
The Role of the Individual in Language Change from the Point of View of Social Network Analysis

Alexander Bergs (University of Osnabrück, Germany)

Abstract

This paper makes four claims concerning linguistic change from the point of view of (historical) Social Network Analysis (SNA): first, that the linguistic behavior of individuals can play an important role in linguistic change, second, that the linguistic system of speakers remains flexible throughout their lifetime, third, that individual linguistic systems can and should be studied in relation to their corresponding social networks, and fourth, that historical network analyses often need to be supplemented by qualitative diachronic data due to the special nature of the network data available. These claims are illustrated on the basis of data derived from the Middle English Paston Letters (1421 to 1503).

1. Introduction

This paper is mainly concerned with two different, but related theoretical issues: the role of the individual in linguistic theory and language change, and the possibility of language change during adulthood. Both these problem complexes have received remarkably little attention in historical linguistics – both for methodological and theoretical reasons, it seems.

The role of the individual in language change and linguistic theory in general has always been problematic (cf. Johnstone 1996). While it is clear that languages are spoken by individuals, many approaches are mostly interested in the general linguistic capacity of speakers, not in individual features. 'Idiosyncracies' do not rank very highly in most linguistic theories: "We define language [...] as an instrument used by the members of the community to communicate with one another. Idiosyncratic habits are not a part of language so conceived, and idiosyncratic changes no more so"

(Labov 1972, 277). Thus, most methodologies are geared towards investigating language in aggregates of speakers, or generalized, abstract and ideal speaker-hearers.

The possibility of language change in adulthood essentially goes against the grain of major linguistic theories such as generativism. It is often assumed that 'language' (i.e. 'grammar' or 'linguistic competence') is formed during first language acquisition, and that it cannot be substantially altered at later stages in life. Thus, language change (as change in the grammar) can only happen during first language acquisition. Adult speakers can only change the input to children's first language acquisition through their performance.

This paper argues that the linguistic behavior of individuals, their idiosyncracies, can play an important role in linguistic change, and that there are interesting and promising ways of investigating these factors. Furthermore, it will also argue that the linguistic system of speakers essentially remains flexible throughout their lifetime and that, therefore, language change can actually happen at any time, not only during first language acquisition. These claims will be made and illustrated on the basis of data culled from the Middle English Paston Letters, a collection of documents authored by members of the Paston family between 1421 and 1503. Contrary to what is commonly assumed about the poverty of (socio-) historical data, for most of these documents we know quite a lot about the context of their composition and their individual authors. The special nature of this database allows for longitudinal, i.e. real-time studies of the linguistic behavior of individual speakers for forty years and more. Furthermore, it also provides ample material for a more or less detailed reconstruction of the social networks of the authors and their individual biog-

raphies. Social network analysis (henceforth SNA) has become one of the mainstays in the methodological repertoire of present-day sociolinguistics (for an overview, see Schenk and Bergs 2004). It can offer a microscopic view on the ‘anthill’ of language use and perspectivize individual speakers in their concrete social environment(s). Thus we can gain the possibility of studying idiosyncratic language use and its repercussions in the corresponding network.

This paper is organized as follows. Section 2 will briefly present some of the basic facts on the two morphosyntactic variables which will be used in the present study: plural pronoun forms and relativizers. Section 3 will outline the basic ideas and methods of (historical) social network analysis and will give an overview on the background of the Paston Letters as a linguistic and socio-historical database. Section 4, then, will discuss the role of the individual speaker in linguistic change, and linguistic change in adulthood from the viewpoint of social network analysis on the basis of quantitative analyses of the morphosyntactic variables presented in the first section. Section 5 draws conclusions and discusses implications for the theory of language change.

2. The morphosyntactic variables

This section presents the two nominal morphosyntactic variables for this study: plural forms of the personal pronouns and relativizers. These were chosen for a number of reasons. First, morphosyntactic variation in the authors’ speech may not be affected in the same way by scribal influences as, for example, phonology/orthography (for evidence, see below). Second, morphosyntactic variation in general may not produce the same overall token frequency as phonological variation, for example. However, it can be expected that third person plural pronouns and relativizers pro-

duce a sufficient number of occurrences for quantitative analyses. Third, on the basis of handbooks and historical grammars (like the *Cambridge History of the English Language*, Volume II), it can be expected that these two variables are still very much in flux in the fifteenth century. Readers are referred to Bergs (2005) for more extensive theoretical discussions and analyses of two more variables: address pronouns and light verb constructions.

2.1 Personal Pronouns

In Old English, i.e. before c. 1000 C.E., third person plural pronouns were characterized by initial <h->: *hī(e)* ‘they’, *hire/heora* ‘their’, *him/beom* ‘them’, and *hī(e)* ‘they’. In Middle English, we see a gradual shift from the Old English <h-> pronouns to the contemporary <th-> pronouns, which were borrowed from Proto Norse during the late Old English period. This development is summarized in a somewhat simplified form in table 1.

There is still some dispute about the language internal mechanics of this change. It is still unclear, e.g., if we see the borrowing of a paradigm or the borrowing of the nominative form only, followed by independent analogical leveling in the recipient language. Also, the geographical spread of the forms from north to south over more than four hundred years poses some interesting problems (cf. Thomason and Kaufman 1991). Without going into too much detail at this point, it can be said that phonological factors, such as the sign prominence of the dental fricative (Ritt 2001), may well have played a role in the initial phase of these changes, but that they did not factor in the later phase(s). However, some processing ease in connectionist terms may have facilitated the change, and may even account for the directionality and the spatio-temporal pattern and

| | Old English | Middle English | Contemporary English |
|------------|-------------------|----------------------|----------------------|
| Nominativ | <i>Hī(e)</i> | <i>Pei</i> | <i>They</i> |
| Genitive | <i>Hire/heora</i> | <i>Her(e) ~ þeir</i> | <i>Their</i> |
| Dative | <i>Him/beom</i> | <i>Hem ~ þe(i)m</i> | <i>Them</i> |
| Accusative | <i>Hī(e)</i> | <i>Hem ~ þe(i)m</i> | <i>Them</i> |

Table 1: Development of plural pronoun forms in English (simplified)

diffusion of the forms: once the interdental fricatives were introduced as Wickelphones/Wickel-features in the most frequent pronoun form (subject), a mixed system with initial dental and glottal fricatives was created. Frequent exposition to the dental fricative form may have strengthened this particular network node and may have ultimately pushed the system in the direction of regular, i.e. uniform forms – which require fewer active network nodes (cf. Bergs 2005, 83–103 for a full discussion). The important point for present purposes is that the paradigm apparently was not adopted in a catastrophic form throughout England, i.e. completely and at one point in time, but gradually. In the fifteenth century, which is the period of interest here, *they* was well established, while there was still considerable variation between innovative <th-> and conservative <h-> pronouns in the possessive and object forms.

2.2 Relativizers

The second nominal variable which will be investigated in the following are relativizers. The relative clause system which we see in contemporary standard English, i.e. a series of *wh*-relative pronouns (*which*, *who*, *whose*, *whom*), invariable *that*, and optional deletion in certain constructions, goes back to Middle English developments. Despite the fact that the *wh*-series was introduced into the relativization system in early Middle English, in the thirteenth and fourteenth century, *that* was more or less the only common relativizer (see Fischer et al. 2000, 91 and Morris 1895, 198). *Wh*-relativizers did not gain any noteworthy frequency until the late fourteenth century. Interestingly, they also did not appear instantaneously, but gradually trickled into the system, beginning with *whom*, *whose*, *which*. Finally, in the late fifteenth century we see the appearance of *who*. Needless to say, there is some complex interaction of different morphosyntactic factors in the English relativization system, now and then, including restrictiveness of the relative clause, syntactic function of the relativizer and of the antecedent, and ontological status of the referent. Romaine (1982) has already discussed the major syntactic factors and has pointed out that the introduction of the *wh*-series runs counter to what can be expected on the basis of Keenan and Comrie's

accessibility hierarchy (1977). On the basis of Keenan and Comrie's study we would expect the subject forms to change first, since this is the most common and accessible position, followed by forms in the more complex syntactic functions, such as indirect object and possessive. For Romaine, the reversal of the hierarchy is indicative of a change from above, i.e. from formal, literate styles into more informal, oral ones. In addition, Bergs (2005) has also shown that the ontological status of the referent seems to have played a role in the early phase of this change. The *wh*-pronouns *who/whose/whom* were first used with 'Deity' antecedents, possibly in order to mirror the ontological markedness of the referent with a new and hence salient, marked linguistic form. Later on during the development, we see a bleaching and conventionalization process in which the new and marked forms gradually lose their marked status and are integrated as regular, productive forms into the linguistic system. The possible referents move from 'Deity' to 'Highly Respectable' to 'Friend' and finally 'Human' or even plain 'Animate'. One more relativizer needs to be mentioned before we move on: *the which*. This complex form can also be found in Middle and Early Modern English, arguably in "disorderly heterogeneity", i.e. more or less free variation with *which* (cf. Bergs 2005, 164–165; Raumolin-Brunberg 2000). It either goes back to a borrowing from Central French *liquel(s)/lequel(s)* (Einkenkel 1916, Meier 1967) or to a reanalysis of fused Old English forms like *se e suahuelc* and *one subulc* (*se* > *þe* and *huelc* > *which*), cf. Curme (1912). Interestingly, it has not been conclusively shown that *the which* as the obviously more complex and explicit form is significantly more common in complex morphosyntactic environments, such as distant relative clauses, as we would expect on the basis of Rohdenburg's (1998, 2000, 2003) and Hawkins's (1994, 2004) complexity principles (but also cf. Fischer 1992, 303–304 for the suggestion that *the which* is more common in non-restrictive relative clauses, especially when the antecedent is separated from the relative clause and/or lacks a demonstrative determiner). This issue seems to require further corpus-based research in the future.

After this brief discussion of some of the language internal aspects of the morphosyntactic variables to be investigated here, we will now turn to

the methodological and language external aspects, i.e. the aims and methods of (historical) social network analysis, and the Paston Letters as database.

3. Social Network Analysis and the Paston Letters

3.1 Social Network Analysis: now and then

Social Network Analysis (SNA) has been a prominent research tool in sociology and related disciplines like psychology and anthropology from the 1930s onwards. While it has been mentioned in passing in (socio-)linguistic studies from early on (e.g. Bloomfield 1933, 46f, Gumperz 1966, 34f), the first systematic implementation of SNA in (socio-)linguistics can be traced back at least to L. Milroy (1987, first published 1980), with pilot studies in the late 1970s.

