagmatic autonomy of the latter.

- (7) German:
- | | | | |
|----------------|---|------------|----------|
| <i>von dem</i> | > | <i>vom</i> | 'of the' |
| <i>zu dem</i> | > | <i>zum</i> | 'to the' |
| <i>an dem</i> | > | <i>am</i> | 'at the' |
| <i>in dem</i> | > | <i>im</i> | 'in the' |

Second, *von*, *zu*, *an*, *in* serve for the expression of purely grammatical relations (such as the genitive, the infinitive complement, the [dialectal] progressive with *am*, etc.), while *wegen*, *nach*, *entlang* express semantically specific relations. Third, the reduced and relatively homogeneous phonological form of the grammatical prepositions as opposed to the fuller and more multiform shape of the semantically more concrete prepositions should be noted.

Adpositions can grammaticalize to case affixes. At this state at the latest, their position in their primary relation is entirely fixed. Some linguists have already regarded French *à* 'to' and *de* 'of' as case prefixes. This is, however, debatable, and, in general, case prefixes are extremely rare among the languages of the world. The grammaticalization of postpositions to case suffixes, on the other hand, is a common process which is observable at historical times in languages such as Turkish and Tamil. Thus we have here another example of the total loss of order freedom by grammaticalization.

Interested as we are in the relation between full words, we now have to consider the secondary relation of the adposition. The adpositional phrase is relatively free in its position vis-à-vis the controlling VP. (6) allows, among others, the permutations in (6'). All of them are independent of the pre- vs. postpositional use of the adposition.

- (6') a. *Dem Alten glückt wegen seines Argwohns nicht viel.*
 b. *Dem Alten glückt nicht viel wegen seines Argwohns.*

That is, apart from permutations of the other constituents of (6), the adpositional phrase can occupy all of the syntactic positions except, of course, for the position reserved for the finite verb. Hence the secondary relation of the adposition is syntagmatically freer than the primary one. However, with the grammaticalization of the adposition, freedom in the secondary relation decreases as does freedom in the primary relation. It is true that this does not, in German, manifest itself in syntagmatic variability, since all adpositional phrases enjoy the same order freedom. It can, however, be perceived in the case government of verbs. Just as verbs can govern certain cases, there are verbs which govern grammatical

prepositions, e. g., *abhängen von* 'depend on', *zählen zu* 'belong to', *liegen an* 'be due to', *irren in* 'err in'. There is, however, no verb which governs a preposition such as *wegen*, *nach*, *entlang*. The difference between free adpositional phrases and adpositional phrases functioning as a complement manifests itself in other languages in differential order freedom. This can be seen in (8) and (9):

- (8) a. *We danced on the boat.*
 b. *On the boat, we danced.*
- (9) a. *We decided on the boat.*
 b. **On the boat, we decided.*

The adjunct in (8) is permutable, the complement in (9) is not. Given that only grammatical prepositions occur in more grammatical, e. g., complement, relations, such a situation can also be adduced as an argument in favor of the reduction of syntagmatic variability in the secondary relation of a grammaticalized adposition.

Once the adposition has become a case affix, its secondary relation passes over entirely to the host NP. Consider (10) and (11):

- (10) Latin:
 a. *Caesar scripsit epistulam ad Hannibalem.*
 'Caesar wrote a letter to Hannibal.'
 b. *Caesar scripsit epistulam Hannibali.*
 'Caesar wrote Hannibal a letter.'
- (11) Italian:
Cesare scrisse una lettera a Annibale.

While the Latin version (10 a) features a free adpositional phrase, version (b) has a dative NP which is a complement of the controlling verb. The Italian version (11) is situated, with regard to grammaticalization, between the two Latin examples, since the preposition *a* can already express the pure dative, but is not (yet) an affix. We can, therefore, set up an — achronic — continuum leading from (10 a) via (11) to (10 b). What is important for the present purpose is the following: At the end of this continuum, we no longer have a grammatical element (here, the dative suffix) which by itself contracts a primary and a secondary grammatical relation. Instead, its primary relation has become a morphological one, namely the relation of the nominal case affix to the noun, while its secondary relation has passed over to its host: *Hannibali* has the relation of indirect object to *scripsit*. At this stage, we are therefore dealing with

an immediate relation between two full words or potentially complex phrases.

As mentioned before, further grammaticalization of the case element now leads to its loss. At the same time, the relation between the host of this element and the controlling term becomes ever tighter. In English, for instance, the relation of the erstwhile (Germanic) indirect object acquires properties of a direct object and becomes available for passivization, as in (12):

- (12) a. *Caesar wrote Hannibal a letter.*
 b. *Hannibal was written a letter by Caesar.*

At the same time, order freedom is severely restricted here. If compared with (8) and (9), (12 a) is more like the latter because we cannot front *Hannibal* in (12 a). Hence, in the course of the grammaticalization of the case element to zero not only its own order freedom, but also the order freedom of its host has decreased.

The result of this case study of the grammaticalization of adpositions is the following: The grammaticalization of a sign is bound up inseparably with the reduction of its syntagmatic variability. This means that grammaticalization does not merely seize a word or a morpheme – namely the one which it reduces to a grammatical formative and finally to zero –, but instead the whole construction formed by the syntagmatic relations of the element in question. To the extent that the external relations of this construction are contracted by the grammaticalized formative, they are also seized by the grammaticalization process. Consequently, with the grammaticalization of a bound morpheme the syntagmatic variability of its host shrinks, too. Thus, the fixation of any word order can be a consequence of grammaticalization.

6. Acquisition of word-order freedom

There are languages such as Amharic that formerly had prepositions, but have passed over, by syntactic change, to using postpositions. For an early stage of Proto-Indo-European, postpositions may be posited (or else the case suffixes could hardly have evolved); but many Indo-European languages have prepositions. How is such a word-order change to be conceived? It would be logically possible that one day freedom in the positioning of the erstwhile postpositions set in so that they could be

used alternatively as prepositions. The syntagmatic variation thus developed would, in the further course of things, have been reduced to the prepositional variant. This would mean, however, that syntagmatic variability increased in the first phase of this development. This would run counter to the sense of grammaticalization, where syntagmatic variability decreases; it would be a case of so-called degrammaticalization. As a matter of fact, such cases are not known.¹ Rigid order restrictions cannot be directly loosened. They can only be substituted by a freer order when the construction in question is renewed. Hence, it is impossible that the same adpositions that were formerly postpositions become prepositions one day. What is possible, however, is that the old postpositions are reduced by grammaticalization and simultaneously prepositions evolve from a new source, which by and by replace the old postpositions. Something of this sort must have happened in the prehistorical development from Proto-Indo-European to Latin.

An example from historical times, and from a different grammatical domain, is offered by main constituent order in modern French as illustrated in (13):

- (13) French
- a. *Jean est venu.* 'John has come'.
 - b. *Il est venu, Jean.* 'He has come, John.'
 - c. *Il est venu Jean.* 'John has come.'

Positioning of subject and verb in this order at the start of the clause, as in (13 a), is obligatory in written French. There is, however, the possibility of forming a complex sentence by right-dislocation of the topic, as in (13 b). This formerly complex construction is reinterpreted as a simple clause in spoken French ([13 c]). That is, the pragmatic markedness – suspension of the theme – disappears, and so does the intonation break as signalled by the comma. The personal pronoun loses its referential function and becomes an agreement marker. What was formerly a right-dislocated topic now occupies the subject position. All of this means that a change in main constituent order takes place from (13 a) to (13 c), from initial position of the subject to its position at the end of the clause (cf. Bailard 1982).

This example shows very clearly that the order regularities of a particular construction are not simply dissolved or inverted. Instead, a new source is tapped for the formation of a construction that is functionally similar, if, for the time being, less grammaticalized, and all the while the

existing order regularities are observed. The new construction with its variant word order can then oust the traditional one.

In German, a similar case is observable. Written German has a rule for main constituent order in independent declarative clauses, which says that the finite verb occupies the second position. This is the strictest rule at this level; in other words, overall order at the sentence level is relatively free. Nonetheless this rule confines the speaker. One cannot start the sentence with the verb, although one might want to do so in presentative sentences. Nor can one defer the verb to a later position, although one might want to do so for the attainment of rhematic effects.

However, this rule can be circumvented by fulfilling it to the letter. As to the second sentence position, the rule merely demands its filling with a finite verb form. If one wants to defer the verbal lexeme to a later position, one fills the second position with an auxiliary, as in (14 b):

- (14) German
- a. *Das Auto schleuderte ihn über den Zaun.*
'The car hurled him over the fence.'
 - b. *Das Auto hat ihn über den Zaun geschleudert.*
'The car has hurled him over the fence.'

For the time being, however, the development potential of this alternative is limited by the fact that all the relevant auxiliaries form specific tense/aspect/mood/voice categories. Consequently, if one chooses this functional sentence perspective, one chooses, at the same time, the verbal categories which are expressed by auxiliaries.

As to filling the first sentence position, the rule only demands a non-verbal constituent. If one wants to put all major constituents after the verb, one occupies the first position with a semantically empty dummy element, as in (15) and (16):

- (15) German:
Es weiß eben niemand so recht, was das heißen soll.
'It is the case that nobody knows quite clearly what this is supposed to mean.'
- (16) German:
Da soll mich doch gleich der Schlag rühren.
Lit.: 'The stroke shall hit me right away.'; i. e., 'I am perplexed.'

German grammar provides two such dummy pronominal elements, *es* 'it' (15) and *da* 'there' (16). Although they are interchangeable in some contexts (both of the examples would be possible with the other element,

but not so idiomatic), the general regularity is that *es* is cataphoric for an NP, while *da* vaguely refers to some spatio-temporal or preceding textual context.

This strategy is exploited and further developed in the colloquial language. Given that the pronominal forms at the beginning of the sentence are nothing more than dummies, they are redundant and can be omitted. Sentences such as those in (17) are very common at the colloquial level:

- (17) a. *Könnte ja jéder kommen.*
‘Then anybody could come.’
b. *Hastu [hast du] eben Péch gehabt.*
‘You just have had tough luck.’
c. *Mußtu [mußt du] halt noch mál hingehen.*
‘You just have to go there once again.’
d. *Müßte man mal drüber nachdenken.*
‘One should think about this.’

However, the position in front of the finite verb is not simply left unfilled in such sentences — that would be a violation of a grammatical rule. Instead, for the time being all such sentences are colloquially elliptical versions of standard sentences which have the dummy *da* in first position. That this is the correct interpretation is confirmed by the fact that the dropping of initial thematic elements is extended to other pronominal elements, as illustrated in the German sentences in (18):

- (18) a. *Is[t] ja noch mal gút gegangen.*
‘It has turned out well once again.’
b. *Wird schon nicht so schlimm wérden.*
‘It won’t get that bad.’
c. *Kann dir doch egal sein.*
‘That should be of no concern to you.’
d. *Wei ich nicht.*
‘I don’t know.’
e. *Kann man nie wissen.*
‘You never know.’
f. *Ham [haben] wir ja noch nie gesehen.*
‘That we have never seen before.’
g. *Müte man mal náher untersuchen.*
‘That should be investigated more closely.’

These sentences lack an initial *das* ‘that’ which would function as the subject in (18 a)–(18 c), but as the direct object in (18 d)–(18 g). This

shows that the motivation for this tendency is essentially non-syntactic. Cf. also the parallelism between (17 d) and (18 g). On the other hand, there appear to be some syntactic constraints. For instance, *das* in other syntactic functions cannot be omitted, as shown in (19):

- (19) a. **(Dem) müßte man mal nachgehen.*
 'That should be looked into.'
 b. **(Dessen) müßte man sich mal annehmen.*
 'That should be taken care of.'

Anyway, the situation opens the possibility for a further step in which such constructions are reanalyzed as simple declarative sentences with initial verb. As a result, German would acquire an alternative main constituent order.

This is not mere speculation. Sentences such as the above are already fairly common in the colloquial language. Moreover, they exhibit a common structural tendency: the initial verb is a modal or auxiliary in the great majority of cases (*können* 'can' in [17 a], *müssen* 'must' in [17 c], *sein* 'be' in [18 a], *haben* 'have' in [17 b] and [18 c], *werden* 'will' in [18 b]). This is even true for (16) (*sollen* 'shall'). This means that the construction is preferred in those cases in which everything including the verb belongs to the rheme of the sentence. In those Indo-European languages which passed through the analogous change a long time ago, namely the Celtic languages, it is also preferably the auxiliary which starts the sentence.² And while this change, or at least this tendency, is increasing in colloquial German, something similar is happening in French and in Modern Greek. Possibly we are faced with a genetic-typologically conditioned drift.

Hence, an order pattern is not directly twisted into a different one. Instead, its alternative first has to be introduced by the grammaticalization of an originally more complex construction. This complex construction completely obeys the rules of established grammar, but undermines them by the artifice of providing mere grammatical elements for the crucial syntactic positions, which lose their word status with further grammaticalization of the construction or are even reduced to zero. As a consequence, they no longer occupy a syntactic position, and the pattern of the sequence of the syntactic constituents is thus changed. This course of things is noticeable both in the French and in the German examples. The last step in this development, which is yet far from observable in both languages, consists in the complete ousting of the traditional pattern by the innovated one.

7. Word order and grammatical level

There is still an open question: what happens to the functions fulfilled by free word order if this becomes fixed by grammaticalization? Consider the following series of Latin sentences (a-versions) with their French equivalents (b-versions).

- (20) a. *Ioannem non puto venisse.*
 b. *Jean, je ne crois pas qu'il soit venu.*
 '(As for) John, I don't believe that he has come.'
- (21) a. *Porcus est Ioannes.*
 b. *C'est un cochon, Jean.*
 'He's a pig, John.'
- (22) a. *Vinum bibit Ioannes.*
 b. *C'est du vin que Jean boit.*
 'It's wine that John drinks.'

What (20)–(22) exemplify is, in turn: topicalization of a nominal constituent, suspension of the theme (“afterthought”) and focussing of a nominal constituent. Latin fulfills all these functions within the clause frame by different word-order variants. French takes recourse, in all cases, to complex constructions which transcend the clause boundary, viz.: left-dislocation in (20), right-dislocation in (21), and sentence clefting in (22). Such devices are available in Classical Latin either to a very limited degree or not at all (cf. Havers 1926 for the so-called *nominativus pendens* [left-dislocation] and Löfstedt 1966 for the cleft-sentence).

Two conclusions may be drawn from this. First, the renewed fulfillment of functions for which the old means are no longer suited goes the same way as the renewal or innovation of syntactic patterns which we saw in the preceding section: available syntactic means are used to form complex constructions. Second, in order to get greater order freedom, one has to step up to a higher grammatical level. If one is not content with the freedom that is available within the French clause, one has to form a complex sentence, e. g., by right- or left-dislocation or by sentence-clefting. In other words: given a hierarchy of grammatical levels from the sentence via clause and phrase down to the word, there is generally greater order freedom at the higher levels than at the lower ones; cf. Ross (1973).

By the example of the adpositions that are grammaticalized to case affixes, we saw that word order turns into the positioning of affixes in morphological slots of their hosts. At this level, order rules are strictest.

