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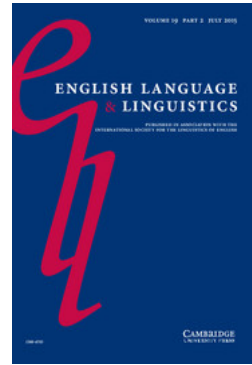
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TERTTU NEVALAINEN

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Social networks and language change in Tudor and Stuart London – only connect?

TERTTU NEVALAINEN

University of Helsinki

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Place is an integral part of social network analysis, which reconstructs network structures and documents the network members' linguistic practices in a community. Historical network analysis presents particular challenges in both respects. This article first discusses the kinds of data, official documents, personal letters and diaries that historians have used in reconstructing social networks and communities. These analyses could be enriched by including linguistic data and, vice versa, historical sociolinguistic findings may often be interpreted in terms of social networks.

Focusing on Early Modern London, I present two case studies, the first one investigating a sixteenth-century merchant family exchange network and the second discussing the seventeenth-century naval administrator Samuel Pepys, whose role as a community broker between the City and Westminster is assessed in linguistic terms. My results show how identifying the leaders and laggards of linguistic change can add to our understanding of the varied ways in which linguistic innovations spread to and from Tudor and Stuart London both within and across social networks.

1 Introduction

Contracting social relationships in communities of varying complexity and fluidity is a fundamental social action that people engage in. Both linguists and historians usually reconstruct communities in territorial terms as common localities but, unlike sociolinguists and dialectologists, historians seldom combine this information with the community members' linguistic behaviour. My aim in this article is to present some sociolinguistic tools for tackling the task and to revisit their application to historical sociolinguistic research in order to better understand the workings of linguistic change. The impetus for this work comes from two sources: new digital resources, which can provide a rich contextualization for the material studied, and advances in quantitative methods that help us make the best use of the linguistic data available. The locality I focus on is Early Modern London and the sociolinguistic tool I discuss is *social network analysis*, which can be used to relate territoriality and mobility to the diffusion of linguistic change.

The sociologist Mark Granovetter (1983) introduced his idea of social network analysis informally as follows:

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The argument asserts that our acquaintances (*weak ties*) are less likely to be socially involved with one another than are our close friends (*strong ties*). Thus the set of people made up of any individual and his or her acquaintances comprises a low-density network (one in which many of the possible relational lines are absent) whereas the set consisting of the same individual and his or her *close* friends will be densely knit (many of the possible lines are present). (Granovetter 1983: 201–2)

Granovetter's interest was largely focused on low-density networks and the strength of weak ties in the diffusion of cultural innovations. Subsequently, social network analysis has been adopted by scholars in various other fields, including sociolinguistics, who argue that weak ties are likely to promote the diffusion of linguistic change and strong ties to inhibit it (Milroy & Milroy 1985, Milroy 2004: 562–5).

For sociolinguists, the practical challenges in social network analysis lie in reconstructing network structures and documenting the network members' linguistic practices. As personal interviews and participant observation are not an option for earlier periods, the idea of linking social networks and linguistic practices of the past presents problems which are directly proportional to the amount and detail of the linguistic and external evidence recoverable from a given period or group of people. The more recent past, the eighteenth century in particular, has therefore attracted more research than earlier times (e.g. Bax 2000; Fitzmaurice 2000, 2010; Tieken Boon van Ostade 2008, 2009: chapter 6; Sairio 2009). In-depth studies focusing on the Middle Ages, such as those on the fifteenth-century Paston family by Bergs (2005) and Conde-Silvestre & Hernández-Campoy (2004), stand out as exceptions. For some reason, work on the sixteenth and seventeenth centuries is also scarce (but see Nurmi 2013).

My article will concentrate on Early Modern London as a place where people could contract a large number of weak ties, on the one hand, and have strong ties locally in their 'worlds within worlds', as Rappaport (2002) put it, on the other. London's population quadrupled between 1550 and 1650, when it has been estimated at about 400,000 inhabitants (Boulton 1987: 3). Apart from waves of immigration, large sections of the population of Tudor and Stuart England came into contact with the capital during their lives; it has been estimated that one out of eight adults had some experience of London life in 1550–1650 (Nevalainen & Raumolin-Brunberg 2000). One of my two case studies presents a merchant network with extensive London ties and the other focuses on a native Londoner who was multiply networked both in the City of London and at the Royal Court in Westminster. Previous research shows that the two localities frequently projected different profiles with regard to language change (Nevalainen & Raumolin-Brunberg 2003: chapter 8).

In what follows I will examine the linguistic cohesion of the social networks under study by looking at changes in progress in Tudor and Stuart England and analysing both leaders of linguistic changes and those who resist them. When assessing the role of networks as norm-enforcement mechanisms, this approach recognizes that not all processes of change are socially indexed (Eckert 2000: 139–70; Labov 2001: 28–9). The phase of change also matters. I will begin by discussing the ways in which linguists have reconstructed social networks in section 2 and move on to approaches to

communities and networks adopted by historians in [section 3](#). Presenting my data and methods in [section 4](#), I reconstruct a Tudor merchant family network in [section 5.1](#) and the web of network ties of Samuel Pepys, a London naval administrator and diarist, in [section 5.2](#). These studies are compared in [section 6](#) and a brief conclusion follows in [section 7](#).

2 Approaches to social networks and communities of practice

For the purpose of measuring social network strength for linguistic analysis, social networks can be defined as the sum of the relationships which an individual has contracted with others over time and space (Milroy 2004: 552). Networks are structural and functional entities that are characterized by the properties of the ties, strong or weak, which connect an individual with other members of their network. These properties can be determined by charting a person's relationships of kin, work and friendship and their territorial clustering, and evaluating network strength on the basis of shared kinship ties, place of work and voluntary leisure activities (Milroy 1987: 141–2).

Granovetter (1983) stresses that new ideas are not adopted automatically across social boundaries. Although weak ties may enable homogenization, structural considerations alone cannot explain the adoption of ideas but '[c]ontent and the motives for adopting one rather than another idea must enter as a crucial part of the analysis' (Granovetter 1983: 216).