One of the basic principles of (social) networks analysis is that certain entities (humans, computers, cities ...) do not exist in isolation, but that they are in some contact with each other. This contact may be stronger or weaker, and the resulting networks may be more or less dense. These very basic facts have already been described, in a refreshingly non-technical way, by Leonard Bloomfield in his 1933 classic *Language*:

Imagine a huge chart with a dot for every speaker in the community, and imagine that every time any speaker uttered a sentence, an arrow were drawn into the chart pointing from his dot to the dot representing each one of his hearers. At the end of a given period of time, say seventy years, this chart would show us the density of communication within the community. Some speakers would turn out to have been in close communication: there would be many arrows from one to the other, and there would be many series of arrows connecting them by way of one, two, or three intermediate speakers. At the other extreme there would be widely separated speakers who had never heard each other speak and were connected only by long chains of arrows through many intermediate speakers. [...] The chart we have imagined is impossible of construction. [...] We believe that the differences in density of communication within a speech-community are not only personal and individual, but that the community is divided into various systems of sub-groups such that the persons within a sub-group speak much more to each other than to persons outside their sub-group. Viewing the system of arrows as a network, we may



Alexander Bergs

Alexander Bergs received his Ph.D. at the Heinrich-Heine-Universität Düsseldorf in 2002 and is presently interim professor and deputy chair of English Language and Linguistics at the University of Osnabrück, Germany. He has worked on the (socio-)linguistic history of English, media and language change, morphosyntactic variation in present-day and historical Englishes, and constructional approaches to language. His publications include *Social Networks and Historical Sociolinguistics* (Mouton de Gruyter 2005) and *Modern Scots* (Lincom Europa, 2nd, revised and updated edition 2005). He is currently finishing a monograph on *Expressions of Futurity in Contemporary English* and editing two books (with Gabriele Diewald) on *Constructions and Language Change and Context and Construction Grammar*. His future plans include editing a multi-volume handbook on *English Historical Linguistics*, to be published with Mouton de Gruyter, and compiling a digital corpus of Late Modern English.

say that these sub-groups are separated by *lines of weakness* in this net of oral communication. The lines of weakness and, accordingly, the differences of speech within a speech community are *local* – due to mere geographic separation – and *non-local*, or as we usually say, *social*. (Bloomfield 1933, 46f, emphasis original)

Bloomfield hints at the idea that the networks that surround us as speakers may have something to do with the way we speak. But his account remains rather vague. It was only with the advent of extensive sociological and sociolinguistic research in the domain of social networks that this link was described and analyzed in greater detail. Numerous studies in sociology (for a recent overview, see Wasserman and Faust 1994) have shown that the attitude(s) and behavior of network participants depend at least partly in some complex way on the network structures they are involved in. In order to make these effects visible and measurable, network analysts have developed a

considerable armory of empirical research tools and measurements for social networks. The body of sociological research in this area today is extremely diverse and still growing at an amazing rate (well documented, *inter alia*, on the website of the International Network for Social Network Analysis – www.isna.org – and the journal *Social Networks* which sees its 27th annual volume in 2005 and ranks quite high on the citation index). It thus seems impossible and perhaps even unnecessary from a *linguistic* point of view to take into consideration each and every *sociological* and empirical detail of social network analysis. Leaving aside many of the details, social networks can generally be characterized by a few universal factors, which can be categorized into structural (quantity) and content (quality) components:

| Structure/Quantity | Content/Quality |
|--------------------|-----------------------|
| Density | Transactional Content |
| Clusters | Multiplexity |
| Centrality | Reciprocity |

These components (in isolation and in combination) can have certain effects on the individual network members. But before we look at these effects, the components themselves should be briefly discussed. Density is defined as the number of actual ties in a network divided by the number of potential ties, which is $(n(n-1)/2)$, n being the number of network participants. In a network like that in fig. 1 below we find eleven actual links and seven participants (nodes) in the 1st order zone. This gives us an overall network density d of $11/21=0.52$. A density of 1.0 means that everybody in the network knows everybody else, 0.0 means that no one has any connections to anybody else. Thus, $d = 0.52$ is a medium value. Clusters are specific areas of high density in a given network, centrality is measurement of how central and connected a given participant is. Most network studies work on the basis of ego-focused networks with one particular participant (usually the most central one) as their anchor and starting point (marked by an asterisk in fig. 1).

On top of these structural/quantity criteria (which are usually easy to establish empirically and lead to a simple 'dots-and-lines-model' of networks), networks are also characterized by a number of content criteria. Most of these rely on the notion of transactional content, i.e. some sort of

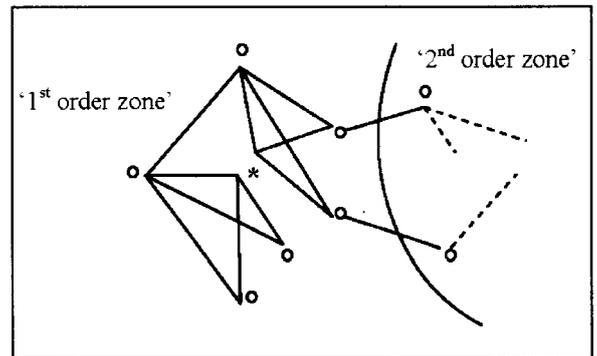


Figure 1: The 'dots-and-lines model' (adapted from Bergs 2005, 29)

transaction needs to take place between two participants in order to qualify this connection as a relevant link for the network. Transactional content can involve the transfer of material or immaterial goods, such as money, gifts, lending of books, or support, trust, and gossip. Multiplexity is a measurement for the complexity of a given link. Network participants may know each other in more than one capacity or social role, e.g. as family members, neighbors, friends, and work-mates. If the link is characterized by only one such capacity it is described as uniplex; if the participants know each other in more than one role, their relationship is multiplex. Reciprocity, finally, looks at the directionality of the exchange, i.e. whether the two participants are on equal terms with regard to power and solidarity, or if there is any directionality in their exchange of goods. The final factor which needs to be introduced at this point is the very influential concept of 'tie strength', as it was developed mainly by Granovetter (1973, 1982). Tie strength is a single, combined measurement for a number of network factors: high frequency, high transactional content, a high degree of reciprocity, for example, foster strong ties between network participants. Low frequency, low transactional content, and a low degree of reciprocity foster weak ties. Vice versa: the stronger the tie the more willing network members are to exchange valuable goods, meet more often, and to reciprocate on presents, or gossip, for example. Granovetter's important contribution was his discussion of the role of weak and strong ties for the behavior and attitudes in individuals and networks. Following the line of argument developed in Mitchell, Ed. (1969) and Barnes (1969, 1972), he points out that dense,

multiplex networks with high transactional content, and therefore many strong ties, tend to generate and enforce uniform network norms inside the network, while loose, uniplex networks with low transactional content, and therefore weaker ties, are more tolerant towards non-conformity regarding network norms, i.e. "deviant" behavior. With this background, Granovetter's theory of strong and weak ties has been particularly fruitful in its application to language variation in social networks, as will be shown in the following section.

Although it is still not exactly clear whether networks and network structures can serve as predictors of behavior in the strict sense, or whether the "network concept" can merely be seen as "orientating statements" (Homans, cited in Barnes 1972, 2-3) and "a set of procedures rather than a fully-fledged theory" (L. Milroy 1987, 46), research by Granovetter and others has shown that network structures *can* have certain effects on the actual behavior and attitude(s) of network participants. Sociolinguistic research (e.g., Milroy 1987, Bortoni-Ricardo 1985, Barden and Grosskopf 1998, de Bot and Stoessel, Eds. 2002) has shown that, by extension, behavior also includes linguistic behavior. The rule-of-thumb is again that dense, multiplex networks often have norm-enforcing effects on the network members, while loosely-knit, uniplex structures are more volatile, i.e. susceptible for change and pressure from outside the network, for example the overt norms standard varieties. Thus, the term "norm" in this case must not be confused with its everyday use, where it usually refers only to "overt norms of correctness in standard varieties". The term "norm" in this approach has a broader extension. It refers to any kind of expectation or pressure to which members of a community or network are subjected. This of course comprises normative pressure to use standard or non-standard forms, depending on the community or network. This means that small, closely-knit communities, like well-established rural villages, often maintain their specific variety of language, while large, loose-knit communities as they can be found in major urban areas, are more prone to change towards standard varieties. Unfortunately, we still know very little about social networks and their effects on speakers in a historical perspective and in linguistic communities which do not have the

ideological scaffolding of modern standard languages (some excellent historical studies like Imhoff 2000, Bax 2000, Lippi-Green 1994 mostly investigate networks as such without their embedding in the sociological macro-structure). But there is reason to believe that networks in principle should have the same norm-enforcing effect on speakers. This would mean that in a pre-standardized time like Middle English¹ dense, multiplex networks led to the preservation of certain regional and social varieties, while loose-knit, uniplex networks did not lead to standardization (as there was no 'modern standard' yet), but rather to greater linguistic freedom and diversity, since these individual network members were not subjected to the same normative pressures of their networks as members in dense networks. Thus, we could expect that members in loose-knit networks show greater linguistic flexibility and that they – just like in present-day studies – are the bridges across which innovations are transported from one network to another. This comes close to a reversal of the effect of networks which we see today: close-knit networks in Middle English may have led to greater uniformity (at least within the network), while loose-knit networks may have fostered greater flexibility, and hence diversity.²

1 Strictly speaking, there were certain linguistic 'standard' varieties in Middle English (cf. Samuels 1965; 1972, Smith 1996) and even in Old English (Gneuss 1972, Gretsch 2001, Lenker 2000). However, these clearly did not have the same status and did not play the same ideological role as those in present-day English. Note, however, that the network concept still perfectly ties in with what we know about the rise and function of the "Chancery Standard", for example.

2 One anonymous reviewer suggested that this reversal might "ruin the explanatory value of the network theory altogether". I strongly disagree. On the level of the individual, the socio-psychological mechanisms and effects (and hence the explanatory value) of networks remain the same – as a matter of fact, they may well be universal. But the macro-structures in which networks are formed and in which they operate obviously do change, and certain networks can lead to different effects, depending on their concrete (historical) context. Thus, if there is no linguistic 'standard' as we know it today, there can also be no standard norms which play a role for networks and their members. But this does not mean that networks did not play any role. On the contrary, the fact that the socio-psychological mechanisms and effects remain the same for all speakers and all times makes the concept so valuable, especially for historical research, in which macro-level concepts like "social class", for example, are not universally applicable.

One of the main problems with social network analysis, present and past, is of course data acquisition. Traditional SNA requires two different sets of data: linguistic data (preferably from individual speakers) on the one hand, and social data (from individual network participants and their ties) on the other. Although it is sometimes very surprising to see how much linguistic and social data can be unearthed even in very remote historical periods (see Tiekens-Boon van Ostade, Nevalainen and Caon, Eds. 2000, Bergs 2005), it seems intuitively clear that data wealth correlates inversely with time depth. The further we go back in time, the more restricted our data becomes. Eventually, three data groups can be distinguished:

- Data that can be fully “individuated”, i.e. where social and linguistic data of single speakers and their environments can be identified. One example are the members of Paston family and their letters, as they will be discussed in the following.
- Data that can only be defined on a macro-level, i.e. with regard to certain groups or locales. Individual speakers cannot be identified. One example is the language of the medieval Lollard community.
- Data that is completely “unsocial”, i.e. anonymous. Speakers/scribes are unknown and their social context cannot really be established. One example here is the unknown author of the Old English epic *Beowulf*.
- (the fourth category – ample social, but no linguistic data – is of course also possible, but obviously does not concern us here).