Thus one can say that a language with rich inflectional morphology has shifted most of its order rules to the word level. This was already seen by E. Sapir (1921: 109 f.), who writes:

Every language has its special method or methods of binding words into a larger unity. The importance of these methods is apt to vary with the complexity of the individual word. The more synthetic the language, in other words, the more clearly the status of each word in the sentence is indicated by its own resources, the less need is there for looking beyond the word to the sentence as a whole ... And yet to say that a sufficiently elaborate word-structure compensates for external syntactic methods is perilously close to begging the question. The elements of the word are related to each other in a specific way and follow each other in a rigorously determined sequence. This is tantamount to saying that a word which consists of more than a radical element is a crystallization of a sentence or some portion of a sentence, that a form like *agit* is roughly the psychological equivalent of a form like *age is* "act he".

From here we can go on to say: The parallel gradation of grammatical levels and of degrees of syntagmatic variability is universal. That is, in every language there is less order freedom at the lower levels than at the higher ones. What is not universal are the grammatical levels themselves; i. e., there is no universal set of grammatical levels that would have to recur in every language. Let me clarify this by (20)–(22). If we want to correlate the grammatical levels of Latin with those of French, we have two possibilities. Either we start from structural criteria and thus distinguish in both languages the level of the – potentially complex – sentence from the level of the clause. Then we find out that a complex sentence in French is characterized by the fulfillment of different functions than those of a complex sentence in Latin. Or else we start from functional criteria and differentiate between a level at which the functions of sentence perspective ("pragmatic functions") are fulfilled and a lower level at which predication is achieved. Then we find out that the functions of sentence perspective are fulfilled at the structural level of the complex sentence in French, but at the structural level of the clause in Latin. Consequently, if grammatical levels are of a semiotic nature, which means they are characterized by the association of certain functions with certain structures, then they are not universal.

Thus, the hierarchies of grammatical levels of different languages may be staggered in regard to the association of functions and structures. A clear case of this is the typological classification that has been bestowed upon Classical Chinese. This is a language without inflectional mor-

phology and with strictly regulated word order. It has been considered an isolating language since the beginning of language typology. This terminology implied that words do not contain grammatical signs by which they relate to each other. Again, V. Skalička (1966) classifies Classical Chinese and all the languages formerly referred to as isolating as polysynthetic. By this he means that the languages form large complexes of morphemes which are rigidly determined in their mutual position. Obviously the grammatical levels are conceived differently here. For those typologists who call the languages in question isolating, the monomorphemic signs of Chinese are words and, consequently, the constructions formed by them are phrases and clauses. For Skalička, instead, they are just morphemes, and the constructions formed by them are therefore words. What is important in the present connection is not a quarrel about terms, but the fact that languages such as Classical Chinese apparently possess a grammatical level that lies between our levels of the word and the phrase with regard to syntagmatic variability of its constituents. A typological comparison of the functions associated with these levels remains to be carried out.

8. Grammaticalization of word order

Let us summarize:

1. Grammaticalization is reduction of the autonomy of a linguistic sign. It comprises, on the one hand, the transformation of lexical elements into grammatical ones and their further reduction to zero, and, on the other, the reduction of the paradigmatic and syntagmatic variability of the sign.
2. Reduction of syntagmatic variability includes fixation of word order. This is why grammaticalization goes hand in hand with the loss of word-order freedom.
3. Grammaticalization also includes renewal of constructions at the highest grammatical levels. Both new grammatical elements and order patterns are attained by the development of hitherto unexploited lexical and syntactic sources. Accordingly, word-order freedom or a new order pattern at a given grammatical level is gained by grammaticalization of a pattern that belongs to the next higher level.

4. A grammatical level is defined by the association of functions and structures. The structural aspects comprise the allowable degree of syntagmatic variability. It decreases at the lower grammatical levels.
5. The overall potential of syntagmatic variability of signs does not necessarily differ among languages. It is, however, distributed among different levels in different languages. In a language with rich inflectional morphology, order restrictions are amassed at the word level. In languages with so-called fixed word order, restrictions are concentrated at a higher level, for instance at the phrase or even the clause level.
6. Word order is not an expression device on a par with inflectional morphology. Instead it is an instance of syntagmatic variability and, thus, a structural aspect of the autonomy of the language sign. Its freedom or fixation depends on which grammatical levels are particularly strongly developed in the language.
7. The functional and dynamic conception of language advocated here provides the interface between internal and external factors in grammatical change. Grammaticalization is a necessary consequence of the desire to lend forceful expression to one's thought. A corollary of this is the suppression of whatever is not expressive. Insofar, grammaticalization is a strictly internal factor or, rather, a method of grammatical change; it is at work in all languages at all times.

Speech communities, however, differ as to which social groups will take greatest freedom in the realization of this desire, and under which circumstances its pursuit is more or less sanctioned by the society. Thus, in one and the same society, journalistic and bureaucratic style may indulge in the formation of fancy complex prepositions (cf. Ch. Lehmann 1990), while the colloquial language may allow for certain kinds of ellipsis (cf. section 6 above). Thus, the distribution of specific grammaticalization processes within a language may well be controlled by social factors.

Notes

1. Alleged counterexamples are mostly reconstructed ones. Here I would appeal to R. Jakobson's (1958) principle that reconstructions should keep within the limits generalizable from historically documented cases.
2. There is another common structural trait in all of my German examples: the verb is in each case followed by a clitic modal particle (which is in some cases preceded by a clitic personal pronoun).

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On the role of prosodic features in syntactic change

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Introduction

From the point of view of the grammarian, sentence prosody follows from syntax and semantics. A focused constituent is prosodically prominent because it is semantically focused. A topic switch is prosodically prominent because it is semantically contrastive. A prosodic boundary is permitted to occur where it does because it matches a major constituent boundary (after structure-flattening readjustment rules have created phonological phrases).

But from the point of view of the language learner, who occasionally changes the grammar by engaging in some form of syntactic reanalysis, prosodic information is often either ambiguous or — even more commonly — insufficient to force the desired constituency analysis. Prosody is only one of four major sources of information the learner has available for discovering constituent structure, so that the lack of clear prosodic information need not always be critical to correct perception. The others are affixation (both morphological and phrasal), word order, and positional alternatives (i. e., what can be moved¹ as a unit?).

At times, nevertheless, prosodic information may be crucial in making a constituency assignment. There are numerous clear cases where absence of decisive prosodic information, or failure on the part of the hearer to take note of it when present, may leave open the possibility of more than one perception of constituent boundaries. Of the possible signals of constituent structure, prosody is the most easily misheard or ignored. For example:

(1) *They assaulted the fortress with the cannons.*

This is equivalent to either (2) or (3):

(2) *They used cannons to assault the fortress.*

- (3) *They assaulted the fortress which had cannons.*

Either reading (2) or (3) may be forced by the appropriate intonation:

- (4) *They assaulted the fortress, with the cannons. (= 2)*
 (5) *They assaulted, the fortress with the cannons. (= 3)*

Just as word order or morphology may be ambiguous about constituent structure, so may prosody. Prosodic breaks, in general (as distinct from “pauses” to think of the next word or the like), correlate with some kind of constituent boundary, but the precise nature of that boundary is open to more than one interpretation. For example:

- (6) *The president's first implication, which went unchallenged, was racist in an extreme degree.*

We use commas in (6) to indicate some sort of prosodic break, not to conform to standard punctuation: standard punctuation would place commas here only on the non-restrictive relative clause reading. But in fact it is difficult to hear (6) without prosodic breaks where indicated even in the restrictive reading. It is possible to disambiguate the interpretations with exaggerated prosodic breaks, but in a relaxed “normal” performance the example is prosodically ambiguous. Given the possibility of such ambiguity, it is plausible that the learner may make the wrong guess.

Whether the wrong guess is called “abduction”² or “listener misanalysis precipitated by camouflage”³ does not seem very important to us. We prefer “learner reanalysis” as a label, because it not only puts the burden on the learner (and therefore necessarily on the perceptual side), but also it does not force a distinction between misanalysis and reanalysis. The implicit value judgement perhaps should be avoided. A reanalysis may indeed be a misanalysis; but a reanalysis may occur without a mistake (rather, simply creation of an alternative analysis), and indeed both may sit side by side in subsequent grammars for generations before one or the other drops out, if ever.

Arguments purporting to show that prosodic ambiguity has led, in specific instances, to syntactic reanalysis can at best be only plausibility arguments. The point is so obvious that we will not belabor it: as Bruce Mitchell is fond of saying, in historical syntax “the vital clue of intonation is denied to us”.⁴ But we are not altogether without information on prosody: early Germanic verse structure is fairly well understood, thanks to a rich tradition from Sievers in the nineteenth century to Pope, Cable,

Russom, and Hoover in recent times. Though we cannot discover intonation patterns (nor, probably, even rhythmic patterns in the exquisite detail claimed by Pope), we know a great deal about relative prominence and about syntactic boundary phenomena. We will consider how these can be brought to bear on syntax after surveying the areas where such information might be relevant.

We should first acknowledge, however, that we believe prosodic reanalysis always to be a type of internally motivated syntactic change. We are not sure that the limits of borrowing through contact can be established with certainty, but even if an intonation pattern were borrowed somehow, it would simply become part of the repertory of possible intonations which would, like all the others, then become subject to internal reanalysis and consequent syntactic change. In the context of a volume dedicated to the interaction between internal and external factors, it is perhaps trivial to assert that here is a factor which cannot (as far as we can see) have an external dimension, but such is our position.

1. Examples, real and imaginary

Assuming we had all the facts, including tape recordings for any language at any time in history, where would we expect to find prosodic features interacting with segmental syntactic features (i. e., word order, affixation) in such a way as to change the syntax?

A. At clause intersections. Here we think of the classic position arguing that the complementizer *that* is a reflex of the earlier forward-looking deictic pronoun *that* in paratactic clauses like those in (7).

(7) *He believes that. God is good.*

The reanalysis consists in leftward reassignment of the prosodic boundary and/or loss of it altogether. The syntactic change in the constituent structure does not correspond exactly to the prosodic reanalysis but is nevertheless in a deterministic relation to it. The new prosodic structure is (8), the new constituent structure is (9). (8) can be derived from (9) by “structure-flattening” rules that mark off intonational groups.

(8) *He believes_s[that God is good].*

(9) *He believes* _{NP}[*that God is good*]].

B. At sentence beginnings. A not uncommon occurrence is the assignment of special status to the sentence-initial position that is marked prosodically. In so-called “topic-prominent” languages like Chinese, this status is fully syntacticized.⁵ West Germanic has shown two rather distinct developments. There is the German and Dutch direction, where the initial position defined by the verb-second constraint is free to be filled without special prosodic marking by any sentence-level constituent (i. e., the position is in no way reserved for subjects); and the English direction, where the position is reserved, at least in unmarked declarative sentences, for subjects.⁶ Anything other than subjects in that position still receives special prosodic marking.

C. At sentence endings. The most common default prosodic features of endings of declarative sentences are major prominence and falling pitch. No doubt there are languages of which this is not true, but it is certainly characteristic of Germanic and of most, if not all, Indo-European languages. Even if falling pitch can be explained on the basis of diminishing lung pressure in articulation, the major prominence near the end must be accounted for by syntactic and/or semantic principles. The exact location of the final default hump varies on a language-specific basis. E. g., the verbals at the end of a clause in German normally follow the hump, if there is a prepositional phrase or a noun phrase to their left to carry it; in English the last major category word, including verbs and even particles, usually carries the default hump.

To us it seems reasonable to suppose that there ought to be examples where the default hump has been displaced to the left and has thereby led to reanalysis of a sentence boundary, but we have not been able to uncover any such cases.

D. At clause-internal phrase boundaries. The historical process of cliticization involves demotion of words to affixal status within a phrase, and decliticization involves promotion of clitics to free-word status. While the latter does not, as far as we know, allow for a prosody-based account, the former presumably depends heavily on stress-loss to bring it about.

E. Wherever two equally-valued grammatical choices emerge, one has rhythmic advantages over the other. An instance of this sort may well be the gradual preference for *do* in the formation of English questions and negatives. But this argument cuts both ways: while it was empty, *do* could be used freely in verse (or prose) to provide a dip where needed, as

Chaucer used it much of the time. When it became fully grammaticized in the three functions it now serves (interrogative, negative, and assertive), this free rhythmic insertion virtue was lost (though gradually; see Stein 1985). It seems likely that rhythmic factors played less of a role in this grammaticization than analogic fixing in positions where the real modals like *can, may, must, will, shall* occurred. *Do* ultimately became the default modal. The position of all auxiliaries, on the other hand, was plausibly determined by the rhythmic considerations of clausal second position.

Since the history of *do* is not so clearly an example of rhythmic preference between otherwise equally-valued grammatical options, we suggest that possibly phrasal adjectives (those containing prepositional phrases) may provide a case. Post-nominal position is not obligatory just because of weight: cf. *the recently published volume* and *the volume recently published*; but if the modifier contains a prepositional phrase, post-position is obligatory: **the published by Collins volume* vs. *the volume published by Collins*.⁷

1A. Clause intersections

We turn now to look in somewhat more detail at examples of syntactic change at clause intersections where prosody may have played a significant role.

Noun clauses. Direct reanalysis of the parataxis seen in example (1) above is not attested. Rather, what is found in Old English may be viewed as an intermediate stage, e. g. *Beowulf* 290:

- (10) *Ic þæt gehyre þæt þis is hold weorod*
 I that learned that this is friendly troop
freaan Scyldinga.
 to-lord of-Scyldings
 'I have learned the following, that this troop is friendly to the lord of the Scyldings.'

Relative clauses. An example of interaction between prosodic features and clause boundaries might be the rise of an overt distinction between restrictive and attributive relative clauses. The distinction between the two in Modern English, when the complementizer is a WH-word, is entirely prosodic. For our purposes it does not matter what abstract representation is given by the syntactic rules to bring about this surface

difference: what is clear is that there is no surface difference except a prosodic one between (11) and (12):

- (11) *The soldier, who retired early, had been wounded in the war.*
 (12) *The soldier who retired early had been wounded in the war.*

It is not clear whether this distinction a) existed at all in Old English, or b) whether it was prosodically marked, if it existed, and if it was, c) whether it could ever be marked exclusively by prosody, as it can today. Grammars of Old English discriminate three main types of relative clauses:⁸

Type I. The “relativizer” is indistinguishable in form from the deictic pronoun:

- (13) *fif Moyses boca, ðam seo godcunde æ*
 five Moses’s books, [in] those the divine law
awriten is
 written is
 ‘five books of Moses, in which the divine law is written’

Type II. The relativizer is just the uninflectable subordinating particle *þe*:

- (14) a. *Ic geseah þa englas þe eower gymdon*
 I saw the angels that of-you took-care
 ‘I saw the angels who took care of you’

Since *þe* is unmarked for case, its role within the subordinate clause can be stipulated by a pronoun:

- b. *þæt se mon ne wat*
þe him on foldan fægrost limpeð
 ‘That the man does not know that to him [to whom] it goes most pleasantly on earth.’ [That particular thing you don’t grasp if life is going pleasantly.]