Based on the structural and content properties of the ties that make up personal networks, social network analysis typically does not extend to the co-construction of particular social meanings by the network members. To zoom in on those contexts of interaction, the concept of *coalition* has been introduced to refer to an alliance contracted for a particular purpose, for example, literary, religious or political (Fitzmaurice 2000, 2010; Milroy 2000: 221). Interwoven into social networks are *communities of practice*, defined ethnographically as aggregates of people coming together around a particular enterprise; examples range from a garage band and a kindergarten class to a research group (Wenger 1998; Eckert 2000: 34–41; Milroy 2004: 552). Besides their defining characteristics of mutual engagement and joint enterprise, communities of practice come with assumptions about shared repertoires, which can include both linguistic and non-linguistic elements. Shared repertoires reflect the history of a mutual engagement and are used as a resource for the negotiation of meaning in the pursuit of the joint enterprise (Wenger 1998: 82–4).

In a recent volume connecting communities of practice to language change in earlier English, Jucker & Kopaczyk (2013: 19) view shared repertoires in linguistic terms, including grammatical patterns, lexical choices, formulaic expressions, lexical bundles, and so on. Seen from this angle, a community of practice can have a similar homogenizing effect on language practice as a dense social network with strong, multiplex ties, which serves as the interactional site where localized styles and norms are constructed (Milroy 2004: 552).

As *family* usually makes up one component in social network analysis, Hazen (2004: 519) raises the issue of the influence of the family unit on sociolinguistic variation. He notes that relatively little is known about the extent to which families use sociolinguistic patterns to signal in-group and out-group status, and whether there is variation in this respect between blood relatives and married relatives. As a relevant sampling unit, families have received a fair amount of attention in historical social network studies (e.g. Bergs 2005).

As shown below, family networks can be embedded in many other communities. The close-knit Tudor family network analysed in section 5.1 is also the core of a London business network, which, in turn, forms part of a larger, geographically mobile merchant community. By contrast, for Samuel Pepys, discussed in section 5.2., the family forms only one of his many parallel sites of interaction in seventeenth-century London. With the Tudor family my interest is in the network's capacity to harmonize its members' linguistic practices whereas with Pepys the focus shifts to the spread of linguistic influence across his principal interactional sites, the City of London and Westminster.

3 Social history research on communities and networks

Besides offering material for reconstructing personal social networks, social and cultural historians have actively researched social networks and communities. The early seventeenth-century notion of *community* in fact resembles the concept of community of practice in certain respects. On the basis of historical dictionary evidence, Withington & Shepard (2000: 10–11) stress the role of mutual participation in community creation and assert that 'community was not a given entity, but was rather constructed through the recurrent decisions and actions of people'. It was not until the end of the seventeenth century that the term acquired its explicit relation to place.

On the other hand, Burke (2004) uses the term *community* to study a variety of domains of language use such as churches, occupations, genders, regions and nations in Europe between 1450 and 1789, linking them to issues in identity formation as well as to the rise of and rivalry between vernaculars. He emphasizes that individuals usually belong to a number of different communities and that:

a record of the language used by an individual on a particular occasion . . . is no more than the record of the identity that came to the fore on that occasion. (Burke 2004: 6)

In other words, the degree to which a particular community or social network may serve as a norm enforcement mechanism is likely to vary.

Archival evidence also provides material for reconstructing micro-level social networks. D'Cruse (1994) presents a study of community brokers in early eighteenth-century Colchester, contrasting a shoemaker and church warden with a wealthy Tory attorney, active in local politics. She shows that, setting himself up as a broker between his business clients and patrons, the attorney had many more links and less dense networks than the more densely networked shoemaker. The attorney's business

arrangements were, typically, enabled by his household members contributing to both the economic and the domestic enterprise (D’Cruse 1994: 181). It was common in trade that ‘relatives provided “an operational extended family” of trusted individuals with shared commercial interests, who provided credit, advice, support, and contacts’ (Wrightson 2000: 83). In social network terms, this would be an example of an *exchange network* (Milroy 2004: 551).

Barbara Winchester (1955) discusses such an operational extended family, the Tudor merchant family of John Johnson, a merchant of the Staple, and his relatives, friends and business associates. She pastes together their life and times based on their correspondence (1541–53), John’s account books and other documentary sources. Winchester’s lively volume provides a key to understanding the context in which to interpret the letters of the Johnson family that she edited for her doctoral dissertation in history (Winchester 1953). In section 5.1 I study this family network active in and around London.

Directly relevant to my second case study in section 5.2 is Archer’s (2000) work on Samuel Pepys’s social networks based on his shorthand diary. Archer discusses the information that Pepys records on the people he dined, drank or shopped with in 1660 and 1666, during which time he established himself as a naval administrator with considerable political influence. Focusing on the topography of Pepys’s daily movements, Archer shows that the diarist divided his time between the commercial City of London and Westminster, where the central administration of the country and the Royal Court were located.

4 Material and methods

Although the documentation problem besets the work of historical sociolinguists and historians alike, combining various data sources offers new opportunities for connecting historical networks and linguistic information. Social networks as reconstructed by historians can provide a solid basis for linguistic analyses, and many sociolinguistic findings may be further interpreted in terms of social networks. My article explores both these prospects, analysing network members’ participation in language change over time and space. I will focus on the uses of personal letters and diaries in connecting social networks with linguistic usage in the sixteenth and seventeenth centuries.

4.1 Corpora and databases

Designing the *Corpus of Early English Correspondence* (CEEC) as a data source for historical sociolinguistic work, we mostly worked with existing letter collections, which had been compiled and edited by historians interested in particular individuals, families or indeed diverse coalitions or communities of practice. Many of the family-based collections, for example, were published by local historical societies or record offices and thus represent a wide spread of regionally focused networks. Collections based on individuals – administrators, lawyers, clergymen, merchants, writers, actors

and so on – provide material for reconstructing their family and professional networks and gaining at least partial access to their communicative interactions.²

The entire corpus covers the period from 1410 to 1800 and consists of material drawn from 192 letter collections and produced by over a thousand letter writers. The 1998 version, which provides the data discussed in this article, extends from c. 1410 to 1681 and comprises 96 collections and 778 writers. A separate database specifies for each letter writer and recipient the metadata available on their life spans, socio-economic status, education, career, social and regional mobility and parents' background, as well as the relation between the writer and the recipient. The published tagged and parsed version of the corpus, the *Parsed Corpus of Early English Correspondence* (PCEEC), comes with a selection of these metadata, including bibliographical information on the editions sampled (Nevalainen & Raumolin-Brunberg 2003: 43–9; Raumolin-Brunberg & Nevalainen 2007).