So far, research using SNA in English linguistics has gone back as far as Old English. Lenker (2000) investigates the development and use of the so-called ‘Winchester Vocabulary’, a specific, standardized vocabulary that seems to have originated in the ‘Winchester Circle’, a group of monks from Winchester that can be characterized as “a closeknit, localised network cluster functioning as a mechanism of norm-enforcement” (Lenker 2000, 236). The Winchester Vocabulary probably developed in a process of cultural focusing within the monastic network. Lenker points out that social networks in this case cannot be used in a strictly quantitative sense: we do not know who the individual monks were and what characterized

their individual ties. All we know is what monastic circles prototypically looked like and what kind of ties must have existed among monks and monasteries. Nevertheless, Lenker argues that the social network concept as a heuristic tool provides some very interesting and new insights for this historical sociolinguistic problem. Further English-based SNA studies mostly concentrate on Early and Late Modern English. Tiekens-Boon van Ostade (2000), Bax (2000), and Fitzmaurice (2000), for example, discuss seventeenth- and eighteenth-century language and culture from a SNA perspective, and offer illuminating network studies on Sarah Fielding (Henry Fielding’s sister), the Thrale family and its circles, and Joseph Addison and the Spectator Group, respectively.³

In the following, I will concentrate on the fifteenth century, i.e. (late) Middle English, one period of time between the Winchester Circle and Sarah Fielding. But first, the individual members of the Paston family and their networks will be described and discussed as a database for the following quantitative analyses of the two morphosyntactic variables described above.

3.2 *The Pastons and their networks as a database*

The Pastons are a family of the landed Norfolk gentry. Their history can be traced back at least to 1378, the year of birth of William Paston I. The period of interest for this study ends in 1504, a time when most of William’s grandsons had died. Numerous historical studies have dealt with the family history. Davis’s (1971) introduction to his comprehensive edition of the family documents is unsurpassed; similarly, Bennett (1995) and Richmond (1990, 1996) offer interesting and multifaceted accounts. Most of what follows is culled from their works. On the whole, we have 14 speakers in three generations, 422 documents and c. 245,000 words. The basic biographical and statistical data for each of the protagonists in this study are listed in table 2.

³ There is a growing number of studies that deal with other periods and languages, like Imhoff (2000) on medieval Navarro-Aragonese and Lippi-Green (1994) on Early High German. For reasons of space, these cannot be discussed here; the reader is referred to Bergs (2005) for a somewhat broader coverage.

| Biodata | | No of texts | No of words (approx.) |
|-----------------------|------------------|-------------|-----------------------|
| <i>Generation I</i> | | | |
| William I | 1378-1444 | 12 | 8,132 |
| Agnes | ?1400-1479 | 22 | 7,746 |
| <i>Generation II</i> | | | |
| John I | 1421-1466 | 44 | 33,092 |
| Margaret | ?1420-1484 | 107 | 67,305 |
| Edmond I | 1425-1449 | 2 | 569 |
| Elizabeth | ?1429-1488 | 3 | 3,958 |
| William II | 1436-1496 | 33 | 15,311 |
| Clement | 1442-?1479 | 7 | 3,254 |
| <i>Generation III</i> | | | |
| John II | 1442-1479 | 86 | 48,603 |
| John III | 1444-1504 | 78 | 43,490 |
| Margery | ?1455-1495 | 6 | 2,634 |
| Edmond II | ?1443-?1504 | 8 | 3,813 |
| Walter | ?1456-1479 | 4 | 1,305 |
| William III | ?1459-after 1504 | 9 | 4,508 |
| TOTAL | | 422 | 243,847 |

Table 2: Biodata, number of texts, and number of words for the Paston family members

As can be seen in table 2, this is not a temporally balanced corpus; some speakers were much more productive than others. Nevertheless, even with this uneven distribution, a number of different perspectives and corresponding hypotheses may be tested. First, one may wish to consider changes in the database as a whole, i.e. between 1378 and 1504, without distinguishing between the different family members. This seems to be particularly attractive for a description of the macro developments, since this corpus comprises mostly one text type. The collection includes a few testaments, deeds, inventories, memoranda, and indentures, most of the documents (349 out of 422, i.e. c. 83%) are letters. This means, in other words, that we are *not* comparing the language of fourteenth century fabliaux with that of fifteenth century deeds of trust. Second, one may want to consider generational shifts. Here we have three generations of Pastons, and while the database may not allow for statistically perfect comparisons (one of the major differences between present-day and historical sociolinguistics!), the number of words still seems sufficiently large, at least for the second and third generation, so that there is a good

chance of finding some generational patterns of language change, should there be any. Third, this corpus allows us to look at the language use of individual speakers. The two brothers, John II and John III, for example, have left us approximately the same number of words, and tracing differences in their individual language use may be quite illuminating, as Davis (1983) has already shown. We will return to this case study later on. Fourth and finally, this corpus also presents us with the chance to investigate some traditional, macro-sociological factors such as gender. The Paston Letters are one of the first data sources for gendered language use in English. Unfortunately, none of the female family members could read or write, and therefore had to dictate all of their writings. It could be objected then that the language of the letters mostly represents the language of the male scribes, not that of the female authors. This could be true, of course, but Bergs (2005, 79-80, 127-128) shows that we need to distinguish between the different language levels. Orthographic/phonological variables are perhaps affected by scribal practice, but morphosyntactic and lexical variables seem to remain mostly unaf-

fect and actually can be shown to reflect the language of the authors. There are scribes like James Gloys, for instance, who wrote letters for more than one author, in this case for both John I and for Margaret, husband and wife. In letter no. 36 (authored by John I), Gloys uses the conservative form *here* nine times, and the innovative form *their* only once in c. 1,062 words. In letter no. 200 (authored by Margaret), he uses innovative *their* nine times, and conservative *here* not even once in a total of 874 words. Similarly, Edmond II wrote letters for himself and for his mother, Margaret. In his own letters, he only uses the innovative *th-*forms, in the letters for his mother we find more than 50% conservative forms. This may not be proof positive, but it certainly indicates that scribal influences may have been rather limited in the domains of lexicon and morphosyntax. Thus, since this paper concentrates on morphosyntax, it can be assumed for present purposes that the language found in the letters actually is that of their authors, not of their scribes. This in turn also means that we may be able to trace some gendered patterns of language use in the corpus. In sum, comprehensive collections of letters like these offer a large number of interesting and important possibilities of investigating synchronic and diachronic variability (other early examples would be the Middle English Cely Letters or the Stonor Letters – for a full account, see the Corpus of Early English Correspondence, CEEC, described in detail in Nevalainen and Raumolin-Brunberg, Eds. 1996; 2003).

3.3 *Developing a social network*

Using biographical material on the Pastons, it is possible to develop a so-called social network strength scale (NSS) for this particular historical context. NSSs are frequently used in sociolinguistic research in order to circumvent complex social network analyses. Instead of carrying out a fully fledged network analysis (which would require some training in sociology and quite a lot of time), researchers using NSSs try to identify some core of easily identifiable and quantifiable factors for the networks of the specific community and its members. These factors can then be used as simple checklists for network structures. This idea goes back to Lesley Milroy's groundbreaking Belfast

study (1987, first published 1980). Apart from establishing who is in contact with whom, she used five criteria on her Belfast NSS (L. Milroy 1987, 142):

- “membership of a high-density, territorially based cluster”
- “having substantial ties of kinship in the neighbourhood ...”
- “working at the same place as at least *two* others from the same area”
- “the same place of work as at least two others of the same sex from the area”
- “voluntary association with workmates in leisure hours ...”

The first criterion, cluster membership, reflects density, while criteria two to five reflect multiplexity. It is important to understand that this particular NSS, while being of greatest importance for the Belfast study, cannot be used without modification in other studies. Every individual social context requires individual NSS criteria: “The challenge for the historical linguist is to show which ties are meaningful to the groups and the individuals who are being studied” (Milroy 2000, 220). For the Pastons, eleven different criteria were developed on the basis of the socio-historical background material available: gender, marital status, education, literacy, place of living, reference group, travel frequency, travel destinations, offices, contacts, and clusters (see Bergs 2005, 71–76 for a full account). What proves to be a problem in many present-day studies (the willingness of participants to cooperate with their personal data and to spend some time with the questionnaire or researcher) is a great advantage in historical studies – here, nobody refuses to cooperate because of long and detailed questionnaires or endless intimate interviews. On the other hand, if we don't know on the basis of the material available to us whether (historical) network member John Doe traveled a lot or whether he was married, there is no other way to find out. In this respect perhaps, historical (socio-)linguistics may “be thought of as the art of making the best use of bad data” (Labov 1994, 11). However, it is also very surprising how much socio-historical data can actually be unearthed, even for periods quite remote in time (see, for example, the amazing studies of MacFarlane 1977, Homans 1941, Raftis 1981, Horrox, Ed. 1994). Table 3 presents

the results of the network analysis for the Paston family, based on the factors listed above. It was distinguished between (a) number of ties, (b) density, and (c) multiplexity. The factor 'Difference' (abbreviated DIFF = number of ties minus density minus multiplexity) combines all three factors and shows the overall structure of the individual network: the more positive this figure, the larger the network (i.e. more nodes which are not interconnected), the more loose-knit and uniplex, and vice versa. John II, for example, obviously has most ties, i.e. a very large network, but also a low degree of density and multiplexity. In other words, he has many contacts with other people, but these don't know each other, and he knows many of them in only few capacities or social roles (e.g., as business partner, son, master). Therefore, he shows the greatest positive figure for DIFF. Margaret, on the other hand, has fewer ties, but a high density and multiplexity. She does not know quite so many people, but many of these people know each other and communicate with Margaret on many different levels and in many different functions. In other words, she shows the greatest negative figure for DIFF. As has been pointed out above, it can be expected on the basis of earlier studies using SNA that tightly-knit network structures with high density and high multiplexity (i.e. a negative value for DIFF) have a conservative, norm-enforcing effect on the participant in question, while loosely-knit network structures with a

large number of ties, low density and low multiplexity are generally more volatile and make the participant in question more open towards influence, i.e. innovation and change, from outside the network. This is one working hypothesis which needs to be tested later on.

In the following, the morphosyntactic variables discussed in section 2 will be cross-fertilized with the network analysis presented in section 3.3 in order to shed some light on the two theoretical questions outlined in the beginning: what is the role of the individual speaker in linguistic change, and is there any possibility of language change beyond first language acquisition as explained in section 1?