Type IIIa. Clauses beginning with *se þe* (i. e., I + II) where both antecedent and relative have the same case (labeled *seþe* relatives by Mitchell and Robinson):

- (15) ... *and wæs se soþa Scyppend, seþe ana*
 and was the true creator he-that alone

is God, forsewen
 is God rejected
 ‘... and the true creator, who alone is God, was rejected’

Type III b. Clauses beginning with *se þe* where *se* has the case required only by the attributive clause (labeled ‘*seþe* relatives by Mitchell and Robinson):

- (16) *þa com he on morgenne to þam tungerefan,*
 then came he in morning to the town-reeve,
seþe his ealdormann wæs
 he-that his superior was
 ‘Then he came in the morning to the steward, who was his superior’

Type III c. Clauses beginning with *se þe* where *se* has the case required only by the clause containing the antecedent (labeled *seþe* relatives by Mitchell and Robinson):

- (17) *syððan hie gefricgeað frean userne*
 when they learn lord [ACCUS] our
ealdorleasne, þone ðe ær geheold
 lifeless, him [ACCUS] that previously held
wið hettendum hord ond rice
 against enemies treasure and kingdom
 ‘When they learn our lord to be dead, he that in the past guarded our treasure and kingdom against enemies’

Concerning (17), Mitchell and Robinson (1986: 77) say “In earlier times *þone* was no doubt stressed in such sentences – ‘our lord ... that one ... he’. But there may be some truth in the view that in our sentences *þone* belonged rhythmically to the adjective clause and was felt as part of the relative ...” We are in some doubt as to their position, given the vacillation between “no doubt stressed”, which entails that *þone* was part of the main clause, and “there may be some truth ... rhythmically”, which entails that *þone* was taken syntactically with the attributive clause.

From examination of these types, it seems fairly clear that Old English relative clauses of type I were initially, and possibly throughout their history, felt to be independent paratactic clauses, appositional to the antecedent, not very different structurally or prosodically from the famous exclamation about Scyld Scefing in *Beowulf*:

- (18) *ðæt wæs god cyning!* (*Beowulf* 11 b)
 that was good king
 ‘He was a good king!’

There is good reason, therefore, to posit the loss of a full clausal prosodic break at the intersection as the beginning in Old English of type I relative clause formation. Type III c is very similar to type I, and as the “no doubt” pole of the Mitchell and Robinson uncertainty indicates, very probably had a prosodic break of the type required in modern non-restrictive clauses.⁹ The fact that the case of the deictic is governed by the antecedent strongly suggests an appositive relationship. Apposition in English is prosodically marked today and it is reasonable to assume that it was marked throughout its history. The clear evidence that apposition is prosodically marked even in Old English is that Old English verses (half-lines) are syntactically cohesive units. Verse ends correspond with syntactic phrase boundaries. And appositional phrases never cross verse boundaries.

Type II, with only *þe*, which was a pure complementizer not even homophonous with any other form (in the way that MnE *that*, also a pure complementizer, happens to be), was pretty certainly restrictive most of the time,¹⁰ and not set off prosodically (except in the minimal rhythmic way a longish phrase or clause necessarily is for phonological, not syntactic, reasons). This type was also the very last subordinate clause type in Old English to lose verb-final word order, as well as the most consistently verb-final of any subordinate clause type during the classical Old English period. The replacement of *þe* by *þæt* was probably by analogy with the nominal clause complementizer *þæt* available from earliest times, and in fact had begun to appear in this function occasionally in the early prose.¹¹

1B. Sentence beginnings

At least from the time of Wackernagel, scholars have toyed with the idea¹² that some special quality about sentence beginnings has attracted certain constituents into “sentence-early” positions – in particular, second position in main clauses. There are two, initially independent, forces at work: 1) the logical need to announce one’s topic early in the sentence (and for that announcement to be marked off in some way); and 2) the pressure to place some pro-clitics as far to the left as possible.

Wackernagel (1892) argued that in Proto-Indo-European sentence particles tended to appear immediately after the first stressed word. Kuhn

(1933) connected this observation to a prosodic explanation. He exhaustively analyzed Germanic verse to define this apparent clitic position more precisely (1933: 93). The conclusion generally agreed upon about second position, however it is defined (after first word, first stressed word, first constituent), is that it is prosodically weak.

Kuhn proposed an account in which for rhythmic reasons the weakly-stressed auxiliary verbs, which functionally have sentence scope, were attracted into second position. If this explanation is correct,¹³ it is clear that it is a vigorous example of prosody interacting with syntax in such a way as to bring about a major reanalysis of word order in several Germanic languages. The causative factor in this instance is prosody: one cannot say that the prosody “follows from” the syntax here, but only the reverse.

But the establishment of this prosodically weak position has to follow from some independent properties. No one except Kuhn has addressed this question in a way that we find as helpful as we would like. Merely showing that it is widespread typologically or even genetically within Indo-European is not enough, since the weak position is defined very differently in different languages. The prosodically weak position characterized by Wackernagel results in a consistent verb-second constraint in only a single low-hanging branch (North and West Germanic). Perhaps the tendency of topics to appear in first position, given that they are stressed elements headed by phrasal nodes, is sufficient to account for the weakness of second position.¹⁴ But if such advantages are inherent in the topical node marked off by the verb-second constraint, and if those advantages provide real functional explanations of why a language should develop like German or Dutch, it is even harder to see why English should have given up these advantages.¹⁵

2. The nature of metrical evidence for syntactic change

In all verse forms where there is an obligatory match between verse or line endings and major syntactic boundaries (either phrase level or clause level, though the latter are of course more informative), some information about syntax exists and can be reliably deduced. In Old English verse, the constraint matching clause boundaries to verses is precise and clear, and has been for a long time. In the recent formulation of Pintzuk and Kroch, clauses “begin and end on half-line boundaries” (1985: 100)¹⁶.

From this fact Pintzuk and Kroch make several persuasive deductions about the nature of the rules which allowed complements to appear post-verbally in Old English. They also draw rather subtle distinctions between rules such as extraposition and heavy-NP shift: that is, the evidence for some of their discriminations between syntactic rules in a dead language is metrical evidence.

But this is not the same as evidence that prosody was responsible, in part, for some syntactic change or other. There is, however, one instance in the literature (that we know of) where an explicit claim is made that a metrically determined syntactic property of verse became grammaticized in prose: that is, more broadly, that a rhythmic feature of verse “contaminated” the grammatical system of the language. This is the case put forward by Alistair Campbell (1970) that certain properties of Old English prose can be attributed directly to influence from the earlier art of verse. We have discussed this case in considerable detail elsewhere (Minkova – Stockwell 1991). Here we merely summarize the essential claims.

The background for Campbell’s hypotheses is this: In verse, when the finite verb was not at the end of the clause, it was generally within the first dip, but not guaranteed to be either absolutely first or absolutely second. In prose, there was a regular, near-absolute, verb-second constraint in main clauses, given that clitic pronouns do not count as constituents.

The rules which generated these effects were two optional rules: verb-fronting in main-clauses and verb-raising in subordinate clauses,¹⁷ which placed a finite verbal constituent in first or second position frequently in main clauses and sometimes in subordinate clauses. In verse, the first dip, which was fed in part by these two rules, allowed a fairly broad constituency. In prose the constituency was not so broad, but it was a subset of the verse constituency.

The essential claims of Kuhn’s laws are 1) that sentence particles – mainly sentence adverbs, subject and object personal pronouns, and finite verbs (especially auxiliary-like ones) – must either appear unstressed in the first metrical dip of a clause, or they will be stressed (i. e., when they appear elsewhere); and 2) that a clause-initial dip must contain sentence particles. Though Kuhn himself did not see it this way, these principles must be taken as specific to verse, since they are defined in terms of metrical constituents.¹⁸

The two peculiarities of clause-initial constituents in verse are 1) the fact that multiple adverbials are permitted in the first dip; and 2) the fact that demonstratives, the first constituent of definite NPs, are not allowed

there (and therefore the extreme rarity of definite NP subjects – those consisting of DEMONSTRATIVE + NOUN¹⁹ – in first position of a verse clause).

In prose, an initial dip contains conjunctions, orientational adverbs, and pronominals. Or a full definite NP may appear first, in which case the clause begins with a metrical dip disallowed in verse. Then another dip follows after the noun in the form of a finite verb in second position. From the point of view of the prose, then, the two most apparent differences are 1) the absence in verse of full NPs initially in clauses; and 2) the absence in verse of fixed order in initial position between adverbs and finite verbs in initial position.

Campbell argued that two syntactic properties of prose were strongly influenced by these verse conventions: verb-initial order in principal clauses, and what he viewed as the failure of the verb-second constraint to become well-established in Old English main clauses.

In Minkova – Stockwell (1991) we give figures showing that verb-first sentences in prose are anomalous. They must be allowed by the syntax, but usage does not favor them. The anomalous instances may indeed be well-explained as “leakages” of verse preference.

As for the putative failure of the verb-second constraint to become well-established in Old English prose, we think Campbell was wrong in his claim: we believe Kemenade is right in claiming that it was fairly regular if the clitic properties of pronouns are taken into account – which they were not by Campbell. Here we quote from Minkova – Stockwell (1991: 155–156):

As the prose matures, the underlying syntactic system is increasingly LESS obscure, a fact for which the Kuhn’s law aspects of the poetry should quite possibly be given credit, since the laws reinforced the position of proclitics and finite verbs in the dip after the first stressed word (if we can speak of “dips” in prose), thus encouraging a surface verb-second output. This is the reverse of Campbell’s suggestion. Old English main clauses become MORE like Dutch and German, in the prose.

Conclusion

If we were to compile a list in which we assign rank-ordered positions to the various internal causes of syntactic change, prosody would appear near the bottom, but it is still not negligible. Though the cases are

extremely difficult to establish beyond the level of plausibility, examples of prosodically-motivated boundary shifts (as in [7]) or even the rise of distinctive structures of which the only surface marking is prosodic (as in [12]) support this; and if the development of the verb-second constraint could be solidly anchored in prosodic factors, prosodic motivation would have to rise significantly in our rank-ordering.

Notes

1. I.e., “found in other positions”. Formulation in terms of the notion “movement rule” is not necessary to establish this point; it’s just an easier way to talk about it.
2. With Andersen (1973), following Charles Peirce.
3. With Ohala (1979, 1981). Ohala 1981 speaks of changes being due to “a misapplication of listeners’ reconstructive rules” (1981: 11). He is referring only to phonetic reconstruction, but there appears to us to be no basis whatever for viewing his explanation as different in any way from that of Andersen (1973). Ohala does not reference the latter. There is a very extensive tradition that ascribes change to misanalysis on the part of the learner (in particular, the young learner), including Anttila’s textbook (first edition 1972), where a detailed discussion of such “reconstructive rules” is given in section 9.16. The specific claim that child learners construct a set of rules (a grammar) that may be significantly different from those of the older generation(s) so long as the productive aspects do not differ noticeably from their models – but that the adult cannot restructure the grammar in the same way – was first formulated, in a way that has influenced nearly all subsequent accounts of phonetic, syntactic, and semantic change, by Morris Halle (1962). The notion that ambiguity in the signal (at any level) may induce such reanalysis goes back much further (it is implicit in A. A. Hill’s 1936 paper on phonetic and phonemic change), but we do not know who is responsible for its first clear formulation. It is elevated to the status of a necessary condition for change in Andersen (1973), at least insofar as the change is internally motivated.
4. Mitchell – Robinson (1986: 79).
5. Li – Thompson (1976).
6. Sentences like *Here comes the bus* are fossils of the once-pervasive verb-second rule of English. Though one might argue that the existential *there* of *There’s a book over there on the table* is a subject, and so is not to be explained like the clearly adverbial *here*, we find this account unpersuasive because it is the superficially predicate NP which governs agreement: *There’re two books over there on the table*. In any case, the view that the preverbal position is

reserved for subjects in English declarative sentences is intuitively correct; all apparent counter-examples have (and must have) some explanation.

7. Old English seems to have preferred extraposition even more regularly than Modern English; Stockwell (1977) lists several types of extraposition in Old English which are either uncommon or ungrammatical in Modern English.
Rhythmic preference is apparently not a strong force in the inhibition of word-order change: consider *good my lord* vs. *my good lord*. However, some curious fossils may well be due to rhythmic preference: e. g., *so sweet a voice*.
8. Examples from Mitchell – Robinson (1986).
9. Hock (1985: 344) has an enlightening discussion of examples of this type: “... although syntactically (in terms of case assignment), the correlative pronouns are bracketed with the main clause, phonologically they usually are bracketed with the following relative clause; ... line breaks ... and caesuras ... almost invariably separate the pronoun from the main clause and connect it with the relative clause”.
10. We are cognizant of Mitchell and Robinson’s warning, however: “Attempts have been made to lay down the rules which governed the use of the various relative pronouns in OE. They have not succeeded, largely because the vital clue of intonation is denied to us” (1986: 79).
11. See, e. g., Lass (1987: 190–191).
12. E. g., the Wackernagel phenomenon, according to Siewierska (1988: 32), “has been noted in numerous genetically and typologically unrelated languages, for example, in Serbo-Croatian, Pashto, Finnish, Tagalog, Ngiyambaa, Walbiri, Papago, and Luiseno ...”.
13. It is accepted, it appears, by Hock (1985), and Pintzuk – Kroch (1985: 105) take it as a proven case: “We assume that like Old High German ... Early Old English manifests an intermediate stage in the development of the verb-second constraint that still reflects the rhythmic factors that gave rise to it (Wackernagel 1892)”. It is in fact a mistake to attribute this explanation to Wackernagel rather than to Kuhn; the former made the observation for Indo-European generally, but the latter made sense of it for Germanic.
14. Assuming also, of course, a metrical alternation principle.
15. See Stockwell – Minkova (1991) for a more complex non-teleological theory of why English basic word order changed, more complex, that is, than the various widely-known theories.
16. This claim is false for subordinate clauses which commonly begin in the middle of a half-line, as in lines 338, 442, 455, 603, 1184, 2163, 2172, etc. In the later version of their paper Pintzuk and Kroch correctly restrict this formulation to matrix clauses (1989: 130).
17. For details see Kemenade (1987) and Koopman (1990).
18. Kuhn saw his generalizations as pertaining to the interrelation between the prosody and syntax of speech (for Common Germanic), and he found support for them in the individual poetic traditions of the various daughter languages.

19. Hereafter we refer to this combination as a “full NP”. In later poetry, such as *Maldon*, such sequences occur (e. g. 72 a *Se flod ut gewat*, noted in this connection in Bliss 1958: 104).

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Discourse and diachrony: The rise and fall of Old French *SI**

Suzanne Fleischman

1. Introduction and ideology

1.1. In a paper devoted to particles and affixes in Amerindian languages, Longacre (1976: 468) writes:

In analyzing the sentences of languages found in some parts of the world, certain ... affixes and sentential particles may continue to defy analysis even at a relatively advanced stage of research. Typically, the native speaker uses such affixes and particles with complete assurance but is unable to verbalize anything very concrete as to their meaning and function. The analyst is here tempted to resort to a rather crass theory of free variation to explain the presence of these elements ... Almost inevitably 'mystery' particles and affixes of this sort are found to have a function which relates to a unit larger than the sentence, i. e. to the paragraph and the discourse.

In the present paper I propose to revisit a notorious "mystery particle" of Old French, the clause-initial morpheme *si* (untranslatable), whose functions, I feel, are likewise best understood as relating to the structure and organization of discourse.

Over the past two decades a growing number of linguists have come to acknowledge the need to look at certain linguistic phenomena, syntactic phenomena in particular, from the viewpoint of their functional motivation in human communication, in discourse – in preference, that is, to concentrating on the formal, algorithmic properties of syntax, and considering in splendid isolation often totally implausible sentences.