Compiled by professional historians, these letter editions proved valuable sources for the personal metadata included in the database. In many cases, especially with older editions, they have been supplemented and updated by information from sources like the *Oxford Dictionary of National Biography*. Various other online resources can take the work further by facilitating the retrieval of external information. Where available, they help contextualize the writers and their contacts and activities in much greater detail than would otherwise be feasible by an individual researcher.

As an example of rich contextualization of an individual, in section 5.2 I discuss the information contained in the diary of Samuel Pepys (1660–9), which has been made available in a weblog format. This site contains the text of his diary from Henry B. Wheatley's edition, the most complete copyright-free version, and 'thousands of pages of further information about the people, places and things in his world' (www.pepysdiary.com/about/). This information is invaluable when analysing Pepys's social networks as he recorded them almost on a daily basis over the course of nearly ten years.

This site is a good example of making the most of a particular data source. As a single ego-document, a diary does not of course suffice for ascertaining linguistic influence, but in Pepys's case it can be supplemented by his personal letters, as is done in section 5. However, there are always gaps in the historical record. We often do not have sufficient ethnographic and linguistic information for finding out which ties were meaningful to groups and individuals (Milroy 2000). For the study of language change, aggregate macro-level analyses of changes in progress therefore provide a useful point of comparison for micro level analyses of possible network influence.

² Care was taken by the team compiling the CEEC to include only collections that accounted for the editorial principles they followed and reproduced the original spelling of the manuscripts (Raumolin-Brunberg & Nevalainen 2007). To ascertain editorial reliability, a number of these editions, especially older ones, were spot-checked against manuscript originals (for a list of all the editions included in the CEEC, see Nurmi *et al.* 2009). We are grateful to the editors of this wide range of texts – without their painstaking work, compiling a corpus of this size and variability would not have been possible.

4.2 *Quantifying Change Database*

In this study I look at a number of changes in progress in Tudor and Stuart England to assess the linguistic cohesion of the social networks discussed. My focus will be on those individuals who are leading these processes as opposed to those lagging behind their contemporaries. This information comes from the *Quantifying Change Database* (Nevalainen *et al.* 2011), which is derived from the quantitative analyses carried out in the *Sociolinguistics and Language History* project (Nevalainen & Raumolin-Brunberg 2003). In Nevalainen *et al.* (2011) we developed a computational model for comparing contemporaries in each phase of a given change in order to distinguish progressive and conservative individuals from those in between who were neither.

We distinguished progressive and conservative individuals by means of a resampling technique known as bootstrapping, used to obtain estimates of summary statistics (Efron & Tibshirani 1993). The data were resampled per linguistic variable and per period a large number of times, and the frequency of occurrence of the incoming variant was computed in each resample. The variation observed in the resamples gives a confidence interval for its frequency in the original data. An individual differs from others if their data deviate significantly from the estimate obtained by the bootstrap method. Those individuals can be identified either as progressive or conservative with respect to their contemporaries.

When analysing a change in progress, its temporal progression becomes relevant (see Labov 1994: 79–83). We distinguished five stages depending on the overall frequency of the study variable in the community at large: incipient (below 15%), new and vigorous (15%–35%), mid-range (36%–65%), nearing completion (66%–85%), and completed (over 85%; Nevalainen *et al.* 2011: 7). In this study I analyse changes at the stages they had reached: (a) by the 1540s and 1550s and (b) by the 1660s and 1670s. Those in the first period encompass two changes in the new and vigorous stage, i.e. the verbal (s) and (ing) variables; those in mid-range three, (neg), (my) and (you); and those nearing completion one, (which). They are defined and illustrated below:

- **(s) variable:** change in the third-person singular indicative suffix in verbs other than *have* and *do* (*she goeth* → *she goes*)
- **(ing) variable:** loss of the preposition *of* in the object of the gerund (*writing of the letter* → *writing Ø the letter*)
- **(neg) variable:** loss of multiple negation (*we cannot see nothing* → *we cannot see anything*)
- **(my) variable:** loss of the nasal in first- and second-person possessive determiners (*mine/thine enemy* → *my/thy enemy*).
- **(you) variable:** replacement of the second-person subject pronoun by the object form (*ye go* → *you go*)
- **(which) variable:** change in the form of the relative pronoun *which* (*the which* → *which*)

In the latter period only two related processes are examined, (s) and (has). At the time the diffusion of verbal *-s* was as good as completed in verbs other than *have* and *do*, and the replacement of *hath* by *has* had reached its mid-range in the language community at large, as represented by the wide variety of writers included in the CEEC (Nevalainen & Raumolin-Brunberg 2003: chapters 4 and 8; Gries & Hilpert 2010: 308, 313).

4.3 *Social network applications to CEEC data*

To obtain baseline information on processes of language change in Tudor and Stuart England, Nevalainen & Raumolin-Brunberg (2003) studied broad sociolinguistic variables such as gender, socio-economic status and region. We have also analysed some of our findings from the perspective of social networks at the macro-level. Raumolin-Brunberg (1998) suggests that the English Civil War accelerated language change by virtue of the unprecedented numbers of weak ties it gave rise to. Nevalainen (2000) and Nevalainen & Raumolin-Brunberg (2000) discuss the role of London in multiplying interpersonal contacts and as a site conducive to language change. Diverse networks and communities of practice have also been studied from various viewpoints using the CEEC and other corpora, including families, caregivers, merchants, printers, groups of early industrialists, and men of science (e.g. Nurmi *et al.* 2009; Kopaczyk & Jucker 2013).