4. Theoretical issues

4.1 *The role of the individual speaker*

(Socio-)linguistic research has not paid much attention to the linguistic behavior of individual speakers. Many studies see their aim in the description and analysis of general human capacities (competence) – no matter with or without variability –, of social aggregates, of speaker types. This means that the individual as such is only interesting as a representative of this general human capacity, or of specific social aggregates, or of certain types. There is no need to rehearse

| Summary | Number of ties | Density | Multiplexity | Difference, DIFF |
|--------------------------|----------------|---------|--------------|------------------|
| ¹ John II | 17 | 0 | 5 | +12 |
| ² William II | 15 | 4 | 7 | +4 |
| ² Clement | 7 | 1 | 4 | +2 |
| ² Walter | 4 | 0 | 3 | +1 |
| ² Edmond I | 4 | 0 | 3 | +1 |
| ² William I | 9 | 2 | 8 | -1 |
| ² Edmond II | 10 | 4 | 9 | -3 |
| ² John I | 12 | 5 | 10 | -3 |
| ² John III | 11 | 6 | 9 | -4 |
| ² William III | 11 | 8 | 8 | -5 |
| ² Elizabeth | 3 | 7 | 4 | -8 |
| ² Margery | 0 | 7 | 4 | -11 |
| ² Agnes | 3 | 13 | 11 | -21 |
| ² Margaret | 2 | 16 | 11 | -25 |

Table 3: Network strength factors for Paston family members

Chomsky's dictum on the role of the ideal speaker-hearer; Labov in a much later programmatic statement explained that the investigation of individual language use is likely to be productive "if the net result of such a policy is to plunge more deeply into the internal composition of the group" (Labov 2001, 33). In Labov's groundbreaking study of the principles of linguistic change, he mostly focuses on 112 different speakers, sometimes in great individual detail. Nevertheless, these individuals are always seen against the background of communal patterns: "This investigation is not a search for individuals, but rather for social locations and social types. The leaders of linguistic change are not individual inventors of a certain form, but rather those who, by reason of their social histories and patterns of behavior, will advance the ongoing change most strongly" (Labov 2001, 33f). He continues: "Linguistic analysis cannot recognize individual grammars or phonologies. Individual rules or constraints would have no interpretation and contribute nothing to acts of communication. In this sense, the individual does not exist as a linguistic object. However, each individual shows a personal profile of the comparative use of resources made available by the speech community" (Labov 2001, 34). Thus, individual speakers are seen as components which lead to the actual (more abstract) object of interest: the speech community. The present study assumes a slightly more differentiated view. On the one hand, it is of course interesting and important to try and identify a social typology of speakers, and the linguistic system of the speech community. On the other hand, the present study also attributes more independence and freedom to individual speakers. Of course, the basis for all communication is convention and individuals cannot (or rather should not) transgress all boundaries of convention in their community since this would perhaps result in complete unintelligibility. However, it also seems plausible to assume that speakers can intentionally break with conventions at certain points, and that this need not always be in accordance with the resources of the community. In other words, explorative expressions (Harris and Campbell 1995, 72–75), or linguistic extravagance (Keller 1994) are essentially non-conforming language use. Research in linguistic change mostly agrees that these can also be the source of linguistic change, once they catch on in the com-

munity, i.e. network of the innovating individual (cf. Milroy and Milroy 1985, J. Milroy 1992, Keller 1994, Haspelmath 1999, Harris and Campbell 1995).⁴ But now let us turn to the Pastons and their use of the two morphosyntactic variables briefly discussed above in section 2.

4.2 Personal Pronouns

Fig. 2 below shows the total occurrences of the possessive and object forms of the third person plural pronoun in the Paston Letters (there are no occurrences of the traditional subject form). Apparently, the general picture of the handbooks is borne out. The most common form is the innovative object form *them* (478), followed by the traditional form *hem* (398). There are fewer possessive forms in total (343 possessive versus 876 object forms); here, however the new form *their* is about three times more common (258) than the traditional form *here* (85).

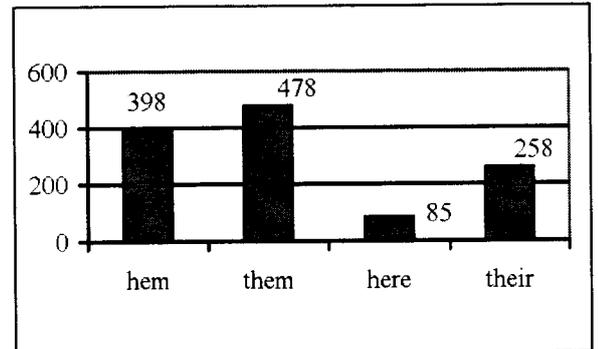


Figure 2: Hem/them in the Paston Letters (totals)

If these static figures can be seen as indicative of diachronic developments, we may speculate that possessive forms must have begun to change earlier than object forms, since they appear to be much more advanced. Figs. 3 and 4 show the development of the forms in ten-year periods (the first and the last division encompass 20 and 17 years,

⁴ Note that Labov's assessment is not entirely clear. If he means that all language use is essentially conventional and based on the community grammar, the present study would not agree. If he means that all language use, including non-conventional explorative expressions, is based on a community grammar, since it either conforms with or deviates from it, his assessment is circular and meaningless, qua being non-falsifiable.

respectively, since the total number of occurrences for these periods was too low to be statistically interesting).

The results of figs. 3 and 4 confirm the developmental picture derived from the static picture in fig. 2. The possessive forms begin to change slightly earlier and seem to change more rapidly than the object forms. The major shift takes place between 1446 and 1465; that in the object forms a ten years later. Also note the more or less steady rate of change, especially in the possessive forms.

Let us now use a different perspective on these developments and look at the generational patterns. Figs. 5 and 6 show the three generations of Pastons and their use of the two alternative forms.

Again, figure 5 and 6 confirm the initial impression: the possessive form changes much more rapidly than the object form. In general one can say that the first generation of Pastons is still fairly conservative in their use of both the possessive and object form, while the third generation has more or less completed the change. The second generation has a transitional function and shows

greatest variability (with 39% new object forms, 63% new possessive forms).

In a third step, we will now narrow our focus even further and look at the language use of individual speakers. Table 4 below shows the use of the four forms in the different family members. Obviously, in contrast to figs. 3-6, there is no uniform pattern that applies to all of them. Some only use the traditional forms in one form. William I, for example, only has the traditional object form, and uses the innovative possessive form occasionally. Others show great variability: Margaret and John I, for example. Yet other show a strong preference for the innovative forms: Edmond II, Elizabeth, William III, for example.

This is partly due to generational factors, of course. William I belongs to the first generation, Margaret and John I to the second, and Edmond II and William III to the third. However, this does not seem to be the whole story. Some individuals actually belong to the same generation, and they also share important macrosociological factors. Yet they behave in different ways, at least linguistically. One example would be the two brothers John

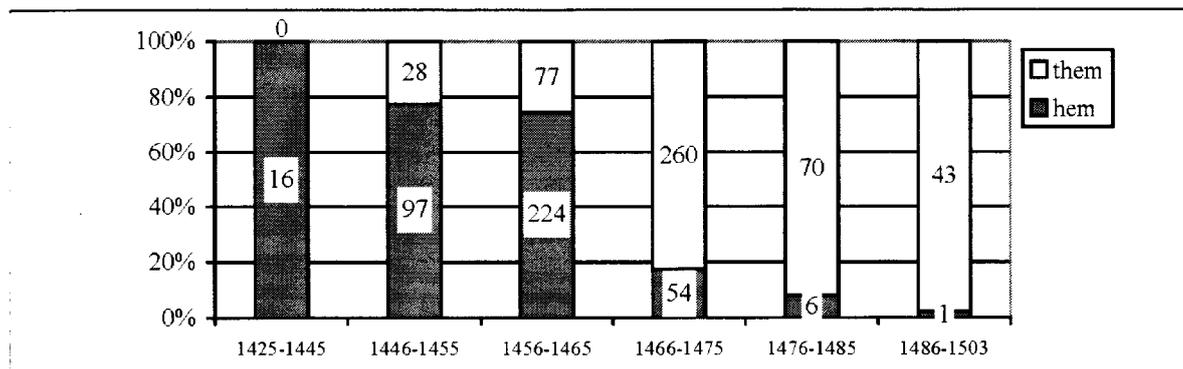


Figure 3: Development of hem/them over time, in percent (figures inside the columns represent totals)

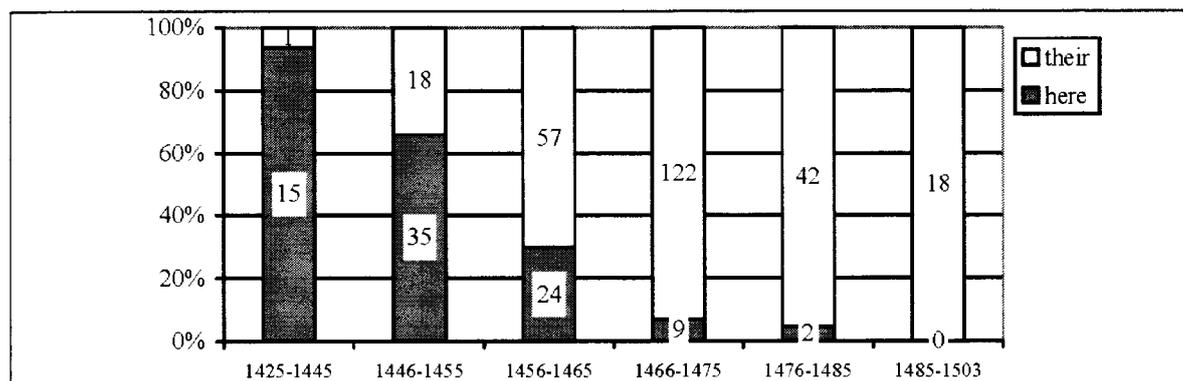


Figure 4: Development of here/their over time, in percent (figures inside the columns represent absolute totals)

Paston II and John Paston III. They were born within two years, they were obviously of the same sex, they had the same kind of education and family background. Still, they employ the pronoun variable in totally different ways. They both agree in their strong preference for the new possessive form, but John II is much more advanced in his use of the new object form. He uses it in more than 96% in contrast to John III with only c. 58%. Another example would be Elizabeth. She belongs to the second generation and should therefore show some variability in both object and possessive forms. However, she exclusively uses the innovative forms – which is even more surprising since all the other women in the family show variable patterns. This appears to be truly idiosyncratic and inexplicable behavior, at least from a macro perspective. On a micro-level, however, some reasons seem to emerge. We will return to this question below, after we have discussed the variation in relativizers.