In the case of a "text language" like Old French, a discourse-based approach suggests itself *a fortiori*, given the absence of native speakers

* Gratitude goes out to Noel Corbett, Knud Lambrecht, and Jonathan Beck for ferreting out sundry bits of nonsense from an earlier version of this paper and for suggesting various improvements.

to assess the grammaticality of constructed sentences or the pragmatic appropriateness of decontextualized utterances. The linguistic data of dead languages come to us exclusively in the form of texts. Thus, to base historical syntax¹ on any method other than comparison of texts is in some sense to denature the data-base. Only by considering the linguistic data of earlier *états de langue* as tied to real textual sources, can we hope to arrive at a more informed understanding of the grammars of dead languages.²

1.2. The particle *si* occurs in virtually every French text from the ninth-century Strasbourg Oaths, the first document recognizably in French, through the fourteenth century. The examples in (1)–(5) represent different genres and different periods within this time span.³

- (1) *Pro Deu amur et pro christian poblo et nostro commun salvament, ... in quant deus savir et podir de dunat* (a), *si salvarai eo⁴ cist meon fradre Karlo* (b), ...
 ‘For the love of God and the Christian community and our common safety/salvation, ... insofar as God grants me the knowledge and the power (a), # will I support this brother of mine, Charles, (b) ...’ (*Strasbourg Oaths*, 842 A.D.; legal oath)
- (2) *Ço est l’arcevesque, que Deus mist en sun num* (a);
Cleimet sa culpe (b), *si regardet amunt* (c),
Cuntre le ciel amsdous ses mains ad juinz (d),
Si priet Deu que pareïs li duinst (e).
 ‘This is the archbishop, whom God sent in his name (a); [He] confesses his sins (b), # lifts up his eyes (c), pointing toward Heaven both his hands [he] has joined (d), # [he] prays God to grant him [a place in] Paradise (e).’ (*Song of Roland* 2238–2241; 12th-c. verse epic)
- (3) *La dameisele par la main*
en mainne mon seignor Yvain (a)
la ou il iert molt cher tenuz (b);
si crient il estre mal venuz (c) ...
 ‘The maiden by the hand leads my lord Yvain (a) to where he will be very well treated (b); # [he] fears he is unwelcome (c) ...’⁵ (Chrétien de Troyes, *Yvain*, 1945–1949; late 12th-c. verse romance)

- (4) *Et quant li Grieu les oïrent venir (a), si voidierent la cité (b), si s'en alerent (c). Et il se herbergierent dedenz (d), si la garnirent et refermerent (e).*

'And when the Greeks heard them come (a), # [they] evacuated the city (b), # [and] went away (c). And they [the Latin army] remained inside (d), # [they] got it ready and fortified it (e).' (Villehardouin, *The Conquest of Constantinople*, § 312; 13th-c. prose chronicle)

- (5) *Or t'ai dite la verité de ta devinaille (a), si me suis vers toi aquitez (b), ce m'est avis (c). Si te dirai ores la moie devinaille (d), si verrai (e) qu'il en avendra (f).*

'Now [I] have told you the truth of your riddle (a), # [and] have [thus] taken care of my obligation to you (b), it seems to me (c). # [I] will tell you now *my* riddle (c), # [and I] will see (e) what happens (f).' (*Prose Tristan*, 132, 19–21; 13th-c. prose romance)

1.3. The hypothesis I wish to propose in this paper — still subject to refinement — is that *si* and the Old French subject pronouns have parallel functions related to the discourse operation of referential tracking. Specifically, I will argue that *si* functions as a main-clause marker of subject/topic continuity, while subject pronouns (e.g. *il* in the examples above) function as markers of switch-reference and topic discontinuity. With respect to diachrony, I will propose a functional motivation for the grammaticalization of *si* at a time when, on the one hand, subject pronouns were not yet obligatory in French, and on the other, a rhythmo-syntactic “verb-second” (V/2) constraint was operative. Once V/2 evolves to the modern SVX order and subject pronouns become obligatory, then *si* as a marker of same subject/topic continuity loses its *raison d'être* and eventually disappears from the language.

It may strike some as preposterous to claim Old French among switch-reference languages. Switch-reference marking has been identified in a variety of exotic languages (see the papers in Haiman — Munro 1983), but to my knowledge not in more common European languages, including Romance. This is not to say that referential tracking mechanisms are foreign to Romance, but simply that the tradition-bound grammars of Romance languages have overall not been investigated from this particular discourse-pragmatic perspective.⁶

2. The origin of *si*

Si and its counterparts in other varieties of Romance derive from Latin *sic*, a clause combining particle meaning ‘thus, therefore, and so’.⁷ In line with the tendency, in diachrony as in discourse, for causality markers to be interpreted temporally and vice versa, *sic* is said to have acquired by the Late Latin period a temporal meaning of ‘then, thereupon’ (Löfstedt 1959: 46–47; Väänänen 1967: 171). The successive nuance is particularly in evidence where *sic* introduces a main clause following a temporal or conditional subordinate, as in the Late Latin examples in (6) and (7) (cited in Väänänen 1967: 171):

- (6) ... *cum avidè bibit (sic) pleno ventre aqua, sic dolorem patiuntur*
 ‘having avidly drunk the water and their bellies full, # [the horses] feel pain’ (*Chiron* 452)
- (7) *At ubi autem sexta hora se fecerit, sic itur ante Crucem*
 ‘However, when the sixth hour struck, # [one] goes before the Cross’ (*Peregrinatio Aetherae* 37,4)

As we shall see below (5.3.), *si*’s derivation from a Latin marker of temporal succession is a diachronic fact not irrelevant to the claim that it functions pragmatically in Old French as a same-subject marker.

3. Philological background⁸

3.1. The “parts of speech” debate

3.1.1. Historical grammarians and philologists have for the most part analyzed *si* (variants *se*, *s’*) as a piece of intersentential connective tissue – an adverb, conjunction, or hybrid of the two – variously translated as ‘and’, ‘thus’, ‘and so’, ‘and then’, ‘therefore’, ‘however’, or left untranslated, with meaning assigned contextually.⁹ An example such as (8), however, would appear to weaken the case for construing *si* as either an adverb of temporal succession or a coordinating conjunction:

- (8) *Quant il eut che fait (a), si prist deux grandesmes pierres (b), si leur fist lier as cous (c) et puis si les fist geter en le mer (d). Apres si se fist coroner tot a force a empereur (e). Quant il fu corones ...*

‘When he had done that (a), # [he] took two huge stones (b), # had them tied around their necks (c) *and then* # had them thrown into the sea (d). *After that* # [he] had himself duly crowned emperor (e). When he was crowned ...’ (Robert of Clari, *Conquest of Constantinople* 21, 18–21)

In (8/d) and (8/e), temporal succession is expressed explicitly by the adverbs *puis* ‘then’ and *après* ‘after that’, respectively, which directly precede *si*. In (8/d), clause coordination is carried out already by *et* ‘and’, which likewise precedes *si* (the sequence *et si* is discussed in 4.4.). If *si* were a temporal adverb or coordinating conjunction, as has been claimed, these clauses would be functionally redundant to a surprising degree.

3.1.2. Several grammarians of Old French (Ménard 1988: § 416, Kibler 1984: § 87) have observed the similarity of *si* to modern diacritics of punctuation. Kibler makes this point with the example in (9), transcribed as in the manuscript, i. e., without the editorially-introduced punctuation:

- (9) *Nicolette laise ester que ce est une caitive qui fu amenee d’es-
trange terre (a) si l’acata li visquens de ceste vile as Sarasins
(b) si l’amena en ceste vile (c) si l’a levee et bautisie et faite sa
fillole (d) si li donra un de ces jors un baceler ...*
‘Forget about Nicolette for she is a captive who was brought
from a foreign land (a) # the viscount of this city bought
her¹⁰ from the Saracens (b) # brought her to this city (e) #
lifted her up and baptized her and made her his step-daughter
(d) [and] # will give her one of these days a young knight [as
a husband].’ (*Aucassin and Nicolette* 2, 28–32)

This example offers prima-facie evidence for the claim, now widely acknowledged, that *si* signals the beginning of an utterance unit (i. e., a clause). However, it leads Kibler to interpret the particle as a conjunctive adverb, given its common usage “as a conjunction equivalent to *et* ‘and’”. In a similar vein, and in recognition of the fact that *si* occurs exclusively in clause-initial position, Foulet (1974: § 440) sees in *si* “un point d’appui pour la voix”, i. e., a mechanism for starting up again following a pause.

Though these statements hint at a discourse function — *si* as a “traffic signal” indicating where to segment the discursive continuum, the emphasis is nonetheless on subsuming it under one of the consecrated parts of speech, hence also on semantics, on finding explicit translation equivalents to bridge the interclausal gaps that Old French, like any language that has not developed a grammar of writing, typically leaves unfilled.

As modern text consumers in a culture of the written word, we have come to expect the connective tissue of discourse to be explicit and grammaticalized; we expect hypotaxis in texts that we read, and where it is lacking supply it ourselves, as suggested by the grammarians' glosses. Yet the Old French texts we now read were virtually all composed as oral discourse; moreover, they were composed in a language that was not yet a codified, written idiom.

3.1.3. From the standpoint of grammar and discourse structure, the language of Old French texts is still very much a spoken language, the communicative instrument of a fundamentally oral culture, adapted — sometimes better, sometimes worse — to writing. Cerquiglini et al. (1976: 191) characterize it as the “literary elaboration” of a language which, while it served as the vehicle for a vernacular poetic tradition already in place by the twelfth century, “had not yet become the object of a grammatical discourse”.¹¹ It is our literate expectation of an explicit linkage in the environment in which *si* occurs that has led investigators to analyze this particle as a sentence adverb, a conjunction, a conjunctive adverb, or, skirting the parts-of-speech question altogether, simply a clause-level connector (Stammerjohann 1988). While I fully agree that the function of *si* relates to the connectivity of discourse, I am not convinced that any of the proposals mentioned thus far tell the whole story.

3.2. *Si* as an anaphor

The hypothesis proposed here — that *si* is a marker of subject/topic continuity — entails construing the particle as a type of anaphor. Several scholars have alluded, more or less explicitly, to its anaphoric nature (Grad 1961; Rychner 1970; Blumenthal 1980). Picking up on Diez's observation (1882: 1060) that *si* heads clauses “where no new subject is introduced”, Blumenthal analyzes this particle as an anaphoric personal pronoun that refers back to a previous “psychological subject”.

Granted, his hypothesis acknowledges the functional and distributional parallelism between *si* and subject pronouns; it also recognizes that *si*, like subject pronouns, is involved in the coding of topics (what Blumenthal calls “psychological subjects”). Yet *si* is not a pronoun, notwithstanding certain syntactic considerations that might seem to favor this analysis: a) it occupies the same syntactic position that bound subject pronouns occupy in Modern French: directly preceding the finite verb; b) it is

separable from the verb only by object clitics and the negative *ne*; c) it would be replaced in Modern French by a subject pronoun.

What undermines this analysis, beyond the fact that morphologically *si* has nothing to do with a pronoun, is that at times it co-occurs with explicit subject pronouns, postposed to the verb, as in (1) and (3): *si salvarai eo* ‘# will save-1sg I’, *si crient il* ‘# fears-3sg he’).¹² This same piece of syntactic evidence that leads me to reject the analysis of *si* as a personal pronoun leads Marchello-Nizia (1985) to reject anaphoric analyses altogether in favor of a pragmatic interpretation of *si* grounded in the problematics of *l'énonciation*.¹³

3.3. *Si* as marker of “veridictive assertion”

In the most exhaustive syntactico-semantic analysis of *si* to date, Marchello-Nizia (1985) analyzes this particle, which she classes among sentence adverbs, as an evidential of veridiction signaling the speech-act of assertion; by means of this particle, she argues, speakers legitimate their authority to make an assertion and simultaneously vouch for the truth of the proposition contained therein – whence the book’s title *Dire le vrai*.¹⁴

3.3.1. Suggestive as this hypothesis is, it presents several difficulties. For one thing, an evidential interpretation fails to explain convincingly why *si* never occurs in the opening clauses of a thematic paragraph,¹⁵ a syntactic fact which anaphoric interpretations account for nicely. The following statement about *si* between main clauses comes closest to addressing this question: “*si* instaure E₁ [the first clause] en un posé préalable et nécessaire, en un ‘thème’, et ce faisant légitime, rend possible l'énonciation de E₂ [the second clause] qui sera dès lors assumé comme vrai (ou réel dans l'ordre du langage)” (Marchello-Nizia 1985: 166). Minus the veridictive emphasis, this statement echoes Rychner’s view (1970: 222) that “*si* rapporte un prédicat à un thème, ou, plus exactement, en marquant comme prédicat un procès, il réduit après coup le procès précédant à l'état de thème“. Restated in terms of more familiar categories of information structure, these statements suggest that *si* serves to organize a sentence into two units of information, topic and comment, and that by introducing the predicational clause (comment), *si* establishes the information in the preceding clause as topical.

The above statements are difficult to reconcile with the syntactic diversity of the data. They apply best to two constructions, the first illustrated in (10) and (11):

- (10) *Tiebauz tes peres si est preuz et gentis*
 ‘Thibaut your father, # he is noble and valliant’ (*The Capture of Orange*, 1508)
- (11) *Icil Alexis si prist son frere l’empereor, si li traist les iaulz de la teste et se fist empereor ...*
 ‘This Alexis, # he took his brother the emperor, # pulled his eyes out of his head and made himself emperor (Villehardouin, *Conquest of Constantinople*, § 70)

In these examples, *si* is preceded by what looks like a lexical subject, but is preferably analyzed as a left-dislocated (extraposed) topic (whence the absence of brackets around the pronoun ‘he’ in the glosses). What motivates this analysis is the apparent constraint against co-occurrence of *si* with an expressed subject in preverbal position (cf. 4.3.3.). The Modern French equivalents (*Thibaut ton père, il est brave et courageux; Cet Alexis, il a prit son frère, il lui a arraché les yeux de la tête ...*), which emerge only in the Middle French period when subject pronouns become compulsory, are paradigm topic constructions; and it is germane to our hypothesis that Lambrecht (1981) interprets the pronouns in such constructions as topic-agreement markers. In Old French sentences like (10) and (11) where *si* is preceded by a lexical NP, text editors should insert a comma between the nominal and *si*.

A variant of this left-dislocated topic construction shows insertion of a subordinate clause, most commonly a temporal “when”-clause, between the topic and the comment/predication:

- (12) *...et messire Gauvains, quant il voit que la chose est a tant alee, si commande que l’en li aport ses armes hastivement*
 ‘... and Sir Gawain, when he sees that things have come this far, # he orders that his armor be brought to him straight-away.’ (*Death of Arthur* 112, 40–42)
- (13) *Li empereres, cant il oï ensi parler le mesagier, si fu tous esbahis*
 ‘The emperor, when he heard the messenger speak thus, # he was thoroughly astonished’ (*Tale of King Coustant the Emperor*, p. 30)

In none of these left-dislocated constructions can a subject pronoun substitute for *si* (*et messire Gauvains, ... *il voit que la chose est a tant alee*), a constraint which undermines Blumenthal’s claim that *si* is an anaphoric personal pronoun, while providing support for the claim ad-

vanced here that personal pronouns mark switch-reference or subject discontinuity (DS) (the pronoun could, however, substitute for Sir Gawain as a left-dislocated topic).