Our study of the leaders of linguistic change (Nevalainen *et al.* 2011) came to the conclusion that progressiveness and conservativeness can pattern according to the stage, duration and type of the change. Family ties were found to be a common denominator for some multiply progressive individuals. The East Anglian Bacon family, for example, a father and two sons, were all progressive in several changes in the late sixteenth century. Like their father, Sir Nicholas, Edward and Nathaniel Bacon were educated at the University of Cambridge and Gray's Inn in London and were later active in politics. Another family with members progressive in several changes was the Johnson merchant circle, discussed below (Nevalainen *et al.* 2011: 29–30).

Another relevant social network approach to the Johnsons was developed by Nurmi (2013) in her analysis of this wool merchant family and their business associates. To explore the role played by social distance in the use of deontic modals, Nurmi calculated network strength scales (NWS) for the members of the Johnson circle centring on the eldest brother John Johnson. Her analysis was based on two sets of indicators, kinship and business partnership. Rating them, she established network strength scales for nuclear family members and partners in the Johnson trading house. Nurmi's analysis will be referred to in [section 5.1](#).

5 Two case studies

5.1 *The Johnson merchant family network*

5.1.1 *An operational extended family*

My first study discusses a mid-sixteenth-century family-based network trading in wool and other goods in London, Calais (part of England at the time) and Antwerp. The family business was run from London, Calais and his Northamptonshire estate by John Johnson, a merchant of the Staple and the eldest of the Johnson brothers. His brother Otwell was based in the City of London and Richard, the youngest, in London and Antwerp. John's wife was Sabine Saunders, to whose uncle Anthony Cave both John

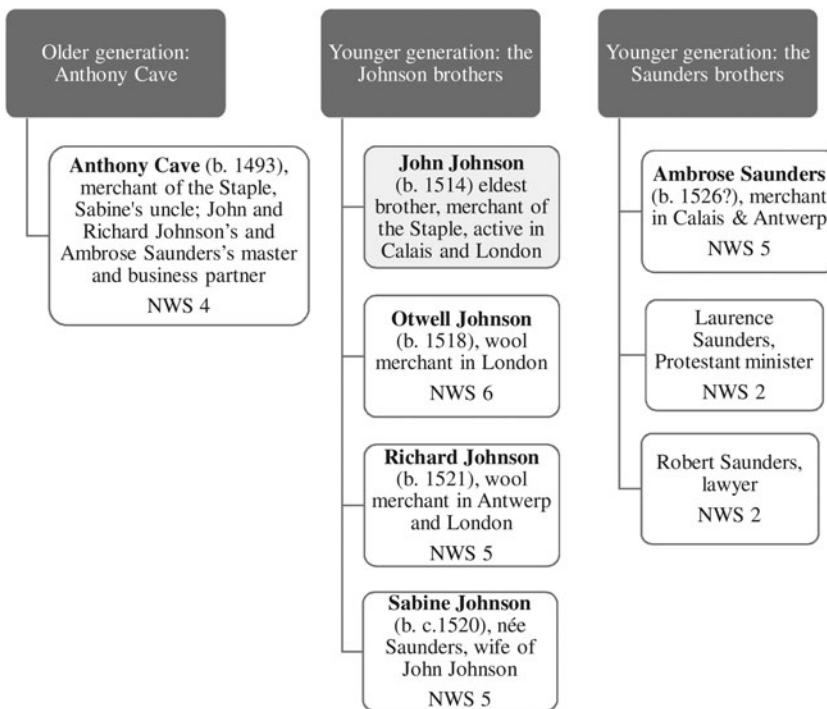


Figure 1. Johnson network's family and business ties

and Richard had been apprenticed. She herself was variously involved in household and wool trade matters at home. One of her younger brothers, Ambrose Saunders, became a partner in his brother-in-law's business. On Sabine's side there were also two brothers, Robert, a lawyer, and Laurence, a Protestant minister, who were close to the Johnsons in various ways although not their trading partners (Winchester 1953; 1955).

Figure 1 shows these connections and provides the basis for considering them in both family and business terms. The *ego* in the multiplex family business network, John Johnson, is highlighted in grey. The basic nature of the network ties does not change during the period covered, 1541–53. I have identified the members of the core kin-based business network: the three Johnson brothers, John's wife Sabine, her uncle and John and Richard's master Anthony Cave, and her younger brother Ambrose Saunders. Two other members of Sabine Johnson's family with no direct business connections are included in the figure for comparison. Applying the rating system used by Nurmi (2013: 169), the network strength scores (NWS) in figure 1 range from the strongest 6 (Otwell Johnson) to the weakest 2 (Laurence and Robert Saunders).

Although my focus is on kinsfolk united by business interests, it is clear that the network was not insulated from others but, by nature of its trade, integrated into several mobile urban networks in London and on the continent. These various merchant communities were characterized by mutual engagement and joint enterprise, and to a

Table 1. *Johnson network members' participation in ongoing linguistic changes (CEEC, 1540–59)*

Phase of change Name/Change	New and vigorous		Mid-range			Nearing completion
	(s)	(ing)	(neg)	(my)	(you)	(which)
Johnson, John	o	o	o	pro	con	o
Johnson, Otwell	o	con	o	con	pro	pro
Johnson, Richard	con	o	pro	pro	con	pro
Johnson, Sabine	pro	o	con	pro	pro	con
Saunders, Ambrose	o	o	pro	con	pro	o
Saunders, Laurence	o	o	o	o	pro	con
Saunders, Robert	con	con	pro	o	con	pro
Cave, Anthony	pro	o	pro	con	con	pro

(pro = progressive, con = conservative, o = in-between)

certain extent a shared repertoire (see Wenger 1998: 73). My interest is to explore the role of the network in spearheading or possibly retarding processes of language change.

5.1.2 *Linguistic analysis*

Looking for possible connections between network ties and language variation and change, we may start with the hypothesis that siblings resemble each other with respect to their language variation patterns. In the Johnsons' case, this assumption is supported by the close-knit structure of the family business network that could be expected to enforce shared linguistic practices. On the other hand, analysing linguistic variation within the family, Hazen (2004: 518) notes that differences may arise from siblings' diverse social connections in the community and identification with and participation in diverse communities of practice. This is in evidence, for example, in the linguistic profiles of the two fifteenth-century Paston brothers studied by Conde-Silvestre and Hernández-Campoy (2004).