Table 5 summarizes the findings so far. It shows the members of each generation in terms of their progressiveness. The figures show the ratio of traditional and innovative forms (total number of

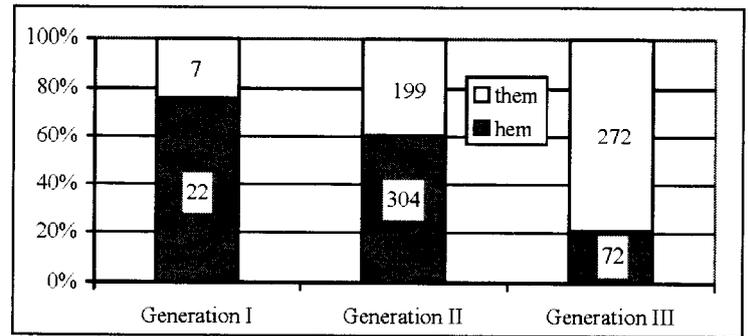


Figure 5: Hem/them in three generations of Pastons, in percent (figures inside the columns represent absolute totals)

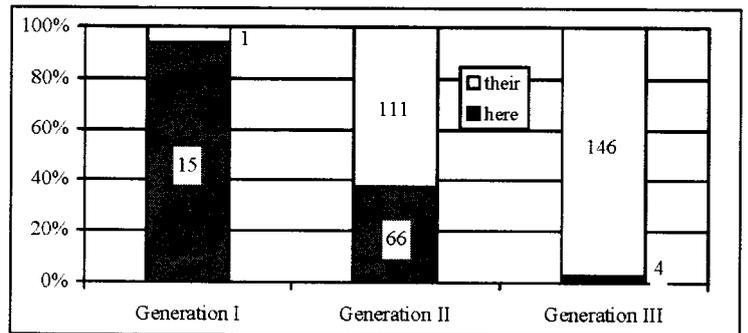


Figure 6: Here/their in three generations of Pastons, in percent (figures inside the columns represent absolute totals)

traditional forms divided by total number of innovative forms). The smaller the figure, the more progressive the use of these variables, i.e. the more *th*-forms we find. For some speakers, certain items do not give any results (if there are no progressive

| Author | Hem | Them | Here | Their | Total |
|--------------------------|-----|------|------|-------|-------|
| ¹ Agnes | 12 | 7 | 2 | | 21 |
| ² Clement | 4 | 1 | 1 | | 6 |
| ³ Edmond II | | 12 | | 4 | 16 |
| ² Elizabeth | | 12 | | 4 | 16 |
| ² John I | 94 | 33 | 22 | 26 | 175 |
| ³ John II | 5 | 140 | 1 | 69 | 215 |
| ³ John III | 65 | 82 | 2 | 64 | 213 |
| ² Margaret | 190 | 126 | 44 | 66 | 426 |
| ³ Margery | 2 | 4 | 1 | 1 | 8 |
| ³ Walter | | 4 | | | 4 |
| ¹ William I | 9 | | 13 | 1 | 23 |
| ² William II | 8 | 27 | 1 | 23 | 59 |
| ³ William III | | 30 | | 8 | 38 |
| Total | 389 | 478 | 87 | 266 | 1220 |

Table 4: Third person plural pronoun forms in members of the Paston family (totals)

| | Author | (<i>hem÷them</i>) | (<i>here÷their</i>) | Total |
|----------------|-------------|---------------------|-----------------------|-------|
| Generation I | Agnes | 1.71 | – | 1.71 |
| | William I | – | 13 | 13 |
| Generation II | Clement | 4 | – | 4 |
| | Elizabeth | 0 | 0 | 0 |
| John I | 2.85 | 0.85 | 3.7 | |
| | Margaret | 1.51 | 0.66 | 2.17 |
| | William II | 0.30 | 0.04 | 0.34 |
| Generation III | Edmond II | 0 | 0 | 0 |
| | John II | 0.04 | 0.02 | 0.06 |
| | John III | 0.79 | 0.03 | 0.82 |
| | Margery | 0.5 | 1.00 | 1.5 |
| | Walter | 0 | – | 0 |
| | William III | 0 | 0 | 0 |
| | William IV | – | – | – |
| | Total | 0.83 | 0.33 | |

Table 5: Third person plural pronoun use in the Paston family, according to generation

forms) or zero (if there are no traditional forms). The average for the whole family is .83 for the object forms and .33 for the possessive forms.

The figures in table 5 show that, on the whole, certain speakers clearly stick out as more conservative, while others are more progressive. In the second generation, John I and Margaret are the most conservative speakers, William II and Elizabeth the most progressive. In generation III, Margery is very conservative, followed by John III. John II, Edmond II, Walter and William III are the most progressive ones.

4.3 Relativizers

Relativizers are much more complex as variables since many language internal factors, such as restrictiveness, syntactic function of the antecedent and of the relativizer, and distance between relativizer and antecedent, have to be taken into account. In the following, for clarity's and brevity's sake, we will restrict ourselves to some of the most basic factors (for a full discussion, see, e.g., Romaine 1982, Bergs 2005). Fig. 7 shows the distribution of 2,050 of the major relativizers in restrictive and non-restrictive relative clauses (henceforth RCs) in the Paston Letters.

In general, the most common relativizer is *that* with 1,276 occurrences, followed by *which* with

572 and *who*, *whose*, *whom* with 124 in total, and 78 *the which*. *That* is much more common in restrictive RCs (83.3%), while the *wh*-relativizers mostly occur in non-restrictive RCs (90.3%). Thus, restrictiveness indeed seems to play an important role in the use of the different relativizers – at least on this level of abstraction. Before we look at this from a diaphasic, generational, and individual perspective on language use, a few more internal factors need to be discussed briefly. It has been pointed out above that, apart from restrictiveness, it is the ontological status of the antecedent (animacy in particular) which can also lead to significant effects. Table 6 shows the distribution of the different relativizers in restrictive and non-restrictive RCs according to the ontological status of the antecedent. It was distinguished between animate (AN), inanimate (INA), and deity (DE) antecedents.

Table 6 shows that animacy and ontological status must have played an important role in the choice of the relativizer. *Which* and *the which* predominantly occur with inanimate antecedents, *whose* and *whom* predominantly with animate antecedents. *That* is the relativizer of choice for animate antecedents in non-restrictive RCs and for inanimate antecedents in restrictive RCs. The most interesting fact, however, is that *who* is almost exclusively used for deity antecedents in (of course) non-restrictive RCs. Two of the four

occurrences with animate antecedents are fairly late (1481 and 1488) and with socially highly respectable antecedents. The third language internal factor which has been discussed for present-day is the syntactic distance between RC and antecedent (Quirk 1957). While Quirk points out that "relative clauses normally follow their antecedents immediately" (Quirk 1957, 105), he also shows that there is a certain preference for *wh*-relativizers in distant RCs. This seems to be related to questions of cognitive and linguistic complexity and explicitness (discussed, e.g., in Hawkins 1994; 2004, Rohdenburg 1998, 2003). It can be argued that the *wh*-relativizers, being 'inflected', are the more explicit forms and can therefore be expected in the cognitively more complex syntactic environments, i.e. with distant RCs.

Also, we would expect *the which* to be more common in these contexts, since the article even adds to its explicitness and anaphoric force and may be seen as a textual-deictic guiding light for the hearer. Figs. 8 and 9 show the results for the Paston Letters. Fig. 8 simply distinguishes between *that* and *wh*-relativizers, fig. 9 further differentiates the results into the individual relativizers.

Fig. 8 confirms Quirk's results for present-day English: *That* is much more common in adjacent relative clauses, *wh*-relativizers in distant ones. This is also reflected in the differentiated picture in fig. 9. The highest percentages of *wh*-relativizers can be found in distant RCs. Interestingly, however, the prediction for *the which* cannot be confirmed. Although we find a rather high percentage of occurrences of this relativizer in distant

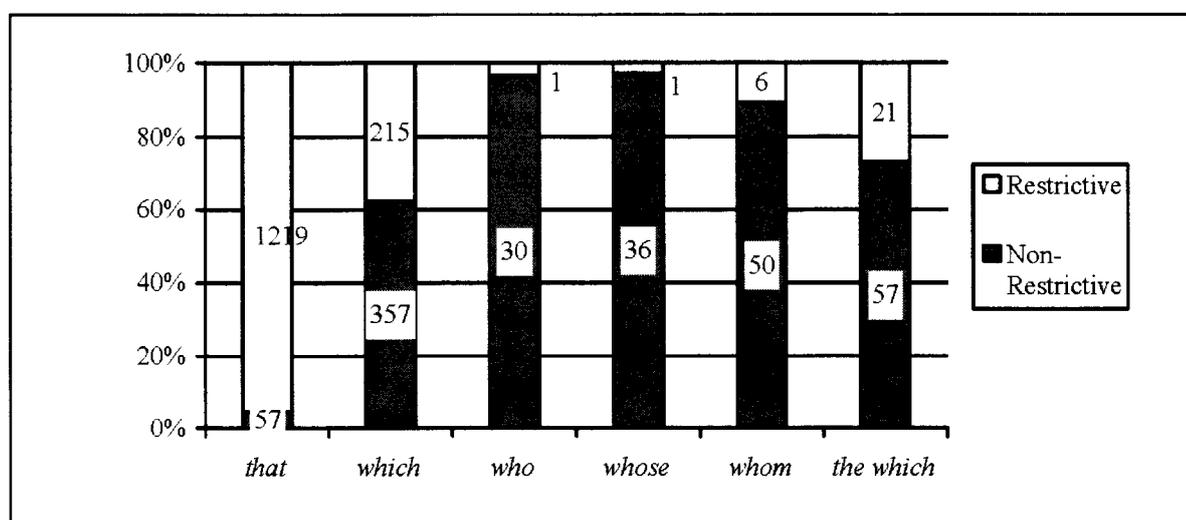


Figure 7: Relativizers in the Paston Letters in restrictive and non-restrictive relative clauses, in percent (figures inside the columns represent totals)

| | Non-restrictive | | | | Restrictive | | | | Total |
|------------------|-----------------|-----|-----------------|-------|-------------|------|----|-------|-------|
| | AN | INA | DE | Total | AN | INA | DE | Total | |
| <i>that</i> | 38 | 19 | | 57 | 406 | 812 | 1 | 1219 | 1,276 |
| <i>which</i> | 88 | 267 | 2 | 357 | 44 | 171 | | 215 | 572 |
| <i>who</i> | 3 | | 27 ⁱ | 30 | 1 | | | 1 | 31 |
| <i>whose</i> | 35 | | 1 | 36 | 1 | | | 1 | 37 |
| <i>whom</i> | 36 | | 14 | 50 | 6 | | | 6 | 56 |
| <i>the which</i> | 16 | 41 | | 57 | 3 | 18 | | 21 | 78 |
| Total | 216 | 329 | 44 | 587 | 461 | 1001 | 1 | 1,463 | 2,050 |

(i) in eleven speakers (between one and eight occurrences each)