The second construction to which the “topic, *si* comment” analysis applies, and the one Marchello-Nizia sees as best illustrating her claim, involves an existential presentational clause introducing a new referent, followed by a predicational clause stating something about that referent:¹⁶

- (14) *Uns reis y est, si ad num Corsablix*
 ‘A king there is whose name is Corsablix [lit. a king there is # has name Corsablix]’ (*Roland*, 1235)
- (15) *Il ot une seror, ainc tant bele ne vi, s’avoit a non Avisse ...*
 ‘He had a sister — never one more beautiful have I seen — # whose name is Avisse [lit. he had a sister, ... # had for a name Avisse]’ (*Aiol*, 20–21)

In sentences of this type, where the information contained in the first clause is not “given” information (note the indefinite articles), one sees a certain validity to the statements quoted above concerning the “thematizing” power of *si*. But in the majority of sentences in which *si* occurs, the information in the reference clause is already thematic, nor does it seem to require “legitimation”. Perhaps the clearest example of this is found in the “recapitulative *quant*-clauses” (16/a, f) that abound in thirteenth-century prose. These are particularly cherished by the chronicler Robert of Clari:

- (16) *Quant il eut che fait (a), si prist deux grandesmes pierres (b), si leur fist lier as cous (c) et puis si les fist geter en le mer (d). Après si se fist coroner tot a force a empereur (e). Quant il fu corones (f), si fait il prendre trestous chiaux que il seut que il en pesoit qu’il estoit empereres (g), si leur fait il crever les iex et destruire et de male mort morir (h).*
 ‘When he had done that (a), # [he] took two huge stones (b), # had them tied around their necks (c) and then # had them thrown into the sea (d). After that # [he] had himself duly crowned emperor (e). When he was crowned (f), # he ordered the seizure of all those whom he knew were grieved over his having become emperor (g), # he had their eyes pulled out and [had them] destroyed and killed in a horrible death (h).’
 (Robert of Clari, *Conquest of Constantinople* 21, 18–24)¹⁷

The second difficulty with the evidential hypothesis likewise concerns the relationship between syntax and information structure. *Si* is used exclusively to introduce independent or main clauses; it never occurs in subordinate clauses. Given the cross-language tendency to package asserted (generally new) information in main clauses and presupposed (given or recoverable) information in various types of subordinate clauses, the claim that *si* is a marker of “assertion” seems somewhat circular: does this not follow from its exclusive use in main clauses?

Finally, as Corbett (1988: 92) points out, *si* is little used in legal charters, which are sworn documents; this is hardly what we would expect if the particle were an authentic operator of assertion and asseveration.

3.3.2. Among the various constructions in which *si* occurs, the evidential interpretation applies most convincingly to the formulaic oath *si m'aït Dieus*, ... ‘so help me God’, which Foulet (1974) translates as ‘aussi vrai que je demande à Dieu de m’aider, ...’ (as truly as I ask God to help me, [I hereby assert] ...). But, as he points out (1974: § 454), the *si* of this construction eventually becomes confused with the subordinating conjunction *si*, leading to a reinterpretation of the formula as ‘if God grants me his help, ...’, and thereby licensing, in the thirteenth century, the variant *si Dieus m’aide*. This *si* SV variant would be impossible if the *si* in question were in fact “discourse *si*”, which does not normally occur where an expressed subject is preposed to the verb.

4. The syntax of *si*

4.1. Pro-drop and expression of the subject in Old French

Old French is a “pro-drop” language typologically intermediate between what have come to be referred to as Type A and Type B languages (cf. Perlmutter 1971), albeit closer to the Type B pole. Type A languages (English, Modern French) require that the subject be expressed by a separate NP, even for subjectless verbs (Fr. *il pleut*, Eng. *it's raining*); Type B languages (Spanish, Italian) do not (Sp. *llueve*, It. *piove*). Old French has agreement-marking on the verb and non-obligatory subject pronouns, though by the end of the Old French period phonetic erosion had seriously diminished the functional value of the agreement morphology (see 6.2.). Relevant to our claim about the discourse functions of *si* is Silva-Corvalán's (1983) observation for Spanish, a language whose

syntax resembles that of Old French in several pertinent respects, that in pro-drop languages expression of the subject (via an independent pronoun) generally indicates some kind of topic discontinuity.

The insertion of subject pronouns in Old French is also connected to the fact that the language is syntactically V/2, particularly in affirmative clauses. According to Price's formulation (1971: § 11.5), if there is no complement (object or adverbial) to occupy the first slot in the clause and no other expressed subject (noun, demonstrative or relative pronoun), then this position will be occupied by the appropriate subject pronoun.

4.2. V/2

4.2.1. Old French grammarians have long acknowledged the language's tendency to place the verb in second position in the sentence. Skårup (1975) refines this descriptive statement, dividing the sentence of Old French into three slots, of which only the second is assigned to a fixed category: the verb and its immediate satellites. Elements that can occupy the first slot include lexical subjects and objects, independent pronouns, adverbs of various types, and *si*. Skårup (1975: 290) notes that these items are not restricted to the first slot; they can also figure in the postverbal slot or be extraposed. However, unlike the other candidates for the first slot, *si* cannot occur elsewhere in the clause nor in extraposition, and its presence, like that of subject pronouns, is clearly connected to V/2. That is, if the first slot in a clause is not otherwise filled, then either *si* or a pronoun will be introduced to fill that position; according to our hypothesis, the choice depends on whether or not the subject/topic continues from one clause to the next. If, on the other hand, the first slot is already filled, then neither *si* nor a pronoun will appear in this position.

By way of illustration, I list in (17) variant readings of verse 3 of the *Life of St. Alexis*, taken from four different manuscripts. The first three have first position filled, the last does not (double slash lines mark the boundary between slots one and two):

- (17) a. *tut // est muez perdu ad sa colur* (MS L, 12th c., England)
 b. *tut // est muez perdu ad sa calur* (MS A, 12th c., England)
 c. *tot // est muez perdu a sa color* (MS P, 13th c., France)
 d. *si // est muez perdue a sa valour* (MS S, late 13th c., France)
 'everything/# // is changed [and] has lost its color/value'

Similarly, the pairs of examples from *Roland* in (18) and (19) are syntactically parallel, save for the presence or absence of an item filling the first slot of the second clause:

- (18) a. *Franceis se drecent, si // se metent sur piez*
 ‘The French stand up, # // [they] rise to their feet’ (1139)
 b. *Franceis descendent, a terre // se sunt mis*
 ‘The French lie down, *on the ground* // [they] have placed themselves’ (1136)
- (19) a. *Quan l’ot Marsilie, si // l’ad baiset el col*
 ‘When Marsile heard it, # // [he] kissed his neck’ (601)
 b. *Quant ot Rollant qu’il ert en la reregarde, ireement // parlat a sun parastre.*
 ‘When Roland heard he was assigned the rear guard, *angrily* // [he] spoke to his stepfather’ (761 – 762)

In these examples, subject/topic continuity need not be marked explicitly, given the ease of reference-identification. As Givón (1983 b: 67) states: “The more continuous/predictable is the topic/subject/referent NP, the less overt expression it needs to receive”. In each example in (18) and (19), the subject/topic of the second clause is the most continuous or predictable, being that of the immediately preceding clause. Thus, no marking is necessary beyond simple verb agreement, the strategy which in Old French serves to mark referents with the highest topic-continuity value (see 5.2.2. and Figure 2). The presence of an explicit continuity marker, *si*, in the (a) examples thus seems to be motivated more by rhythmico-syntactic considerations (i. e., by V/2 or by metrics) than by the strict demands of referential tracking.¹⁸

Comparison of the examples in (18) and (19), or of (22) and (23) below with (24), reveals a significant fact about the behavior of *si*: it does not occur in all instances in which it could. Let us say provisionally, then, that *si* is an optional marker of subject/topic continuity whose presence is determined by rhythmico-syntactic as well as discourse-pragmatic factors.

For the early texts (twelfth century), V/2 appears to merely be a “preferred clause structure” that could be overridden, and often was, by prosodic considerations; however, by ca. 1200 the preverbal slot could no longer be unoccupied, except in a very limited number of sentence types (Skårup 1975: 291). This development correlates with Marchello-Nizia’s observation (1985: 200) that the beginning of the thirteenth century marks the highest text frequency of *si* between main clauses.

4.2.2. The examples cited thus far confirm that in the majority of cases *si* occurs in clauses with no expressed subject. Foulet (1974: § 457) sees

this as a consequence of inversion; that is, given that an element in the first slot other than the subject will necessarily trigger subject inversion, in such cases the subject is not normally expressed, particularly in the case of a pronoun subject, since its referent is generally identifiable from the agreement marking. In the rarer instances in which *si* co-occurs with an expressed subject (lexical or pronominal), as in (1/b) or (3/c), this constituent appears postverbally – a consequence of V/2 (if the first slot is filled by *si*, no other constituent can precede the finite verb). At several points in the sections that follow, I will consider the motivations for the marked *si* VS pattern.

4.3. The syntax of *si*

4.3.1. As stated above, *si* occurs exclusively in independent clauses, and always occupies by itself the first slot in clauses in which it appears. Crucial to my hypothesis that *si* is a marker of subject/topic continuity is the fact that it never occurs in the first sentence of a thematic paragraph; that is, it never occurs directly following a major break or turning point in the thematic continuity of the discourse. Various scholars have observed that *si* occurs most commonly where there is no explicit expression of the subject and, moreover, where the subject of the *si* clause is understood to be the same as that of the preceding clause (Rychner 1970, 1971; Marchello-Nizia 1985; Brucker 1986 a, b).

4.3.2. Within the clause unit, *si* occurs directly before the finite verb, from which it can be separated only by oblique clitics or, less frequently, by the predicate negator *ne* (cf. [44] below).¹⁹ Since an Old French sentence cannot begin with a clitic (i. e., clitics cannot occupy the first slot), *si* is frequently introduced to prevent this from occurring (cf. [4/e], [5/b, d], [16/c, h]).

4.3.3. It has been variously observed that *si* marks the beginning of clauses in which it occurs. Thus anything to the left of it must be considered in extraposition, outside the boundary of the clause. It is this consideration that leads us to analyze constructions like those in (9)–(13) as left-dislocated constructions in which the first nominal referent is an extraposed topic rather than a sentence subject. Compare (11), partially repeated as (20), with the non-topicalized (i. e., SVO) variant found in three other manuscripts, given as (20’):

- (20) *Icil Alexis si prist son frere l'empereor, si li traist les iaulz de la teste ...*
 'This Alexis, # he took his brother the emperor, # he pulled his eyes out of his head ...' (MS *O*)
- (20') *Cil prist son frere l'empereor et li traist les iaulz de la teste*
 'This one took his brother the emperor and pulled his eyes out of his head ...' (MSS *C, D, E*)

In addition to the matter of topicalization, these two examples raise the issue, to be taken up in 4.4., of *si*'s relation to the coordinating conjunction *et* 'and' and to other elements (conjunctions and adverbs) that commonly appear at the beginning of clauses.

4.3.4. Though *si* always occurs in main clauses that do not inaugurate a thematic paragraph, what directly precedes *si* in discourse can vary. It can be preceded by another main clause — by far the most frequent pattern from the tenth through the fourteenth centuries (Marchello-Nizia 1985) — including another *si* clause, as in (21):

- (21) *Li vaslés entendi bien que li empereres li donnoit boin conseil (a); si s'atorna au plus belement qu'il peut (b), si s'en vint avec les messages (c).*
 'The young man understood well that the emperor was giving him good advice (a); # [he] dressed himself up as elegantly as he can (b), # [and he] came with the messengers' (c) (Robert of Clari 31, 1–3)

or by an introductory subordinate clause, usually temporal (22/a) or conditional (23/b):

- (22) *Quant il vint pres del roi (a), si parole si haut que tuit cil de leanz porent bien entendre (b) ...*
 'When he [Lancelot] came near the king (a), # [he] speaks so loud that everyone inside could hear him well (b) ...' (*Death of Arthur* 82, 13–15)
- (23) *Ço di[t] la medre (a): "S'a mei te vols tenir (b), Sit guardarai pur amur Alexis (c)."*
 'Thus says his mother (a): "If you cling to me (b), # [I] will care for you out of love for [my son] Alexis (c)". (*Life of St. Alexis* 151–152)

If the subordinate clause is in turn preceded by a noun phrase, as in (12) and (13), repeated for convenience as (24) and (25), then, as stated above, the noun phrase must be analyzed as a left-dislocated topic. Without *si*, the identical syntax is analyzed as a straightforward SVO sentence, as in (26):

- (24) ... *et messire Gauvains* [topic], *quant il voit que la chose est a tant alee* (a), *si commande que l'en li apor ses armes hastivement* (b)
 ‘... and Sir Gawain [topic], when he sees that things have come this far (a), # he orders that his armor be brought to him straightaway (b)’ (*Death of Arthur* 112, 40–42)
- (25) *Li empereres* [topic], *cant il oï ensi parler le mesagier* (b), *si fu tous esbahis* (c).
 ‘The emperor [topic], when he heard the messenger speak thus (b), # he was thoroughly astonished (c).’ (*Tale of King Constant the Emperor*, p. 30)
- (26) *Tristan* [subject], *par droit et par raison, quant ot fait l'arc* (a), $[\emptyset]$ *li mist cel nom* (c).
 ‘Tristan [subject], with right and reason on his side, when he had made the bow (a), $[\emptyset]$ gave it this name (b).’ (Bérout, *Tristan* 1761–1763)

4.3.5. Where a *si*-clause follows a passage of quoted speech, *si*, as a same-subject marker, always indexes the quoted speaker, whether this participant is explicitly referred to (27) or not (28):

- (27) “*Granz merciz, mestre*”, *fait* Tristanz. *Si se depart maintenant* ...
 ‘“Many thanks, master”, goes *Tristan*. # [he] leaves straight-away ...’ (*Prose Tristan* I: 149, 15–16)
- (28) “*Bials sire Diex, come est tote proesce morte et tote joie torneé a duel!*” *Si a dit ceste parole par plus de VII fois* ...
 ‘“Oh, dear Lord, alas! all excellence is dead and all joy turned to grief.” # [she] uttered this phrase more than seven times ...’ (*Prose Lancelot*, p. 114)

Where *si* occurs within quoted speech, as in (29), it functions as a same-subject marker, just as in narrative discourse:

- (29) *Li reis Marsilie out finet sun cunseill (a).*
Dist a ses humes: "Seigneurs, vos en ireiz (b),
Branches d'olive en voz mains portereiz (c),
Si me direz a Carlemagne le rei (d),
Pur le soen Deu, qu'il ait mercit de mei (e).
Ja einz ne verrat passer cest premer meis (f)
Que je.l sivrαι od mil de mes fedeilz (g),
Si recevrai la chrestienne lei (h) ..."
 'King Marsile brought his counsel to an end (a).
 He said to his men: "My lords, you will go on [now] (b),
 olive branches [you] will carry in your hands (c),
 # [you] will tell King Charlemagne (d),
 for the sake of his God, that he should have pity on me (e).
 Scarcely will [he] see this first month pass (f)
 before I will follow him with a thousand of my faithful (g),
 # [I] will receive the Christian faith (h) ..."' (*Roland* 78–85)

In this example, the *si* clause in (d) indexes the addressee (*vos* 'you' = Marsile's men), a participant introduced in the reference clause (b);²⁰ the *si* clause in (h) indexes the speaker, Marsile, introduced by the pronoun *je* 'I' in the preceding subordinate clause (g). *Si* is excluded from (c), since the first slot is preempted by the object 'olive branches'.