Table 1 shows how the Johnson network members pattern according to their progressiveness (pro) or conservativeness (con) with respect to six ongoing processes of change viewed against the norms of the wider community (for details, see section 4.2).³ John Johnson, the *ego* of the network, is a middle-of-the-roader linguistically: he was neither progressive nor conservative in as many as four out of the six changes studied, and progressive only in his use of the determiners *my/thy* and conservative in preferring *ye* to *you*, both changes at mid-range, between 36 and 65 per cent, in the wider community; see (1).

³ There is ample data from the members of the family business network, ranging from nearly 40,000 words from John Johnson to some 11,000 from Sabine Johnson. Only Laurence and Robert Saunders have fewer, some 2,200 and 1,100 words, respectively. The network forms part of a wider community of 65 contemporary writers in 1540–59, and of 158 writers in 1520–59.

- (1) I sold in the countrey bouthe the rest of your wull and **my** awne also, so that **ye** shall have all youre money by Whitsontyde or shortly after with honest proffit, (John Johnson, 1545; CEEC JOHNSON, 222)

The youngest of the Johnson brothers, Richard, is like John in that they both profile similarly on (my) and (you). By contrast, John's favourite brother and partner Otwell is his complete opposite with respect to these two processes, preferring *you* but lagging behind with respect to the (my) variable.

Sabine Johnson resembles her husband John in promoting the short form (i.e. without the nasal) of the first- and second-person determiners, as in (2). Although her usage is categorical, this change is only at mid-range in the community at large at the time and some variation occurs in John's usage, as shown in (3). In general, Sabine is more extreme in her reactions to ongoing changes than John: she promotes the use of third-person *-s* and subject *you* but continues using negative concord and the relativizer *the which*.

- (2) I trust I shall have qualles shortly to make fat agenst **my** ounckell Anthony and **my** aunt comyn, (Sabine Johnson, 1545; CEEC JOHNSON, 303)
- (3) I have appoynted Ambrose to take owte vijC of the barist of **myne** awne felles . . . (John Johnson, 1545; CEEC JOHNSON, 271)

Compared to John, Ambrose Saunders's profile is rather different again: like John he is neither progressive nor conservative with respect to the two new and vigorous changes and the one nearing completion, but as far as (my) and (you) are concerned, he patterns with Otwell. Otwell, too, agrees with John being in-between with respect to two of the changes, the diffusion of verbal *-s* and the disappearance of negative concord. These results suggest that social proximity need not result in similar profiles in linguistic leadership (see Nurmi (2013: 180) for similar findings on deontic modals).

As to conservatism, the lawyer Robert Saunders is the most conservative of the Saunders brothers and within the whole extended network: he is lagging behind in the new and vigorous changes (s) and (ing) as well as (you). In three cases his profile matches that of his uncle, Anthony Cave. By contrast, in four changes out of six the clergyman Laurence Saunders is a middle-of-the-roader, just like John Johnson.

Looking at the network from the perspective of the changes, the greatest divide appears with (you), the levelling of the subject and object forms of the second-person pronoun, where the members are either progressive (Otwell, Sabine and her brothers Ambrose and Laurence) or conservative (John, his brother Richard, their master Anthony Cave and Robert Saunders, the lawyer). The relatively low-frequency syntactic variable (ing) makes the least difference, leaving six of the eight members in-between the extremes and the remaining two being conservative.

Although the members of the Johnson merchant network were geographically mobile, key activities of their wool business took place in the City of London. The City was the country's mercantile centre and the government and the Royal Court were located at Westminster. To be able to make comparisons, we sampled writers from both

these localities when compiling the CEEC (Nevalainen & Raumolin-Brunberg 2003: 162–84). This information enables me to examine the extent to which the Johnsons aligned with their London contemporaries.

To assess the metropolitan allegiances of the network members, I compared the use of the six linguistic variables by individuals resident in the City as opposed to those at Westminster in 1520–59. The results show that most members of the Johnson network were progressive or in-between with respect to *which* and the loss of negative concord, which were also promoted at Court, i.e. by the royalty, nobility, officials and diplomats resident in Westminster. As to the loss of negative concord, the Saunders brothers and their uncle Anthony Cave were more advanced than the Johnson brothers, as educated men in general were at the time (Nevalainen 1999).

By contrast, there were more conservatives at Court than in the City in the use of the originally northern forms *my* and verbal *-s*, with respect to which most of the Johnson network members were either in-between or progressive. Sabine Johnson was the only one to be progressive with respect to both of them. Again agreeing among themselves, her brothers and uncle were either in-between or conservative in their use of the short determiner *my*. Finally, the (you) variable divided the two metropolitan locations into progressive and conservative individuals in equal numbers, just as it divided the Johnson network members.

A brief comparison can be made between the Johnsons and their contemporary Henry Machyn, a merchant taylor (1496/8–1563). Machyn lived in the City and kept a Chronicle between 1550 and 1563, in which he recorded the major events of his time. Analysing the Chronicle, Bailey & Moore (2007: 242–4) find Machyn linguistically conservative: he regularly uses several outgoing forms, including *the which*. Findings such as these indicate that there was a good deal of variation in the City as well.

We have seen that the Johnson network had divided allegiances between the City and Westminster depending on the linguistic process in question, with some division within the network also detected among blood relations. As individuals, the network members present rather divergent profiles with respect to changes in mid-range. However, John Johnson, the ego of the network, proved remarkably noncommittal in that he was in-between the two polarities in four processes out of the six studied. In this respect, he was matched by his brother-in-law Laurence Saunders, a clergyman. Both of them had various roles and responsibilities in their communities, which would have placed particular demands on their linguistic choices. Their middle-of-the-road usage may hence have served them in the linguistic marketplace but been less conducive to reinforcing family norms.