Table 6: Restrictiveness, relativization and animacy in six relativizer types (totals)

| | Author | (<i>hem÷them</i>) | (<i>here÷their</i>) | Total |
|----------------|-------------|---------------------|-----------------------|-------|
| Generation I | Agnes | 1.71 | – | 1.71 |
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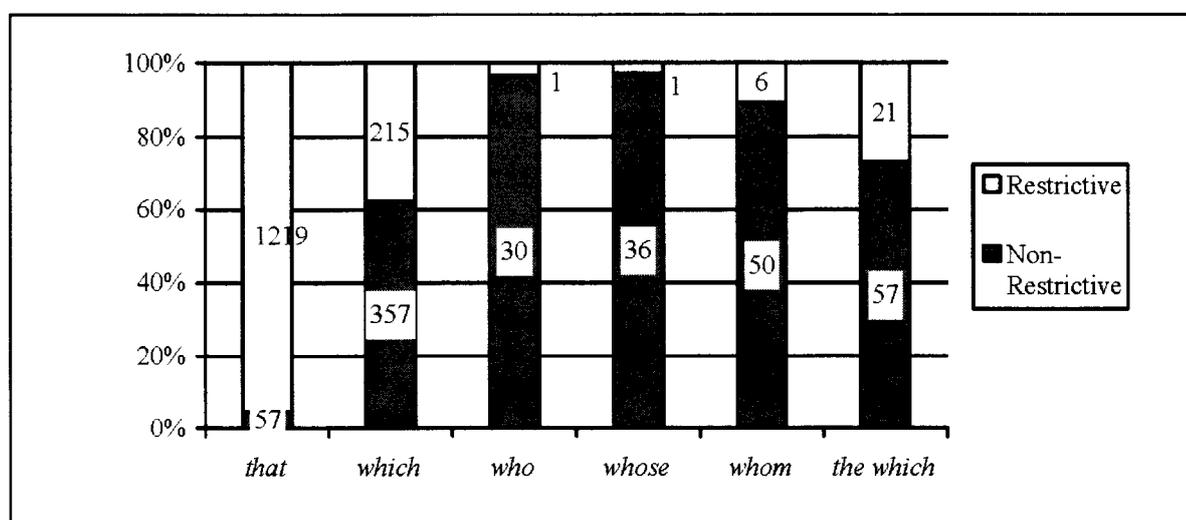


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| <i>whose</i> | 35 | | 1 | 36 | 1 | | | 1 | 37 |
| <i>whom</i> | 36 | | 14 | 50 | 6 | | | 6 | 56 |
| <i>the which</i> | 16 | 41 | | 57 | 3 | 18 | | 21 | 78 |
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RCs (c. 45%), we would have expected a much higher frequency, given the greater anaphoric force and explicitness.

Because of the complexity of this variable, diachronic developments are somewhat harder to trace than in personal pronouns. Beginning with the most obvious patterns, fig. 10 shows the distribution of *that* and *wh*-relativizers in 10-year intervals.

The picture sketched in the handbooks and language histories is actually borne out. *Wh*-relativizers are gradually spreading through time from c. 25% of all relativizers in the beginning of the fifteenth century to c. 50% in the end. If we analyze the development from a generational point of view, a slightly different picture emerges, however. Fig. 11 shows *that* and *wh*-forms in the three generations of Pastons.

The changes in fig. 11 are not as smooth and gradual as those in fig. 10. We start with c. 65% *that* in generation I. Then there is a somewhat elevated level of traditional *that* in generation II (c. 70%) and a sharp drop in frequency to c. 50% in generation III. This result might be due to dif-

ferent total frequencies for the three generations; but even if there is no increase in generation II, we still do not see the changes which could be expected on the basis of fig. 10. Why should that be so? One possible explanation might come from the variable itself. Relativization is a complex syntactic variable and we can expect it to behave differently than personal pronouns and their substitution (which could be a more lexical process). From a traditional point of view, however, we would expect syntactic changes of this kind to be even more catastrophic, rapid, and generation-based than lexical substitutions, since they, arguably, depend on language acquisition, i.e. fundamental changes in the base grammar in a new generation of speakers. This is not what we see in figs. 10 and 11. Fig. 10 shows a gradual increase of innovative relativizers over time, while fig. 11 suggests relative stability in the three generations. This might lead to two conclusions: first, it can be suspected that the nature of this change is not only related to pure syntax, as is often assumed, and second, speakers can operate with mixed lexico-syntactic systems for quite a

Figure 8: Adjacency in RCs with *that* and *wh*-relativizers, in percent (figures inside the columns represent totals)

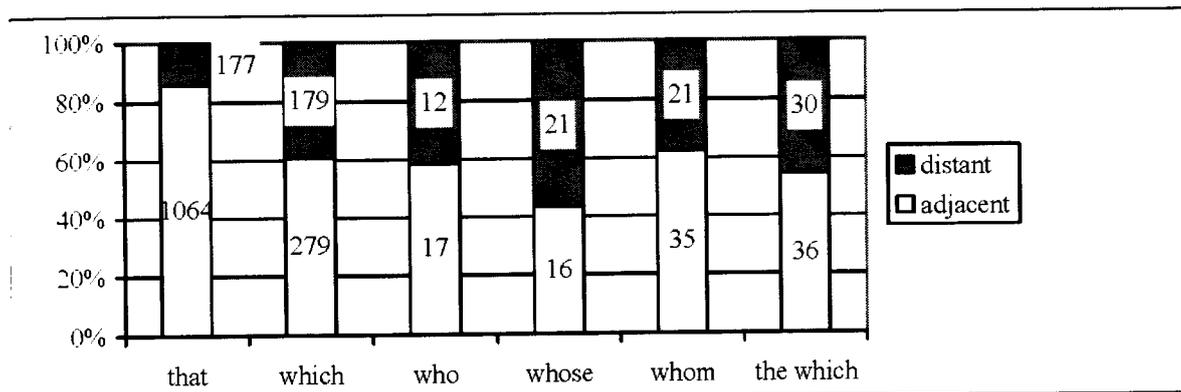
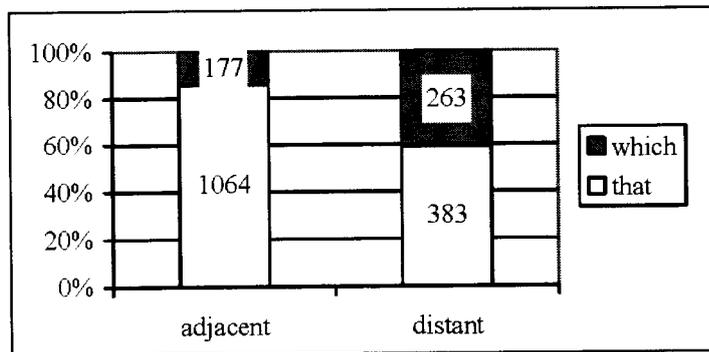


Figure 9: Individual relativizers and adjacency in RCs, in percent (figures inside the columns represent totals)

long time, and they seem to be able to alter these systems gradually.

Let us now again narrow our focus and concentrate on the language use of individual speakers. Table 7 below summarizes the use of the different relativizers, divided into restrictive and non-restrictive RCs, by the individual family members.

Again, as with the personal pronouns, the general macro-level picture is not always repeated on the individual micro-level. Some speakers, especially of the first and second generation, still have a very high percentage of *that*, even in non-restrictive RCs (Agnes, William I, William II), while others show a strong preference for *which* in both restrictive and non-restrictive RCs (Edmond II). Edmond II and Margery are two of the most advanced speakers in at least one respect: they practically show the modern pattern with no *that* in the non-restrictive section. At the same time, we

see dramatic differences in the use of the latest *wh*-relativizers, i.e. *who*, *whose*, *whom*. The frequency of *who*, for example, ranges from zero (Margery, William II) to more than 23% (William III). Some family members use the whole 'paradigm', *who*, *whose*, *whom* (John I, John III), while others only use some forms (Agnes, Edmond II, William II). Interestingly, not a single speaker shows the ranking of forms predicted by Keenan and Comrie's reversed accessibility hierarchy, discussed in Romaine (1982). This reversed hierarchy says, in a nutshell, that the substitution process as a change from above begins with the most complex positions (e.g. genitive, oblique, indirect object) and advances toward the simpler functions (direct object, subject). Note that this can be seen in the macro-level frequency of the forms presented in fig. 7 above, where *whose* and *whom* are more frequent than *who*. On the individual level, however, some speakers, like Edmond II, have a much high-

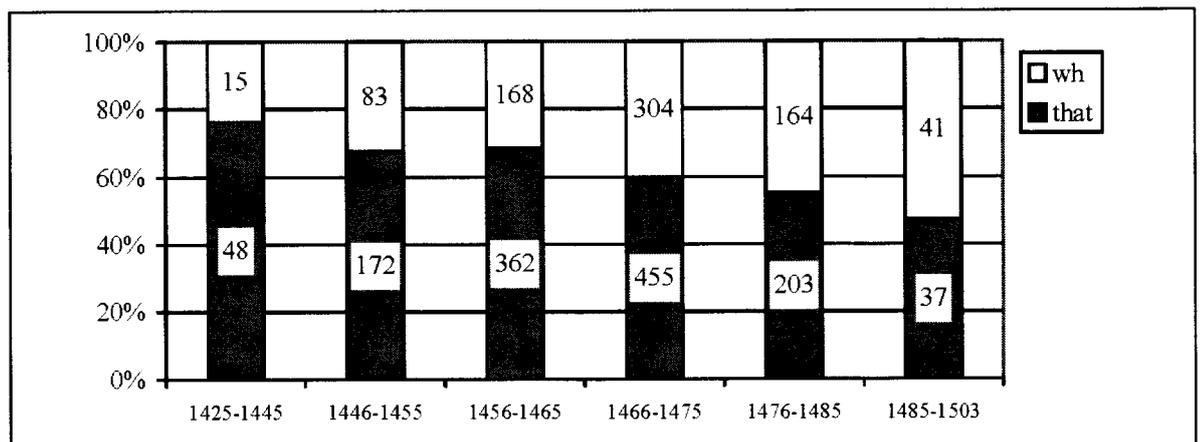


Figure 10: That versus wh-relativizers in ten year intervals, in percent (figures inside the columns represent totals)

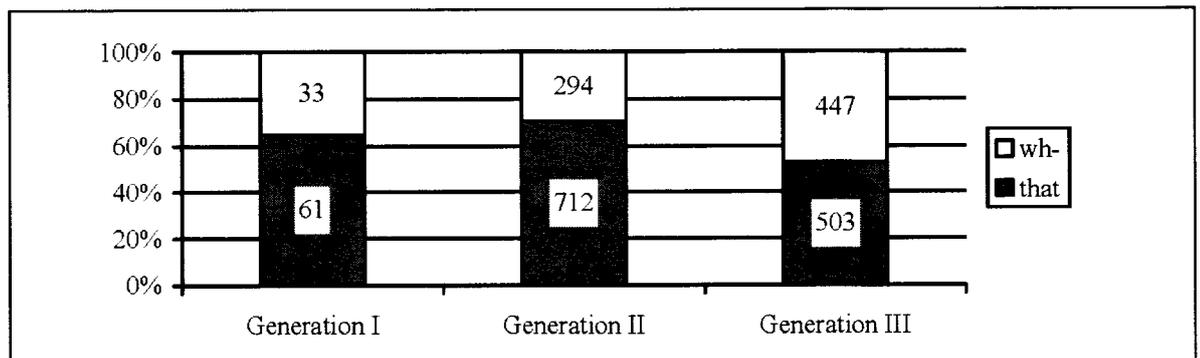


Figure 11: That versus wh-relativizers in three generations of Pastons, in percent (figures inside the columns represent totals)

er percentage of *who*, while others have a high percentage of *whom* (John III). This pattern (or lack of such) seems to suggest that *who*, *whose*, *whom* were probably not introduced as regular, productive, purely syntactic elements (which we would expect to follow the syntactic predictions), but rather as parts of complex formulaic elements such as *by the grace of God, who have you in his keeping*. It is only when the formulaic character of these utterances is lost (through loss of saliency and markedness reduction) that these constructions are fully integrated into the grammatical system and can be used productively as purely grammatical elements. In qualitative terms, one of the most progressive leaders is William III, who uses *who* four times, *whose* and *whom* once. Three of the occurrences of *who* are in phrasal contexts with Deity antecedents, one is in a non-phrasal context with the Scottish King (i.e. a socially high

ranking entity). *Whose* is used in a fairly early text (1479) with a 'respectable gentleman' as antecedent. *Whom* is used in 1478 in a phrasal context; however, the morphosyntax appears to be wrong: "by be grace of God, *whom* haue yow in hys keypyng" (William III, 1478, no. 406). This is a typical example of so-called case attraction, where the relativizer shows the morphosyntactic case of the antecedent, not the one required by its own syntactic function. Although case attraction is not unusual in earlier Englishes, its appearance in such a fixed and well-known phrase might indicate that the phrase itself may have lost some of its saliency and special status, i.e. it may have undergone what can be characterized as markedness reduction. This in turn makes William III quite a progressive speaker in this respect.