4.4. *Si* and other sentence-initial particles

4.4.1. Though *si* always marks the onset of clauses in which it occurs, it can be preceded by coordinating conjunctions (*et* 'and', *mes* 'but') and a variety of primarily temporal adverbs (*lors* 'then', *puis* 'then, next', *atant* 'with that', *apres* 'after [that]'). These conjunctions and adverbs must be analyzed as lying outside the boundary of the clause.²¹ In examples (30) and (31) *si* is preceded by the coordinating conjunction *et*:

- (30) *Atant s'asist et si manja.*
 'With that, [he] sat down *and* # [he] ate.' (Chrétien de Troyes, *Perceval* 831)
- (31) *Ostes, vous m'avés bien pilliét, et s'en i a chi de plus rikes*
 'Innkeeper, you have really robbed me, *and* [yet] # [there] are
 richer than I here' (*Jeu de la Feuillée* 1063–1064)

Whether the text editor has introduced punctuation preceding *et si* (31) or not (30), this sequence always conjoins two clauses. This follows from

the fact that *si* always marks the onset of a new clause. *Et*, however, like its English counterpart, can conjoin either multiple clauses, as in (32/a, c, d), or multiple predicates of a single clause, as in (33):

(32) ... et puis [∅] *fist sa serour asseoir de joust li* (a); *si li commence a demander de son estre* (b), *et ele l'en dist partie* (c) *et partie l'en ceile* (d). *Si demeurent leanz en tieus paroles jusqu'a eure de prime* (e).²²

'... and then [Arthur] had his sister [Morgan] sit down beside him (a); # [he] begins to ask her how she is (b), and she told him part of it (c) and part [she] conceals (d). # [They] remain engaged in this discussion until the hour of prime (e).' (*Death of Arthur* 50, 80–83)

(33) ... *si l'a levee et baptisie et faite sa fillole*.

'# [the viscount] lifted her up and baptised her and made her his step-daughter.' (*Aucassin and Nicolette* 2, 31)

In (32), it is the reinforcement of *et* by *puis* (32/a) and by the pronoun *ele* (32/c) that signals the onset of a new clause, or what Rychner (1971: 96) calls "un début relativement plus important".

4.4.2. As a conjunction coordinating clauses/sentences, *et* remains outside the domain of the clause/sentence and cannot therefore occupy the preverbal slot. In (32/a) this preverbal slot is filled by the adverb *puis*, in (32/c) by the subject pronoun *ele*. Though the editor of this text (Frappier 1964) appears to regard (c) and (d) as a single clause, as evidenced by the lack of punctuation, I divide this material into two clauses because of the tense switch (past → present).

Silva-Corvalán (1983) has argued convincingly, for Spanish, that tense switching does not occur across coordinated predicates of a single clause or sentence, where there is necessarily subject continuity, but can occur across coordinated full clauses, which need not maintain subject/topic continuity. As mentioned above, in a pro-drop language like Spanish or Old French, expression of the subject via an independent NP generally indicates some kind of topic discontinuity; like clausal conjunction in English, an NP subject in a pro-drop language allows tense switching precisely because of the correlation with subject/topic discontinuity (Silva-Corvalán 1983: 772). A propos of (32/c), this statement squares with our interpretation of the Old French subject pronouns as switch-reference (different-subject) markers.

4.4.3. Virtually all the punctuation of Old French texts has been introduced by editors in an attempt to facilitate the reader's task by segmenting the essentially seamless discursive continuum of a language that, albeit transcribed on paper, was nonetheless fundamentally oral in structure (cf. Cerquiglini et al. 1976; Fleischman 1990 a, b). What guides editors' punctuation decisions are "traffic signals" inserted into the discourse for the purpose of identifying units of utterance at various levels of discourse structure: the clause, the sentence, the thematic paragraph, etc. Clause boundaries in (32) are signaled either by *si*, as in (32/b, e), or by *et* plus some indicator of a new unit of action or a new referent, e.g., the sequencer *puis* (32/a), the different-subject marker *ele* (32/c), and/or tense switching (32/b–c, c–d). No same-subject marker is required in (32/d) since at this point in the discourse Morgan is the most continuous or "primary" subject/topic; moreover, the first slot in the clause is filled by the direct object *partie* 'part'.

4.4.4. In example (32), we observe that the referent of the subject/topic of (32/e), marked in that clause by *si*, includes the referents of the subjects/topics of (32/a) and (32/c), Arthur and Morgan. A similar situation obtains in (34), extracted from a conventional description of combat between two knights, who alternate as subjects/topics. The subject/topic of the last clause, (34/f), referenced by *si*, is the two combatants together.

(34) *Vers Erec point (a), si le menace (b). Erec l'escu del col anbrace (c), si le requiert come hardiz (d); cil met l'escu devant le piz (e). Si se fierent sor les blazons (f).*

'Toward Erec [the opposing knight] advances (a), [and] # threatens him (b). Erec places his arm through the shield around his neck (c), [and] # attacks him vigorously (d); the opponent [lit. that one] protects his chest with his shield (e). # [they] strike at each other's coats of arms (f).' (Chrétien, *Erec and Enid* 2873–2877)

There are switch-reference languages in which a same-subject marker can be used in precisely this way, i.e., where the referent of the subject of a marking clause includes, as a subset, the referent of the subject of the reference clause. Thus in a sentence from Lenakel (an Austronesian language) that translates 'Magau saw Tom and they both ran away', the verb *ran away* is prefixed by a same-subject marker. Same-subject marking in Lenakel can even at times be used where the subject of the marking clause is coreferential with some other argument of the reference clause,

e. g., *Tom* in the sentence above, or the dative *him* in the sentence that translates 'The women gave *him* food and then SS slept' (Lynch 1983: 214–215). Among the switch-reference languages surveyed in Haiman – Munro (1983), it is Lenakel that shows the greatest parallelism with Old French.

5. Switch reference and topic continuity in discourse

The principal claim of this paper is that *si* and the Old French subject pronouns have complementary pragmatic functions relating to the organization and coherence of discourse: *si* functions as a same-subject marker and, correspondingly, a marker of topic continuity, while the pronouns function as different-subject markers and, correspondingly, markers of topic discontinuity. As we shall see below (5.3.), switch-reference and topic continuity – the one a phenomenon of syntax, the other of the pragmatics of discourse – are naturally connected within a theory of language that posits an interdependent relationship between grammar and discourse.

5.1. Switch reference

5.1.1. Canonical switch-reference marking is an inflectional category of the verb that indicates whether or not its subject is coreferential with that of another verb, generally that of the clause immediately preceding or following. Functionally, it is a device for referential tracking whose purpose is to avoid ambiguity of reference; formally, it is most often a category of the verb, similar to agreement marking, though in some languages it is marked by an independent morpheme. Haiman – Munro (1983: X) note that the formal similarity between switch-reference marking and agreement marking may lead to a complete overlap between these two systems. For a time during the medieval period, French had both inflectional (suffixed) agreement marking on the verb and periphrastic switch-reference marking, expressed via *si* (prefixed and bound) and the subject pronouns (disjunctive). Diachronically, however, the switch-reference system gradually evolves into a new system of grammatical agreement, this time marked prefixally on the verb by the erstwhile independent pronouns that have become clitics.²³

5.1.2. There is a range of variation in the ways and extent to which switch-reference is marked in languages that grammaticalize this category. Haiman (1983: 106) notes that in one common type of switch-reference language, different subject is signalled by a personal affix, same subject by either zero or, what is functionally equivalent, an invariable affix. *Mutatis mutandis*, Old French fits this pattern, as shown in (32), expanded below as (35), and in (36):

- (35) *Li rois se vest et apareille tout maintenant (a), puis [∅] s'assiet en son lit (b), et puis [∅] fist sa serour asseoir de joustes li (c); si li commence a demander de son estre (d), et ele l'en dist partie (e) et partie [∅] l'en ceile (f). Si demeurent leanz en tieus paroles jusqu'a eure de prime (g).*

'The king dresses and prepares himself straightaway (a), then [∅] sits down on his couch (b), and then [∅] had his sister [Morgan] sit down beside him (c); # [he] begins to ask her how she is (d), and *she* told him part of it (e) and part [∅] [she] conceals (f). # [They] remain engaged in this discussion until the hour of prime (g).' (*Death of Arthur* 50, 78–83)

- (36) *Lors fu donnee la roïne as malades en decepline (a). Ge [DS] l'en portai (b), si [SS] li toli (c), puis [∅] [SS] ai toz tens o li fui (d).*

'Then the queen was given to the lepers for punishment (a). *I* [DS] carried her off (b), # [SS] took her away (c), [and] ever since [∅] [SS] with her have fled (d).' (Béroul, *Tristan* 2591–2594)

In (35), King Arthur is the subject of the reference clause (35/a). This referent continues as the subject of (35/b–d), marked twice simply by agreement ([∅]), once by invariable *si*. In (35/e), the subject switches to Morgan, marked by the personal pronoun *ele*. She continues as the subject of (35/f), marked by agreement. Finally, in (35/g), as pointed out above, the same-subject marker *si* references the previous subjects collectively.

In (36), the queen is the subject of the reference clause (36/a); when the subject switches to the speaker in (36/b), this switch is signaled by a different-subject marker, the personal pronoun *ge* 'I'. The first-person subject then continues, signalled by the invariable same-subject marker *si* in (36/c) and simply by agreement in (36/d).

5.1.3. In some languages switch-reference marking is limited to verbs with third-person subjects, since it is redundant where either subject is

first or second person. In this regard Old French follows the pattern of languages that grammaticalize switch-reference beyond the call of strict functional duty. The fact that switch-reference in Old French nonetheless overwhelmingly involves third-person subjects is predictable from the data-base, which consists largely of nonpersonal (i. e., third-person) narrative texts. Switch-reference with first or second person subjects, as in (29) and (36), occurs for the most part only in passages of direct speech.

5.1.4. In the languages surveyed in Haiman – Munro (1983), a reference clause is never subordinate to a marking clause, though the editors acknowledge having “no explanation for this puzzling restriction, which is anomalous in both functional and structural terms” (Haiman – Munro 1983: xii). In this regard, Old French might perhaps be the exception that proves the rule; for in this language, when reference clauses are not main clauses, they are typically temporal subordinates – cf. (4), (12), (13), (16), (19), (22), (24), and (26).

Where reference and marking clauses are coordinate, Haiman – Munro (1983: xii) note that the linear order seems to depend on whether the switch-reference marker is a prefix or a suffix of the verb: where the affix is a suffix (most cases), the marking clause normally precedes the reference clause; where the marker is a prefix (e. g., in certain Austronesian languages), the marking clause follows the reference clause.²⁴ In Old French, where both *si* and the pronouns can be analyzed as separable prefixes on the verb (cf. n. 23), the reference clause always precedes the marking clause.

5.1.5. Switch-reference markers develop from a variety of sources. Support for our hypothesis that *si* is a same-subject marker is provided by the fact that it originates as a marker of temporal succession in Latin (cf. section 2.), temporal succession markers being a documented source of same-subject markers. Longacre (1983) reports that in Guanano (a Tucanoan language of Northern South America), the same-subject marker develops from an erstwhile marker of temporal succession. As the inferential basis for this diachronic shift, he suggests the unlikelihood of the same person doing two things simultaneously. Speakers of Guanano (also of Tunebo, a Chibchan language of Colombia) normally expect that actions in succession are performed by the same agent, while actions that overlap are performed by different agents (Longacre 1983: 198). Thus, in these languages, different-subject markers develop from markers of temporal overlap, same-subject markers from markers of temporal succession.

5.2. Topic continuity

Givón (1983 b) distinguishes three levels of continuity in discourse: thematic continuity, action continuity, and continuity of participants in or topics of the discourse. Continuity at the second and third of these levels figures crucially in defining the structure of thematic paragraphs and the syntax of sentences and clauses, given that each clause in discourse contains one or more topics/participants plus the verb or predication. Though action continuity is often inseparable from participant/topic continuity, nothing more will be said about it here. The concern of this paper is the functional domain of topic/participant continuity and the grammatical devices used in Old French to code certain points along this domain.

5.2.1. Thematic paragraphs in discourse are generally organized with one nominal referent as the recurring topic, which tends to appear in each foregrounded clause of the paragraph (hence in each main clause, given the overall correlation between foregrounded information and main clauses). However, at different points within the paragraph, that referent has different “continuity values”. At the beginning of a paragraph, it breaks the continuity of the dominant topic chain of the preceding paragraph, and is thus discontinuous at that point. It may at that point be a new topic (indefinite) or an established topic (definite); the two are marked differently.

An established topic may return after gaps of varying size (in terms of number of clauses), without recurring in successive clauses. And these different discourse contexts likewise may condition different syntactic marking of the definite topic.

Finally, any topic – initial, continuous, or returning – may appear in contexts where other topics are present in the same clause or its immediate discourse environment (cf. in particular examples [3], [4], [32], [34], [36]). The presence of other nominals/topics, especially if they can lay claim to the same morphology (case, gender, person-number), creates a potential for topic ambiguity, thereby increasing the difficulty of topic identification. Thus different syntactic devices may be used to mark topics in environments of greater or lesser ambiguity. The ambiguity factor will be relevant to our discussion of the use of *si* together with postverbal subjects.

5.2.2. Topic continuity/predictability is the unmarked situation in discourse, topic discontinuity/surprise the marked situation. Relating this

to the psychology of discourse processing, Givón (1983 b: 55) posits a correlation between the degree of topic continuity/predictability and the accessibility or recoverability of the referent: topics that are continuous are more accessible and easier to process than topics that are discontinuous. Topic ambiguity also fits into this inherently psychological dimension of continuity or accessibility: the more competing topics there are in a given environment (i. e., the more topics that might lay claim to the coreferential interpretation of a predicate clause), the less accessible or less easily recoverable is the topic.

5.2.3. Givón defines accessibility in terms of the degree of difficulty the speaker assumes the addressee might have in assigning a correct and unique reference-identification to a given-topic nominal. He sets up a hierarchy of morphosyntactic devices used across languages to mark topics, ranging from the most continuous/predictable/accessible at the top of the hierarchy to the least continuous/predictable/accessible at the bottom. Figure 1 lists the marking devices that show the widest cross-linguistic attestation.

- Most continuous/predictable/accessible topics
 - zero anaphora
 - unstressed (bound) pronouns/grammatical agreement
 - stressed (independent) pronouns
 - right-dislocated definite NPs
 - neutral-ordered definite NPs
 - left-dislocated definite NPs
 - Y-moved NPs (contrastive topicalization)
 - cleft/focus constructions
 - referential indefinite NPs
- Least continuous/predictable/accessible topics

Figure 1. Topic Accessibility Hierarchy (cross-language)
(adapted from Givón 1983 a: 17)

The ordering of this hierarchy reflects a basic principle of iconicity, according to which “the more predictable the information, the less coding it receives” (Givón 1983 b: 67). That is, the more discontinuous, surprising, or inaccessible the topic, the more overt expression (i. e., the more coding material) it receives, and vice versa.

In Figure 2, the Topic Accessibility Hierarchy is adapted to the grammar of Old French. Points on this hierarchy relevant to our discussion will be illustrated in examples (37)–(39) below.