5.2 *Samuel Pepys's London networks*

5.2.1 *Locating Pepys's contacts*

My second case study approaches the complexity of reconstructing the multiple social networks of someone whose life and circumstances have been extensively documented. Samuel Pepys (1633–1703), a naval administrator, provides detailed information about

his daily contacts in the diary that he kept between 1660 and 1669, and a rich documentation has been preserved on his public and private life. He was born in London, the son of a tailor whose family came from Cambridgeshire, and his mother was a London butcher's daughter. Pepys was educated at St Paul's School in London and at Magdalene College, Cambridge. In 1655 he married Elizabeth St Michel and entered the service of his distant cousin Admiral Edward Montagu, later to be created Earl of Sandwich.⁴

In the following decade, Pepys established himself both professionally and financially. The diary also displays the wide range of relations in other spheres of life that he contracted in the 1660s. Archer (2000: 79) concludes that his social life was bi-polar: he was a community broker with frequent contacts both in the City of London and at Westminster. As various linguistic differences have been detected between people active in the City and those associated with the Royal Court at Westminster, a sociolinguist would be interested to know the extent to which Pepys may also have been a linguistic broker (Nevalainen & Raumolin-Brunberg 2003: 162–4). The answer will depend on a successful reconstruction of some of Pepys's social networks and connecting these networks with linguistic information. Digital resources such as the diary website discussed in section 4.1 provide a step forward in the first enterprise. Section 5.2.2 compares Pepys's usage with his progressive and conservative contemporaries in the City and at Court.

The fact that Samuel Pepys divided his time between the City and Westminster becomes visible when the localities he refers to in his diary are put on a map. Figure 2 presents this information for the City (right) and Westminster (left); the size of the icons corresponds to the number of mentions. The figure maps the same years as Archer (2000), but because of the large number of mentions it only includes three months for both 1660 and 1666.⁵

We can see that there are more individual mentions of places in the City than in Westminster, where Pepys's visits concentrated on a more circumscribed area, with Whitehall Palace and Westminster Hall receiving the largest numbers of single mentions, and Westminster itself coming third. In the City the largest number of place identifiers refers to the City and its synonyms.⁶ The largest icon for a specific locality within the City represents the area of the Royal Exchange.

The numerous references to 'home' and 'office' are not included in the map, 'home' referring to the Pepyses' home in Seething Lane, which was part of the Navy Office building complex in the City. The Navy Office was Samuel's 'office' and it housed the

⁴ The life of Samuel Pepys has been chronicled in several biographies and Pepys entries are included in the *Oxford Dictionary of National Biography* (Knighton 2004) and the *Encyclopaedia Britannica*. My discussion of his social networks also refers to Archer (2000).

⁵ My gratitude to Sara Norja for assisting me in identifying the place names in Pepys's diary and doing the mapping for the diary and the letters using the ZeeMaps program (www.zeemaps.com/map?group=995168). I would also like to thank Anne Kingma for preparing a preliminary list of the place names in the letters. I retain copyright on the maps.

⁶ For Pepys 'London' and 'town' in this context designate the City of London.

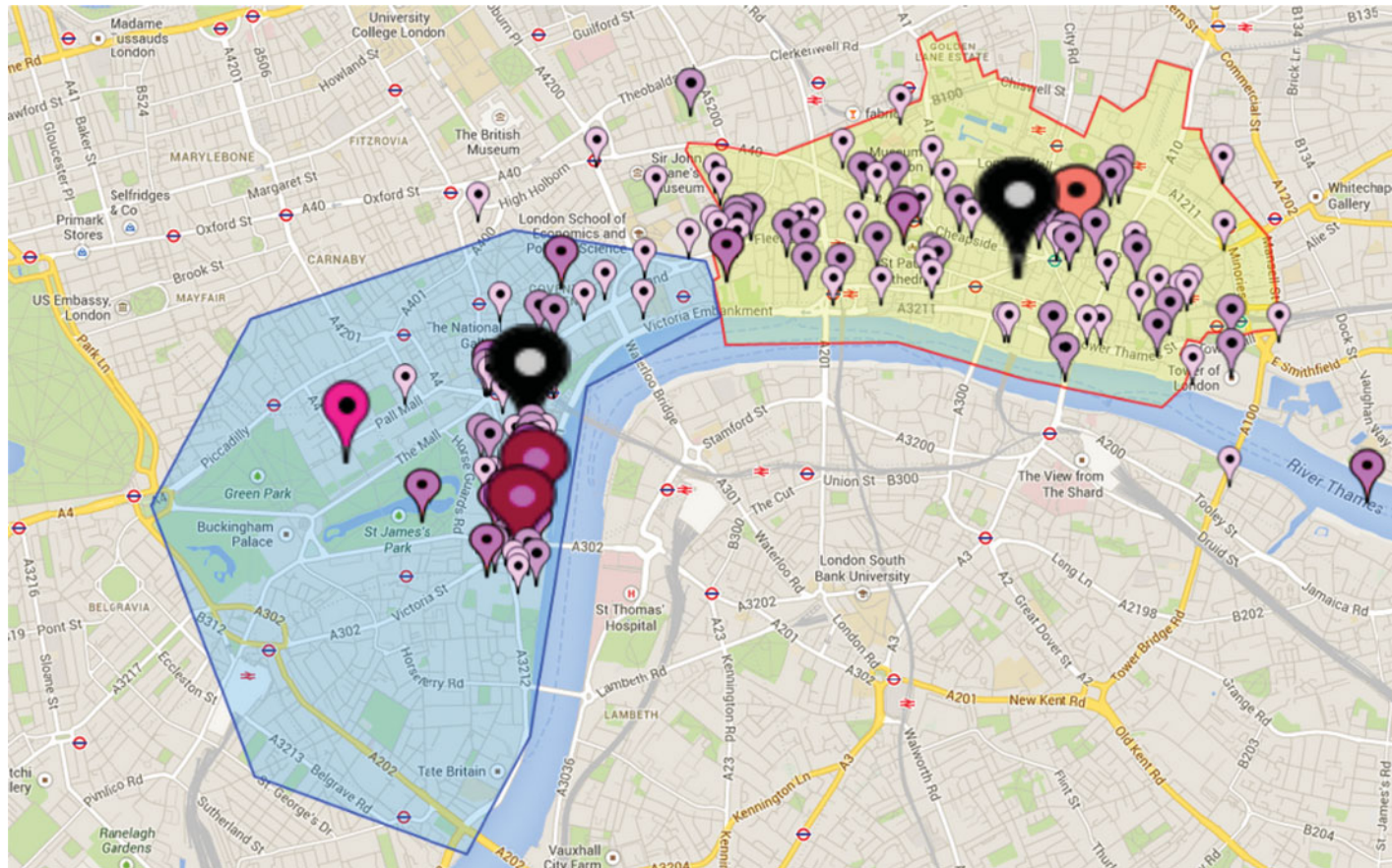


Figure 2. (Colour online) Pepys's London locations, diary (3 months, January, June and October, 1660 and 1666)