In the following section, the rather unsystematic findings on individual language use presented

| Non-Restrictive (NRS) | | | | | | | |
|-----------------------|-------------|--------------|------------|--------------|-------------|------------------|---------------|
| Author | <i>That</i> | <i>Which</i> | <i>Who</i> | <i>Whose</i> | <i>Whom</i> | <i>The which</i> | NRS Total (N) |
| Agnes | 47.8% | 39.1% | 4.4% | 8.7% | | 4.3% | 23 |
| Edmond II | | 61.9% | 19.1% | | 9.5% | 9.5% | 21 |
| John I | 9.1% | 63.6% | 4.6% | 10.2% | 5.7% | 6.8% | 88 |
| John II | 3.2% | 85.6% | 3.2% | 4.8% | 3.2% | | 125 |
| John III | 2.2% | 68.7% | 6.0% | 3.7% | 17.2% | 2.2% | 134 |
| Margaret | 16.2% | 37.1% | 1.9% | 8.6% | 7.6% | 28.6% | 105 |
| Margery | | 50.0% | | | | 50.0% | 12 |
| William I | 26.6% | 40.0% | 6.7% | 13.3% | 6.7% | 6.7% | 15 |
| William II | 20.8% | 58.3% | | 4.2% | 16.7% | | 24 |
| William III | 5.9% | 47.1% | 23.5% | 5.9% | 5.9% | 11.7% | 17 |
| Restrictive (RS) | | | | | | | |
| Author | <i>That</i> | <i>Which</i> | <i>Who</i> | <i>Whose</i> | <i>Whom</i> | <i>The which</i> | RS Total (N) |
| Agnes | 78.6% | 21.4% | | | | | 42 |
| Edmond II | 68.4% | 31.6% | | | | | 19 |
| John I | 86.3% | 12.4% | | | 1.3% | | 161 |
| John II | 72.4% | 27.3% | | | 0.3% | | 301 |
| John III | 83.8% | 15.8% | | 0.4% | | | 271 |
| Margaret | 89.4% | 6.7% | | | 0.4% | 3.5% | 519 |
| Margery | 91.7% | 8.3% | | | | | 12 |
| William I | 92.9% | 7.1% | | | | | 14 |
| William II | 83.5% | 13.7% | 1.4% | | 1.4% | | 73 |
| William III | 78.3% | 13.0% | | | | 8.7% | 23 |

Table 7: Restrictiveness and relativizer use in individual informants (Bergs 2005, 191)

so far will be couched in a SNA framework. In particular I will investigate whether these phenomena go beyond seemingly random idiosyncrasies, i.e. whether there is any systematic correlation between individual network structure(s) and use of these variables.

4.4 A network point of view

As has been pointed out before, traditional network studies suggest that there may be some correlation between (linguistic) behavior and individual network structures. Denser, tightly-knit, multiplex networks tend to exert more pressure on their members to conform to norms in the network than loosely-knit, open, uniplex networks, which tend to make their members more volatile and susceptible to influences from outside the network. This means for the Pastons that network members with very low (negative) network scores should generally exhibit a more traditional language use, while those with very high (positive) network scores can be expected to be more linguistically flexible, i.e. to show more innovative, modern forms. Table 8 summarizes the network scores developed above and the findings of the linguistic analyses. It tries to correlate the factor DIFF (cf. table 3 above), the ranking in pronoun use (cf. table 5 above), and the progressiveness

ranking for relativizers in restrictive RCs (the more *wh*-relativizers, the more progressive the speaker). Table 8 also distinguishes between the second and third generation of speakers in order to ensure greater comparability of the results. The first generation was also not considered since it only comprises two speakers, Agnes and William I. Some other speakers, like Elizabeth and Walter, were excluded in the quantitative analysis of their relativizer use since their total occurrences were too few (<20) to be statistically interesting.

Apparently, table 8 does not show a clear and straightforward correlation between DIFF and the use of the two variables, but some interesting patterns can be made out. William II, who has the highest (positive) DIFF, is indeed more progressive in his use of personal pronouns and relativizers than John I and Margaret. John I, in turn, ranks higher than Margaret, which also corresponds to his language use. In how far this is a question of networks or gender, or both, remains a task for future research. Elizabeth shows a remarkable behavior: she ranks fairly low with respect to DIFF (being a woman – with corresponding lack of education and literacy at the time –, being married, traveling very little and not very far, and holding no official offices), but still she is very progressive in her pronoun use. Her relativizer use could not be included in the strictly quantificational part, but her use of *wh*-relativizers is clearly above average

| | <i>DIFF</i> | <i>Pronouns</i> | <i>Relativizers</i> | |
|----------------|----------------|--------------------------|--------------------------|------------------------------------|
| GENERATION II | +4 William II | ² Elizabeth | ² William II | Increasing progressiveness ↑ |
| | +2 Clement | ² William II | ² John I | |
| | +1 Edmond I | ² John I | ² Margaret | |
| | -3 John I | ² Margaret | | |
| | -8 Elizabeth | | | |
| | -25 Margaret | | | |
| GENERATION III | +12 John II | ³ John II | ³ Edmond II | Increasing progressiveness ↑ |
| | +1 Walter | ³ William III | ³ John II | |
| | -3 Edmond II | ³ Edmond II | ³ William III | |
| | -4 John III | ³ John III | ³ John III | |
| | -5 William III | | ³ Margery | |
| | -11 Margery | | | |

Table 8: Networks and language use in generations II and III

only 4 out of 17 are *that*). Moreover, she has both *who* and *whom* in her system, and likes to use *the which*. Thus, she differs drastically from her sister Margaret, and should be regarded as one of the more progressive speakers. These differences cannot be accounted for by only looking at her DIFF score, which predicts something else. Her biography, however, reveals some illuminating details. In contrast to her sister, who was c. ten years older and quickly rose to the position of a strong and important *mater familias* (cf. Wood 2004), Elizabeth must have been the rotten apple of the family. Her mother, Agnes, tried to marry her off twice. The first arranged marriage was with Stephen Scrope, a man Elizabeth seems to have hated. When she refused to marry him, Agnes “kept the girl shut up so that she could not see or speak to any man, and was even suspicious of her conversing with the very servants in the house. As if this were not enough, she had attempted to break the girl’s spirit by other means” (Bennett 1995: 30). These other means included beating the girl on a regular basis for more than three months and sometimes so severely that she “broke her head in two or three places”. Eventually, Elizabeth gave in, but for some other reason this wedding never took place. When a second arranged marriage with John Clopton also failed to take place, Agnes gave up and Elizabeth was sent to London to live with Lady Pole. She finally married Lord Poynings, with whom she had a son, Sir Edward. After Poynings’ death she married a second time, Sir George Browne of Betchworth. They had two children: a son and a daughter. Browne was one of the rebels against Richard III and was executed in 1483. What all this means is that Elizabeth’s surprisingly progressive language use may have been due to the fact that she had a strong motivation to dissociate herself from her family and from her mother in particular – in network terms, she clearly was a fringe network node in the family network, and had a different reference group as orientation. At the same time, she was also a social climber and entered new social circles with her successful marriages. This could also be one of the ‘reasons’ for her remarkable language use. However, these biographical details are not easily quantifiable (or sometimes even empirically falsifiable), so that they do not show up in her DIFF score. Nevertheless, they may account for her linguistic behavior.

The third generation of Pastons is also interesting. Again, there is no straightforward correlation between network structure(s) and linguistic behavior, but some general patterns become visible. John III, for example, ranks fairly low on the network scale, and this mirrored in his rather conservative use of personal pronoun forms and relativizers (actually, the story is a little bit more complicated, see section 4.3). Similar things can be said about Margery, John III’s wife, who sides with the other two women, Margaret and Elizabeth in terms of her negative DIFF score, and who, like Margaret and her husband, is rather conservative in her language use (apart from the fact that she does not use non-restrictive *that*). At the other end of the scale is John II who has the highest positive DIFF score by far and who also plays a leading role in his linguistic behavior. He is only outranked by Edmond II, who has a lower percentage of *that* in restrictive relative clauses. The linguistic behavior of William III is somewhat surprising. He ranks below John III on the social network strength scale (NSS) but plays a major role in innovative language use. As we have relatively little information about his life – we only know that he was born around 1459 and that he was supported by his brother John II when he was at Eton in 1478/79; from 1487 onwards he was in the service of the Earl of Oxford from which he was dismissed in 1504 because he was sick and “crazed in his mind” – we can only speculate about possible reasons for this behavior. Perhaps he was trying to imitate his brother John II. But all this remains speculation and shows some of the limits of SNA and HSL. After all, SNA and its results, especially in a historical perspective, need not, perhaps cannot be deterministic regarding the individual network members and their behavior; it can only describe certain likelihoods.