- Most continuous/predictable/accessible topics
 grammatical agreement ($[\emptyset]$)
si
 subject pronouns (*il*)²⁵
si V subject pronoun (exx. [1], [3], [40])
 demonstrative pronouns (*cil*) (exx. [20'], [34], [39])
si V definite NP (= right-dislocated NP; ex. [41])
 neutral-ordered definite NPs
 left-dislocated definite NPs (exx. [10]–[13])
 referential indefinite NPs (exx. [14], [15])
si V referential indefinite NP (ex. [42])
 Least continuous/predictable/accessible topics

Figure 2. Topic Accessibility Hierarchy (Old French)

A few remarks are in order concerning differences between the hierarchies. First, zero anaphora is not an option in Old French, given that person-number agreement is marked on all finite verbs. The most continuous or “primary” topic, which in most instances is the subject/topic of the immediately preceding main clause, is thus normally marked simply by agreement $[\emptyset]$ if there is no potential ambiguity, as in (37/c, d, e). *Si* also codes highly continuous topics; but as noted above, it always establishes the onset of a new clause, i. e., it marks a (low-level) discourse boundary (37/d). Agreement does not necessarily establish a boundary and can therefore be used either at the onset of a clause (37/e) or within a clause to coordinate multiple predicates (37c/2, d2).

With regard to subject pronouns, the cross-language hierarchy in Figure 1 distinguishes two sets, rank-ordered in terms of topic accessibility: the bound/unstressed/conjunctive variety codes more continuous topics, the independent/stressed/disjunctive variety less continuous topics. In Old French, subject pronouns are all potentially stressable and can all occur separately from the verb complex, e. g., *et il pour l'amour de li ne s'i repose un petit* ‘and he, out of love for her, does not tarry there a bit’ (Foulet 1974: §§ 205, 483; for a dissenting view, see Price 1971: § 11.5). Subject pronouns must therefore be analyzed as nominal arguments at this stage, though the forms will eventually reduce to clitics, flanked by a separate set of independent pronouns borrowed from the oblique series.²⁶ Their argument status also explains their ability to fill the first slot of the clause, as in (37/c₁), (39/c), etc.

5.2.4. Three of the marking devices listed in Figure 2 — subject pronouns, definite NPs, and indefinite referential NPs — are flanked by a variant

construction “*si V NP*”, where NP represents the device in question postposed to the verb (e. g., *si V* pronoun: *si crient il* ‘# fears he’; *si V* definite NP: *si ala li dux de Venise* ‘# went the Duke of Venice’; *si V* referential indefinite NP: *si vint uns valles* ‘# came a young man’). In all three cases I have ranked the *si V NP* alternative lower on the hierarchy, in accord with Givón’s iconicity principle referred to above. The Old French hierarchy in Figure 2 is striking in its overall conformity to the iconicity principle; that is, devices higher on the hierarchy contain less coding material than those below them. Invariable *si* contains less – or at least less informative (since it does not code person-number or gender) – coding material than subject pronouns, which in turn contain less coding material than demonstratives (*il* vs. *cil/celui*, *ele* vs. *cele*), and so on down the hierarchy. Concerning the question of the relative continuity values of *si V* vs. corresponding *si V NP* constructions, the iconicity principle favors the rankings given in Figure 2; however, this question requires further empirical testing.

5.2.5. Examples (37)–(39) below provide a comparative illustration of Old French topic-marking devices. Since this paper does not purport to offer a quantitatively based survey of the topic-continuity domain in Old French, along the lines of the papers in Givón (ed.) 1983, observations will be confined to those devices central to the focus of this inquiry.

Example (37) is a narrative passage with three established topic participants: Queen Guinevere, Lancelot, and a knight the latter has just slain. At the point in the text where the example begins, the queen is the primary topic as well as the subject of the preceding main clause. Between that clause and (37/a) two subordinate clauses of indirect speech intervene.

(37) ... *Lors regarde Lancelos le chevalier qu’il avoit ocis* (a), *qui estoit chaoiz a l’uis de la chambre par dedenz* (b); *il le trest a soi et [∅] ferma l’uis* (c); *si le desarma et [∅] s’en arma au mieuz qu’il pot* (d). *Lors [∅] dist a la reïne* (e): ...

‘... Then Lancelot looks at the knight that he had killed (a), who had fallen into the room by the door (b); he drew him toward himself and [∅] closed the door [c]; # [he] removed the knight’s armor and [∅] put it on as best he could (d). Then [∅] [he] said to the queen (e): ...’ (*Death of Arthur* 90, 55–59)

(37/a) begins with a recurrent topic – though at this point not the most continuous topic, coded by a definite NP (Lancelot). We might have expected *il*, but given that this clause contains two third singular mas-

culine topics, definite NPs are used to avoid ambiguity. Once reestablished as the primary topic, Lancelot continues as such for the remainder of the passage, marked accordingly by *si* (37/d₁) and agreement (37/c₂, d₂, e). The motivation for *si* (vs. [Ø]) in (37/d₁) is to prevent that clause from beginning with an oblique clitic.

Where the most continuous topic cannot be referenced unambiguously by agreement or by *si* alone (this occurs only in the case of multiple third-person topics in the same immediate environment), several strategies are available for assigning a correct and unique reference-identification. A device lower down the hierarchy may be used, e. g., the pronoun *il* in (37/c₁), the demonstrative *cil* in (39/a), (25), and (34/e), or the neutral-ordered definite NP Lancelot in (37/a). Alternatively, *si* may be reinforced by a postposed pronoun, as in (3/c) above (*si crient il* ‘# fears he’), or by a postposed definite NP (the nobles in [38/c] below):

- (38) *Adont si [= li baron] atirent leurs messages (a) ... puis quant il eurent atiré leur messages (b), si se departirent li baron (c), et li marchis s'en ala en son païs et li autre ausi cascuns (d).*
 ‘Then # [= the nobility] organized their messengers (a) ... and then when they had organized their messengers (b), # *the nobles* departed (c), and *the Marquis* went off to his land and likewise each of the others (d).’ (Robert of Clari 6, 1–6)

In (38) the two topics with competing claims on the third plural morphology are the nobles and their messengers. Though the subject of (38/c), the nobles, is the most continuous topic, the *si* V NP construction – which in this example looks like a right-dislocated construction²⁷ – avoids any possible ambiguity, given that the direct object (the messengers) is likewise a topic in the immediate environment (direct objects are commonly secondary topics; Givón 1983 a: 22).

In (38/d) we observe the use of an unmodified definite NP, *li marchis* [= the Marquis Boniface of Montferrat], to mark another established topic, albeit one returning after an absence of ten clauses and across a paragraph break. In example (39), a topic returning after a significant absence is marked by a demonstrative (*cil*) within a left-dislocated construction (39/a) (given the ambiguity of *cil* and *il* – both singular and plural, coreference subscripts are inserted in the Old French):

- (39) *Cil₁ a cui il₂ commanda le jugement a fere (a) si₁ furent de la terre de Logres (b), ne il₂ ne cuidoit pas qu’il₁ osaissent muer qu’il₁ nel feïssent (c).*

'Those whom he ordered to pronounce the sentence (a), # they were from the land of Logres (b), and he did not think they would dare refuse to do it (c).' (*Prose Lancelot* I, p. 123).

As in (10)–(13), the left-dislocated topic of the reference clause (39/a) is picked up in the marking/predicational clause (39/b) by the same-subject/topic-continuity marker *si*. The participant referred to as *il* in the relative clause in (39/a) then returns as the topic of (39/c); but since a competing topic has intervened in the meantime, in (39/b), this "he" is coded by the less continuous *il*.

5.3. Grammar and discourse: switch-reference and topic continuity

It should be apparent from the discussion in this section and from many of the examples cited thus far that switch-reference and topic continuity are not unrelated. There is a strong cross-language tendency for discourse topics to be encoded as grammatical subjects, and likewise for subjects to be the most continuous topics (Givón 1983 a: 38 n. 21). Across languages, the subject receives a higher topic-continuity value than any other grammatical case (indirect object, direct object, the various obliques).

From an investigation of these two phenomena in Ute, Givón (1983 b) reports an overall correlation between zero anaphora/grammatical agreement (as topic continuity markers) and subject continuation; likewise, between independent pronouns (as markers of discontinuous topics) and switch-reference. In other words, zero anaphora and agreement are primarily same-subject marking devices, while independent pronouns function as different-subject marking devices. *Mutatis mutandis*, a similar correlation obtains in Old French.

As stated above, zero anaphora does not occur in Old French. But the two devices highest on the Topic Accessibility Hierarchy, grammatical agreement and *si*, correlate strongly with subject continuity, while subject pronouns, further down the hierarchy, are the most frequent markers of switch-reference. This pattern is best attested in texts from the twelfth and thirteenth centuries. Later, during the Middle French period, this functional system of referential tracking begins to break down, for syntactic reasons outlined below (section 6.). But even in fourteenth- and fifteenth-century texts, which show a much higher co-occurrence of *si* with expressed subjects than do texts from the twelfth and thirteenth centuries, in the majority of cases the *si* clause still preserves subject continuity (Marchello-Nizia 1985: 165).

6. Grammaticalization and degrammaticalization

6.1. Grammaticalization

6.1.1. As stated above, agreement marking on the verb is often insufficient in Old French to reference the subject of a sentence unambiguously, notably in narrative, where most participants govern third-person morphology. This is true *a fortiori* as the suffixed inflections are progressively eroded. Given this state of affairs, and given also that the use of subject pronouns is a marked pattern (at this stage in its development, French is closer to the Type B profile), there is motivation for the language to develop a referential-tracking system for signaling subject continuity or discontinuity across the clauses of discourse. In other words, syntactic conditions in early Old French were favorable to the grammaticalization of different- and same-subject markers. To carry out these discourse functions, the language pressed into service, respectively, its optional subject pronouns and the invariable morpheme *si*. For several centuries, dating back to the pre-literary period, these morphemes provided a reasonably functional system for tracking nominal referents and marking topic continuity.

6.1.2. Writing on the grammaticalization of subject clitics in Northern Italian dialects, Haiman (in press) observes that these morphemes prove their grammaticalized status as clichés in failing to do the one thing they are supposed to do, which is to mark agreement; and once having reached this point, he speculates, “there is no way for these morphemes to go but down” (cf. also Lehmann, this volume). *Mutatis mutandis*, we might postulate a similar trajectory for *si*.

In the course of the thirteenth century, *si* undergoes grammaticalization to the point that it too is no longer effective at doing the one thing it is supposed to do, which is to mark subject/topic continuity. Thus in thirteenth- and fourteenth-century texts we see the particle reinforced more and more often by postposed subject pronouns, whose referents may be the same (40 c, d) or different (41/c) from those of the preceding main clause:²⁸

- (40) *Après si se fist coroner tot a force a empereur* (a). *Quant il fu coronés* (b), *si fait i [same subject] prendre trestous chiaux que il seut que il en pesoit qu'il estoit empereres* (c), *si leur fait il [same subject] crever les iex et destruire et de male mort morir* (d).

'After that # [he] had himself duly crowned emperor (a). When he was crowned (b), # *he* [same subject] ordered to be seized all those whom he knew were grieved over his having become emperor (c), # *he* [same subject] had their eyes pulled out and [had them] destroyed and killed by a horrible death (d).' (Robert of Clari 21, 21–24)

- (41) *Einsi se partirent* (a). *Si comme li pelerin se furent logie en l'isle Saint Nicholai* (b), *si ala li dux de Venice et li Venicien [DS] parler a aus* (c).
 'Thus they departed (a). Once the crusaders were established on the Isle of St. Nicholas (b), # went [3sg.] *the Duke of Venice and the Venetians* to talk to them (c).' (Robert of Clari 11, 15–17)

Occasionally *si* even occurs in clauses whose subject is a *new* referent:

- (42) *Et apres, si vint uns valles, et [Ø] portoit entre ses mains le vaissel que Nostre Sire donna a Joseph en le prison.*
 'And then, # [there] came *a young man*, and [he] carried in his hands the vessel that Our Lord gave to Joseph in prison.' (Didot Perceval, p. 208)

or in clauses with subjectless or impersonal verbs:

- (43) *L'endemain que li rois fu venuz a Kamaalot, si avint que endroit eure de disner menjoit messire Gauvains a la table de la reïne et autres chevaliers assez.*
 'The next day when the king had arrived at Camelot, # [it] happened that around the dinner hour Sir Gawain was eating at the queen's table along with many other knights.' (Death of Arthur 62, 16–19)
- (44) *Et quant il furent venu a l'ostel Lancelot* (a), *si nel trouverent pas leanz* (b); *si n'i ot²⁹ celui des chevaliers qui n'en fust moult liez* (c) ...
 'And when they had arrived at Lancelot's lodging (a), # [they] did not find him inside (b); # *there wasn't* one among them who was not overjoyed (c).' (Death of Arthur 92, 27–29)

For this stage in the history of French it seems reasonable to argue that *si* has become what Haiman calls "a grammatical cliché". In Middle French texts it no longer carries out effectively the discourse function of

referential tracking, as seen in examples like (41)–(44), but operates more like a syntactic place holder, a monosyllabic tenant of the first slot in the clause whose presence is dictated by V/2. As such, *si* offers a convenient strategy for shifting subjects into focal position, after the verb. This strategy seems to be particularly exploited in two situations: either where the subject is a heavy constituent: ‘the Viscount of this town’ (9/b), ‘the Duke of Venice and the Venetians’ (41/c), or where the clause is intransitive: *et si mourut aussi maistres Foukes* ‘# died also master Fouques’ (Robert of Clari 2, 12–13). There appears to be a tendency in Old French prose, though I find no mention of it in the literature, to avoid placing heavy constituents in the first slot of the clause. As for intransitives, flexible word-order languages seem to prefer VS order for this type of clause.

6.1.3. Haiman (1974) generalizes a claim that has been frequently made for Old French (cf. 4.1.), namely that in V/2 languages, or in particular constructions in these languages, the surface subject pronouns characteristic of Type A languages appear only when required to keep the finite verb in main clauses in second position. The idea that surface subject pronouns are motivated by word order is not a new one. In French the grammaticalization of obligatory subject pronouns may be seen as an effect of two specific word-order tendencies: the requirement to fill the first slot in the clause (i. e., the V/2 constraint) and the later tendency not to fill it with elements other than a subject (Skårup 1975). I submit that these same two word-order considerations are instrumental in the grammaticalization and subsequent “degrammaticalization” (loss of grammatical function) of *si*.

V/2 – which by the thirteenth century had become a requirement rather than simply a preferred clause structure – motivates the insertion of *si* just as it motivates the insertion of subject pronouns. Both morphemes are viable occupants of the first slot in the clause, and they are functionally in complementary distribution: as discontinuity and continuity markers, respectively. They differ in two interrelated respects: first, *si* is unmarked for person, number, and gender, whereas the pronouns code this information; second, *si* occurs only in the first slot of the clause, whereas the pronouns can also occupy the postverbal slot, and can therefore be used together with *si* to clarify the identity of a potentially ambiguous referent. But as stated above, this system of referential tracking begins to break down in the thirteenth century, leaving *si*, for a time at least, as largely a place holder of sentential first position. In Middle

French texts we see more examples of *si* co-occurring with expressed subjects — lexical or pronominal, but always postposed to the verb.

Paradoxically, it is at this stage in the evolution of French — corresponding to the stage in the development of Northern Italian subject pronouns that, for Haiman (in press), marks the point of consummate grammaticalization — that the process of degrammaticalization begins for *si*, a process closely linked to the later tendency not to fill first position with elements other than a subject.