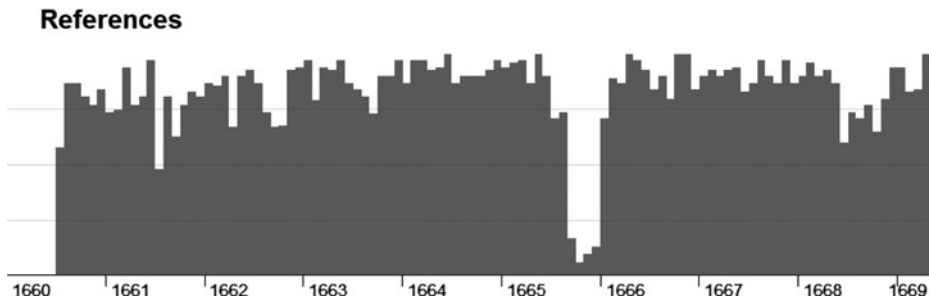


Figure 3. Frequency of Pepys's diary references to his home in Seething Lane (detail from www.pepysdiary.com/encyclopedia/1023/#references)

Navy Board. In the whole diary, Pepys refers to his 'office' some 2,000 times. [Figure 3](#) shows the timeline of references (altogether over 2,500) to his Seething Lane home. The gaps in 1665 and early 1666 stand for a period of the plague, during which the Pepyses often stayed in Greenwich.

[Figure 4](#) shows a map with place name references in Pepys's personal letters included in the CEEC from the period 1660–81. As in the diary, the City and Westminster both figure prominently in these letters, which mostly date from the 1670s and are addressed to Pepys's immediate family. However, there are notable differences between the map in [figure 4](#) and that in [figure 2](#). Although the letters have almost 33,000 running words and the diary for the selected months in 1660 and 1666 twice that number, i.e. 67,500 words, place name density is much higher in the diary sample (the scale indicating the number of mentions by the size of icon is the same in both).

The diary is thus obviously the better source for identifying Pepys's social networks, both places and people, in the 1660s. As to the latter, we obtain a rough idea of the density of Pepys's network ties by looking up the number of mentions he makes of individuals. Unsurprisingly, his wife gets the most mentions (over 2,000) within the family, his father one quarter of that number, and his brother-in-law, Balthasar St Michel, well over a hundred. As to his friends and colleagues, Henry Moore, Montagu's 'man of business' and a lawyer at Gray's Inn, is referred to over 250 times, mostly in the first half of the 1660s. By contrast, a fellow diarist and Pepys's close life-long friend to be, John Evelyn, is mentioned fewer than forty times in the diary period (see Knighton 2004).

In the course of the 1660s, the professional company that Pepys kept shifted from clerks and men of business to public figures with considerable political influence. This shift can be observed, for example, by comparing the key words in his diary for 1660 with those for 1669, using the whole diary as a reference corpus. In 1660 the first keyword is *Mr*, referring to the title of many of Pepys's contacts at the time. In 1669 the list is headed by *York*, with reference to James Stuart, Duke of York and the future king James II, who was then the Lord High Admiral and Pepys's superior.