In conclusion one can say that all three levels of enquiry – the corpus as a whole, three generations, and individual speakers – have led to interesting and significant results. While the macro-level has shown the gradual changes across time (in the pronouns, for example), the generational analysis has shown the surprisingly great stability in some domains (like the shift from *that* to *wh*-relativizers). The analysis of the individual level, then, not only leads to the identification of certain speaker types (conservative *mater familias*, innovative rotten apple, social climber, admiring

brother) and functions in the network(s) (innovators, bridges, fast adopters, maintainers) – which is more or less the approach advocated by Labov – but also allows for the analysis of the minute and almost imperceptible changes in individual language use, which can ultimately lead to major linguistic changes (cf. Milroy and Milroy 1985, J. Milroy 1992). These are not necessarily always visible from a quantificational network point of view, but sometimes need careful and detailed qualitative analyses. One example would be the slow and gradual changes in the introduction of *who*, *whose*, *whom*, which do not simply enter the linguistic system as grammatical elements in one big swoop, but which originate as part and parcel of complex formulaic expressions which are then slowly (des-)integrated into the grammar. This process can indeed be traced through the detailed documentation of individual language use, since this reveals how speakers gradually break with conventions and either introduce completely new forms, or change the use of old ones. Sometimes, however, these facts cannot be adequately captured in a social network *cum* language data snapshot. What we need instead is a careful study of the individual biographies and the incidents which may have resulted in significant changes in the individual network structures. These may include, *inter alia*, long-term relocations, major changes in the immediate contacts, e.g. through marriage, and social promotion or demotion. As with SNA and NSS, this of course is meant as an open list which requires modification depending on the concrete domain of application. In the next section, we will further explore this idea and look at a closely related topic which also plays a major role in the theory of linguistic change: the question when linguistic change can actually take place.

5. Language change throughout a lifetime

In most generative frameworks (and many others as well), it has been assumed that grammar (language) is acquired during first language acquisition, and more or less fixed at a certain age (see, e.g., Hale 2003, Labov 2001, 415–465, esp. 422–423, cf. Lightfoot 2006 for a different-yet-similar story couched in I-language versus E-language terms). This means that after a ‘critical

period’, language learning means learning a second language or variety, something additional to the first basic vernacular grammar. This in turn means that language change ‘proper’ (i.e. changes in the I-language) can only happen during first language acquisition while the basic grammar of the child is being formed; later changes are relegated to the status of ‘additions’ and ‘modifications’, matters of performance, or perhaps changes in the E-language. Proper changes can then only be caused by the child’s exposition to primary linguistic data (PLD) during first language acquisition which differs from that to which the PLD giver was exposed. Hale (2003, 349) argues that these differences can be systematic (e.g., scope and sequence of data exposition) or contingent and sporadic (e.g., noise and performance ‘errors’ in the production or perception process). This is not the right place to argue that this view is necessarily wrong. As a matter of fact, the division between competence and performance, or between I-language and E-language, seems to seal off these theories against all criticism and empirical validation: whatever evidence one can find in favor of (I-)language, i.e. competence change in adulthood, critics can always devalue this as a matter of performance. But this is the topic of another article. This section will try to show that by studying individual speakers over long stretches of time in great detail, one may be able to see a few phenomena emerge which at least question the idea of first language acquisition as the sole source of linguistic change. Whether these phenomena actually fall in the domain of performance or competence will have to remain an open question.

The use of SNA in the way presented so far offers some very interesting new perspectives on the socio-psychological rigging of linguistic behavior in individual speakers. On the one hand, it offers the chance of developing some basic speaker typology, which in itself is already very illuminating from the viewpoint of language variation and change. On the other hand, it can help us to identify and describe the functions that individual speakers may have played in very concrete cases of linguistic change. However, there is also one serious problem which needs to be addressed here. Many present-day studies in sociolinguistics using SNA take linguistic and social ‘snapshots’ in the form of questionnaires (see, e.g., the papers in

De Bot and Stoessel, Eds. 2002). Researchers using some sort of participant observation rarely spend much longer than one or two years in their communities. The Milroys, for example, carried out fieldwork in Belfast in 1975/76. Again, we get a snapshot-like picture of the speakers and their social networks with very little, if any developments. This is then correlated with an equally snapshot-like synchronic description of the language use of these speakers. The situation is often very different for historical studies like the present one. On the one hand, we do not find enough social data to develop synchronic networks at any given point in time. This means that the NSS developed here are based on diachronic data accumulated throughout a speaker's lifetime. Let us take a fictitious and extreme example: a speaker may have traveled a lot in England and Europe and may have met many people from very diverse backgrounds. Perhaps he even was an active member of royal circles. But he lived, for some strange reason, more or less as a hermit between the ages of 30 and 50. These different life styles are not actually documented in the NSS scores. In fact this person may only achieve an average ranking here, since the different periods and their factors may level each other out. In a synchronic study, in contrast, one could document the current state of affairs quite well. On the other hand, we are also often dealing with diachronic linguistic data accumulated throughout a speaker's lifetime, i.e. the

language use of teenagers and speakers in their twenties is often lumped together with that of speakers in their thirties, forties, and beyond. In contrast to synchronic, present-day studies, historical SNA does not offer a snapshot of the social and linguistic situation, but rather a video clip. This of course does not mean that historical SNA is per se impossible, but that its results need to be critically evaluated and taken with a pinch of salt. One might even argue that *because* the special nature of historical data SNA can offer new and interesting perspectives. On the one hand, here we can find plenty of data for detailed longitudinal studies of linguistic developments in real time. The Pastons, for example, offer data on over forty years of individual language use. On the other hand, if there is enough social background data, the diachronic *development* of network structures can be brought into the perspective of this long-term linguistic variability, i.e. individual biographies can be matched with individual language use. This in turn also means that we can investigate the possibility of language change after first language acquisition. Let us turn to some concrete examples from the Paston Letters, beginning with the diachronic correlation of biographical facts and linguistic behavior.

Fig. 12 below shows the use of the pronoun forms *hem* and *them* by John Paston III. His linguistic data covers the period 1461–1503, i.e. more than 40 years. Obviously, he uses the older

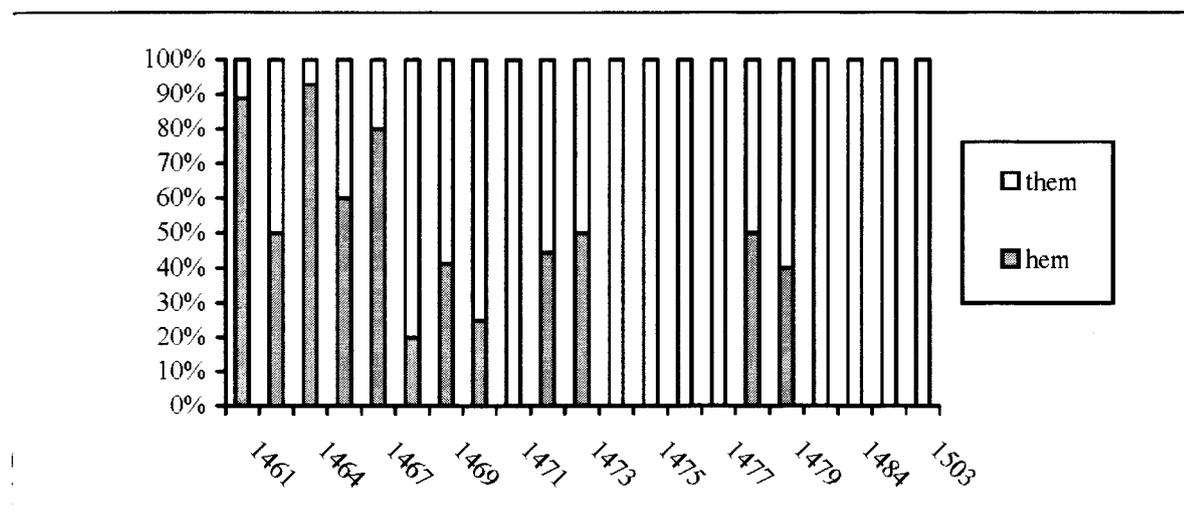


Figure 12: John Paston III's use of *hem* and *them* over time, in percent

form *hem*, only until about 1467, when the new form *them* takes over. The same pattern can be seen for other variables as well, for example the spelling of <might> instead of <myt, mygth>, <-owght> instead of <-owt>. Davis (1954, 60) also speculates that these changes may have had to do with new events or new experiences in John's life, such as his visit to Bruges the following year, the fact that his father died the year before, or that he was wooing Lady Boleyn's daughter.

A similar phenomenon can be seen in John III's mother Margaret. For her, we have data from 1443 to 1482. She begins using the innovative forms *them* and *their* in 1449 and 1452, respectively, but they only became frequent after 1468. This may be due to temporal factors alone, or due to complex contextual factors, including register, style, topic, and addressee. It is worth mentioning, for example, that her husband, John Paston I, died in 1466, and that we mostly find letters to her sons from this date onwards. Edmond II is another example. He was born about 1443. We have eight letters with c. 3,813 words from him; the first one is from 1471. He prefers *that*, even in restrictive RCs, and he uses *whom* and *who* in fairly conservative contexts. However, 50% out of the occurrences of *who* and *whom* (3 out of 6) are in one single letter from 1479 to his brother John III. *The which* occurs only twice in his share of the data – in one single sentence in an indenture from 1472. What does that mean for his linguistic competence and performance? The data are not extensive in this case, but I think they suggest at least that *the which* must have been a very special, marked form for Edmond II, not an item of everyday language use. Did he adopt this – undoubtedly grammatical – feature, just to drop it again? Is *the which* part of his grammatical competence, his language, or only a performance-based 'slip of the tongue'? When Margaret and John III adopt the new forms and lose the old ones, do they simply add to and drop from their in principle unchangeable vernacular grammar? I think what can be seen here are bits and pieces of a mosaic which leads to the impression that language as such, even as competence, may be much more flexible than is commonly assumed. Speakers obviously can change their linguistic behavior even at a fairly advanced age, and these changes seem to go beyond mere performance or additional stylistic

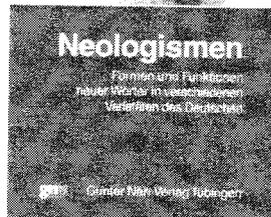
variants. This phenomenon has not received adequate attention in research so far and needs further investigation in the future. On the basis of the data presented here, there is no reason to believe that the changes which speakers initiate or adopt after language acquisition are systematically (qualitatively) different from those during first language acquisition. They seem to be based on the same basic and universal set of cognitive and social-cognitive skills, including first and foremost intention-reading and pattern-finding (see Tomasello 2003). The obvious differences between changes during first language acquisition and later changes seem to be mostly of a quantitative nature, i.e. adults do not change their linguistic system with the same amazing speed as children do. But neither do they learn to play the piano, or play tennis just as fast as many children do. In other words: fundamentally, both first language acquisition and (later) language change may well be the same kind of process: "grammaticalization", i.e. the formation and change of grammar – only at different rates of change.

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Hilke Elsen
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Wie und warum bilden wir neue Wörter? Wird das von einzelnen Sprechergruppen und -intentionen mitbedingt? Um diese Fragen zu beantworten, werden die Neologismen aus acht Varietäten des Deutschen, z.B. Werbe-, Zeitungs-, Fachsprachen, hinsichtlich Wortbildungstechnik und Gebrauchsfunktion analysiert. Die verschiedenen Sprachausprägungen unterscheiden sich dabei deutlich in der Wahl der bevorzugten Wortbildungsmöglichkeiten.

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