6.2. Degrammaticalization

The degrammaticalization of discourse *si* and its eventual disappearance from the language is a process that takes place over the course of several centuries. As suggested above, this diachronic process is closely connected to two other, interrelated changes in Old French syntax: the progressive establishment of obligatory subject pronouns and the shift from a flexible, pragmatically controlled word-order of the V/2 or TVX type, to a rigid SVX type. (Word-order typologists posit TVX as a transitional stage through which an SXV language moves on its way toward becoming SVX; cf. Vennemann 1974, Harris 1978.)

The process through which subject pronouns become obligatory in French is related to, though not caused by, the erosion of suffixal agreement markers on the verb (cf. Price 1971: 148–149; Harris 1978: 111 ff.). As Harris notes, in thirteenth-century texts, two-thirds of the relevant examples already show subject pronouns; the increased use of these pronouns thus seems to antedate most of the consequences of phonetic erosion. Concerning the relationship of these two developments, it seems most plausible to view the deterioration of suffixal agreement markers as strongly favoring a tendency, already well established and motivated independently by word-order considerations, toward greater use of subject pronouns.

Harris (1978: 112) sees the increased use of subject pronouns as a consequence of a particular typological goal at a certain period in the language's history, and the subsequent generalization of the pattern as part of the overall move by the language from TVX to SVX. This claim reiterates, within the broader framework of word-order typology, Skårup's statement quoted above (6.1.3.) linking the grammaticalization of subject pronouns first to the V/2 requirement and subsequently to the tendency to reserve the first slot in the clause for subjects.³⁰

The grammaticalization of obligatory subject pronouns, together with the shift from V/2 to SVX that took place during the fifteenth century, appear to be the crucial factors contributing to the demise of *si*.³¹ Having already lost its functional *raison d'être* and become something of a grammatical reflex, and losing now its rhythmico-syntactic motivation as surface subjects become fixed in first position (we recall that *si* cannot occur if another element occupies first position), *si* declines markedly in the fifteenth century. By the seventeenth century it is virtually absent from educated usage, attested only as a quaint archaism in literary and theatrical attempts to reproduce dialect or colloquial speech.

7. Conclusion

This paper has sketched in broad outline a functional reinterpretation of the Old French particle *si* as a discourse marker of subject/topic continuity, linking its rise and fall to the grammaticalization of obligatory subject pronouns, erstwhile markers of switch-reference, and to the gradual shift from V/2 to SVX. Though I am convinced that the approach taken here – looking at syntax from the pragmatic standpoint of how information is structured in discourse – can bring us closer than more traditional or more formal approaches to understanding the functions of *si* and other “mystery” elements of Old French grammar, I doubt that the last word on this particle has been said.

I see at least two ways in which the analysis proposed here might eventually be refined. First, by a more in-depth investigation of topic-continuity marking in Old French that would consider the range of devices used to code points along this domain. Second, by a more systematic diachronic stratification of the data-base, as in Marchello-Nizia (1985), but with special attention to changes in the use of *si* that might correlate with two interrelated developments in discursive praxis: the move, beginning in the thirteenth century, from verse composition to prose composition, and the development of a textuality that comes to rely less on the voice and increasingly on writing. By looking more closely at external or extragrammatical developments such as these, alongside developments internal to grammar, we can perhaps discover more compelling explanations for certain of the changes that take place in the syntax of a language. In particular, it would be of interest to probe the extent to which the word-order shift from TVX to SVX, one facet of a more

general drift from a pragmatically driven grammar to a grammar more narrowly constrained by formal categories, correlates with the overall move from orality to literacy.

The analysis presented in this paper targets a limited area of Old French syntax. I offer it not only as a modest contribution to the grammatical history of French, but also, and perhaps more importantly, as a case study for a broader methodological agenda that concerns the practice of historical grammar.

As an alternative to the approach to *si* taken in Marchello-Nizia's monograph, Corbett (1988) suggested that this particle might profitably be studied from the perspective of the pragmatics of Old French oral literature. His suggestion is founded on the belief that a "systematic inquiry into the dynamics of discourse may help us to better understand the idiosyncracies of medieval French" (Corbett 1988: 96). The implications of Corbett's statement clearly go beyond the domain of Old French. What it calls for, in essence, is a minor revolution in our approach to historical grammar; it challenges those of us who bring linguistic expertise to bear on the study of medieval vernaculars to rethink the received interpretations — to rewrite the grammars, as it were — in the light of insights afforded by a linguistically based study of discourse.³² As a step in this direction, I have taken up Corbett's challenge in this paper, bringing discourse and diachrony together in an inquiry into the functions of two grammatical strands in the fabric of Old French textuality.

Notes

1. The "historical grammar" rubric conflates two approaches to language with differing methodologies: one has as its goal an essentially synchronic description of an earlier *état de langue*, the other an analysis of the changes a language has undergone over the course of its diachrony. The two approaches are brought together in this paper: on the one hand, the period from roughly 1150 to 1450 — spanning Old and Middle French — is looked at as a synchrony for the purpose of grammatical description; on the other, crucial syntactic changes that took place during this period will be brought to bear on the (necessarily diachronic) questions of grammaticalization and degrammaticalization. Admittedly, these two approaches to historical grammar are never entirely discrete, especially if one subscribes to a view of grammar not as a fixed, static structure, but as a continuous movement between "structure" ("grammar" in the traditional sense) and "discourse" (speakers' use of the

forms of grammar in specific contexts) – e. g., what Hopper (1987, 1988) refers to as “emergent grammar”.

2. I leave aside here the philological nine-tenths of the iceberg that deals with constituting a “text” in the first place from the lacunary, at times indecipherable, and often conflicting testimony of manuscripts. In Fleischman (1990 b) I consider the problem of manuscript variation in relation to the structuring of information in discourse.
3. The following coding conventions are used in this paper: textual examples are numbered, with main clauses (also certain relevant subordinate clauses) lettered in parentheses at the end of the clause. The second clause of example (3) will be referred to as “(3/b)”. Where a clause contains more than one predicate, numerical subscripts will be used, e. g. “(3/b₁)”. In glosses, words not contained in the Old French but required for the translations (e. g., subject pronouns, connectors of various sorts) are enclosed in square brackets; the place of *si* (or Latin *sic*), which according to our hypothesis is untranslatable, is marked by a number sign (#). The following abbreviations are used: V/2: verb-second; SVX: Subject Verb other elements; TVX: Topic Verb other elements.
4. Constructions of this type in which *si* co-occurs with a postposed subject (lexical or pronominal) will be taken up in 5.2.4.
5. Word-by-word (3/c) analyzes as follows:

<i>si</i>	<i>orient</i>	<i>il</i>	<i>estre</i>	<i>mal</i>
#	fear-3sg.	3-masc. nom.	to-be	badly
<i>venuz</i>	ptc.-nom. sg. masc.			
come-past	‘# fears he to be unwelcome’			

Old French has two cases, nom[inative] and obl[ique]. The 3rd-person masc. nom. (i. e., subject) pronoun *il* is neutral with respect to number; context, together with agreement marking on the finite verb and case/gender/number marking on the past participle, are used to identify the referent as Yvain.

6. Notable exceptions are Lambrecht (1981), who sees French subject pronouns coming to function more and more as topic agreement markers in informal speech, while Silva-Corvalán (1983) and Bentivoglio (1983) link subject pronouns in varieties of modern Spanish – a pro-drop language like Old French – to topic discontinuity and switch-reference, respectively. Hopper (forthcoming) looks at contrastive word-order patterns as a strategy for participant tracking in Old English.
7. The congeners of *si* found in Old Occitan and Old Italian will not be treated here. Blumenthal (1980) offers a comparative analysis.
8. The philological debate over *si* fills the pages of over sixty studies. Rather than reiterate their content, I refer interested readers to Marchello-Nizia (1985: Chapter 1, esp. 15–18; also 162–164) for full bibliography and a summary of viewpoints. Reference will be made here only to items directly

relevant to our discussion or to work that has appeared since the publication of Marchello-Nizia's monograph.

9. It is essential not to confuse this "discourse" *si/se/s'* with several polysemes (given in upper case in the examples below):
 - *si* 'if' (vars. *se*, *s'*), subordinating conjunction: *Ha! Seigneur, ... SE vos poez, si vos en retornez* 'Oh, Sir! ... IF you can, # go back [there]';
 - *si* 'so', adverbial intensifier (= MFr. *tant*, *tellement*): *Jamés ne vos oblieraï, ja SI loing de vos ne serai* 'I will never be SO far away from you that I will ever forget you';
 - *si* 'thus, so', adverb of manner (= MFr. *ainsi*): *Ha! biaux dous fius, seés vous jus, SI vous metés a genouillons* 'Oh, dearest son, bend down; kneel down THUS'; *SI m'aüt Dieus* 'SO help me God';
 - *si*, adversative affirmation particle: *Vos n'i irioz. – Je SI ferai* 'You will not go. – I will INDEED!';
 - *se* (var. *s'*) 3sg/pl reflexive clitic pronoun: *Après SE sieent li baron* 'Then the nobles sit down'.

In addition, the inconsistent orthography of medieval manuscripts occasionally yields *si* for the locative adverb *ci* (= *ici*) 'here' or the neuter demonstrative pronoun *ce* (= *ça/cela*) 'this/that'.

Given the extent of polysemy, simply constituting a reliable data-base for discourse *si* is no easy task; text editors themselves on occasion mistake one *si* for another.

10. The Old French shows SV inversion in this clause, i. e., '# her-bought the-viscount from the Saracens'.
11. The term "grammatical" is intended here not in the linguist's sense in which all languages have a grammar, resident in the heads of their speakers, but in the normative sense of *bon usage* – a concept inseparable from writing.
12. This is unlikely a situation of "clitic doubling", as described in Haiman (in press) for Northern Italian dialects. At this stage in the evolution of French, subject pronouns are independent morphemes and not yet the bound clitics they will eventually become.
13. This particular variety of linguistic pragmatics, developed in France by Antoine Culioli and Oswald Ducrot and their circles, is founded on the proposition that all utterances (*énoncés*) of a text inevitably contain traces of the locutionary activity that produced them (*énonciation*), the context in which they were produced, and the subjectivity of the producer. Some of the most illuminating recent work on the grammar of Old French is based on issues of *énonciation* (surveyed in Fleischman 1990 b).
14. Marchello-Nizia does not invoke evidentiality per se; however, the function she ascribes to *si* would qualify it as an evidential marker.
15. Within discourse, chains of clauses combine into larger thematic units which Givón refers to as "thematic paragraphs" (other investigators use different terminology for this same concept). These may in turn combine into even

larger discourse units, such as paragraphs, sections, chapters, parts, or stories (Givón 1983 a: 7). The thematic paragraph is the lowest level of discourse structure at which continuity can reasonably be talked about.

16. Underlying this distribution of information across two clauses is a basic principle of information structure: one new piece of information per utterance unit (cf. Chafe 1987). Languages adopt various types of presentational constructions to avoid introducing new referents and predicating something about them in a single unit of utterance (cf. Lambrecht 1988 a, b; Herring 1988).
17. Robert uses the “*quant ... , si ...*” construction in a particular way to recapitulate previously asserted information before going on to introduce new information, as in (16/a, f); cf. also (38/b) below. There are apparently languages in which this “backstitched” style of narration is mandatory. Grimes (1975: 96) reports on several languages in which events must be linked to preceding events through this type of repetition: “They went down the river. Having gone down the river, they entered the canoe. Having entered the canoe, they began to paddle. Having begun to paddle ...”
18. In texts composed in verse, particularly those like *Roland* with fairly rigid metrics (a 10-syllable line consisting of 4- and 6-syllable hemistichs), we must not dismiss the influence of prosodic factors. The monosyllable *si* could easily be inserted or deleted to accommodate meter. Thus in two manuscripts of Marie de France’s *Lanval*, a text composed in octosyllabic rhyming couplets, we find the following variants:

- (a) *Mes jo aim e si suis amis*
‘but I love and # am a friend’
- (b) *Mais jo aime e sui amis*
‘but I love and am a friend’ (293)

In the (a) version, the first verb *aim* ‘I love’ is one syllable [ɛm], with *si* inserted after the coordinating conjunction *e* to produce an 8-syllable line; in the (b) version, the variant *aime* is two syllables [ɛ-mə], thus no same-subject marker follows the conjunction. As we shall see below (4.4.1.), it is the insertion of *si* that leads us to analyze the (a) version as bi-clausal and the (b) version as a single clause with coordinated predicates.

19. For convenience, and following the terminology used to refer to Old French cases, the label “oblique” will be used to refer to all non-subject clitics, including direct and indirect objects and the locatives *y*, *en*.
20. A clause in which switch-reference is marked is referred to as the “marking clause”, the clause with reference to which it is marked is the “reference clause”.
21. These elements are not all obligatorily clause-external; those which trigger subject inversion (the adverbs) can alternatively occupy the first slot within the clause, e. g., *atant* ‘with that’ in (30), *puis* in (32/a).
22. Clauses like (32/e) in which *si* references more than one previous subject are discussed in 4.4.4.

23. Though *si* constitutes a separate word graphically, morphologically it should be analyzed as a bound prefix, separable from the verb only by oblique clitics. In this regard it parallels the clitic subject "pronouns" of Modern French, which have likewise been interpreted as bound prefixes (Harris 1978: 118).
24. This generalization, coupled with Haiman's observation (in press: preface) that in most languages different subject:same subject::agreement marker : zero, suggests the possibility that switch-reference marking in coordinate clauses may be the outcome of conjunction reduction or gapping.
25. For convenience, and with no intent to subvert the goals of "affirmative-action" grammar, the third singular masculine form will be used to illustrate categories that mark gender, person, and number.
26. This development is described in Price (1971: Chapter 11), Harris (1978: Chapter 5). In contrast to nominative (subject) pronouns, Old French oblique pronouns do occur in two series, stressed/independent and unstressed/bound. Only the stressed variety can fill the first slot, whereas the unstressed variety precedes the finite verb in the second slot (cf. Skårup 1975). Various grammarians have suggested that, in accordance with V/2, *si*-insertion is often motivated by a desire to prevent a sentence from beginning with an unstressed oblique pronoun.
27. This interpretation was suggested by Knud Lambrecht (personal communication), who elsewhere (Lambrecht 1981) refers to constructions of this type as "antitopic" constructions, to distinguish them from left-dislocated "topic" constructions.
28. English syntax requires that these pronouns precede the verb, however they are postposed in Old French.
29. *Si n'i ot* is the precursor (here negated and past tense) of the modern presentational construction *il y a*, which will ultimately replace *s'i ad*.
30. French is thus a language providing solid diachronic evidence for Haiman's (1974) claim that strict Type A languages only develop from languages that at some stage in their development were strict V/2 languages.
31. As Noel Corbett (personal communication) suggests, the problematic ambiguity between discourse *si/se* and reflexive *se* (cf. Blumenthal 1980: 66–67) and *si* 'if' was no doubt also a factor contributing to the loss of discourse *si* once its grammatico-pragmatic function was taken over by obligatory subject pronouns.
32. A similar orientation is advocated in Betten's paper (this volume) and in various of the references contained therein.

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Jan Terje Faarlund

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1990. 15.5 x 23 cm. X, 222 pages. Cloth.

ISBN 3 11 012651 6

(Trends in Linguistics. Studies and Monographs 50)

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