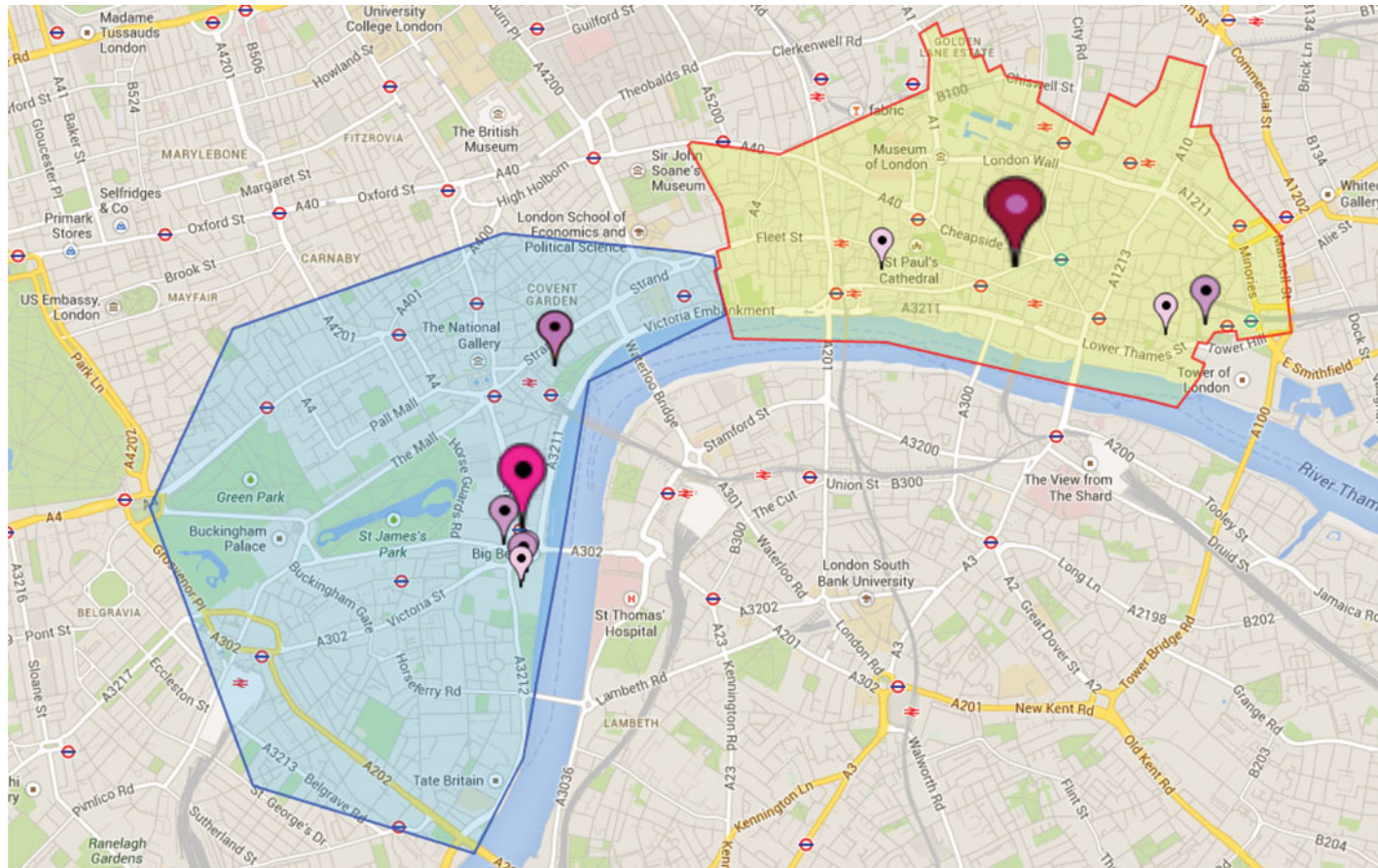


Figure 4. (Colour online) Pepys's London locations, letters (1660–81, most dating from the 1670s)

Within Pepys's professional network, his patron Sir Edward Montagu is mentioned some 900 times in the diary, most of them in the first half of the decade, and the Duke of York over 800 times, mostly in the second half, as also suggested by the keyword analysis. King Charles II has the most mentions (well over 1,000), spread evenly over the whole period but no doubt divided between navy business and general gossip.

Latham (1983: 57–8) explains that the Navy was the common concern Pepys shared with the King throughout his reign. They first met during the voyage that brought Charles back from exile in 1660. In the years that followed, Pepys held several offices related to naval administration and was often heard by the King on Navy Office business. They also conversed in less formal contexts, as Pepys records in his diary as shown in (4):

- (4) And the King come to me of himself, and told me, 'Mr. Pepys,' says he, 'I do give you thanks for your good service all this year, and I assure you I am very sensible of it.' And the Duke of Yorke did tell me with pleasure, that he had read over my discourse about pursers, and would have it ordered in my way, and so fell from one discourse to another. I walked with them quite out of the Court into the fields. (28 January 1665/66)

In the 1670s the King habitually consulted Pepys on naval matters, making him in practice his secretary of state for the marine. Pepys's final verdict on his master was that the King 'understood the sea' (Latham 1983: 58).

5.2.2 *Linguistic analysis*

The Pepys letters included in the CEEC consist of family correspondence. Pepys wrote to members of his family – his father, younger brother John, sister Paulina and his brother-in-law Balthasar St Michel ('Brother Balty'). Their letters to Samuel were also included but only Balthasar St Michel's amount to quantifiable numbers. As noted in [section 4.2](#), the linguistic analysis of Pepys's correspondence is focused on two changes, the (has) and (s) variables; see (5) and (6). As Pepys was shown to be consistently progressive with respect to both of them, in principle he could have acted as a linguistic broker with regard to the diffusion of (has), which had only reached mid-range in the language community at large at the time.

- (5) Very glad I am that my Sister **hath** disposed as shee **tells** me of her troublesome parsonage, I pray God blesse her and hers in what she **doth** therein. (Samuel Pepys, 1677; CEEC SP_{PEPYS}, 53)
- (6) As to what **relates** to my Brother Johns Accompt I doe hope in a very little time, soe soone as Will Hewer shall come to Towne againe, which wilbe at the end of this Weeke, to be able to finish my lookeing over all his Papers, and see in what condition hee **has** left the World. (Samuel Pepys, 1677; CEEC SP_{PEPYS}, 54)

The others singled out as progressive among the hundred letter writers in the database included, in the City, Thomas Oxinden writing to his father and stepmother and, at Court, the King himself, who corresponded with his sister Henrietta or 'Minette' (Duchess of Orléans), and James Stuart's young daughter Mary (the future Mary II), who wrote to a childhood friend. Dorothy Spencer also wrote to a close friend, and John

Table 2. *Progressive and conservative individuals in the City and at Court (CEEC, 1660–81)*

Name	Domicile	Rank	Mid-range (has)	Completed (s)
Pepys, Samuel (b. 1633)	City	Professional	pro	pro
Thomas Oxinden (b. 1633)	City	Gentry/Professional	pro	o
Edward Swan (b. ?)	City	Gentry/Professional	con	o
Balthasar St. Michel (b.1640)	City	Professional	con	o
Charles II (b. 1630)	Court	Royalty	pro	pro
Mary Stuart (b. 1662)	Court	Royalty	pro	o
Dorothy Spencer (b. 1617)	Court	Nobility	pro	o
John Wilmot (b. 1647)	Court	Nobility	pro	o
Cyril Wyche (b. 1632)	Court	Upper Gentry	con	o

(pro = progressive, con = conservative, o = in-between)

Wilmot to his nuclear family, mostly to his wife. The conservatives in the City included two men, Balthasar St Michel, who communicated with his brother-in-law Samuel Pepys, and Edward Swan, who had fallen on hard times and wrote to his old friend in the country. At Court, Sir Cyril Wyche corresponded in his professional capacity with Arthur Capel, Earl of Essex. Table 2 summarizes these findings.⁷

As *has* was more common in spoken interaction than in formal genres in the late seventeenth century (Kytö 1993: 126), this variation may be linked to stylistic considerations and the writer's kin-based social networks or networks based on particular friendships. This is the case with both Pepys and Charles II, who were progressive with respect to *has* and verbal *-s* in general, the latter change nearly completed in most verbs at the time (Gries & Hilpert 2010: 313). By contrast, in the case of Cyril Wyche and probably Bathasar St Michel as well, the writer's humbler status vis-à-vis the addressee may have been partly indexed by their use of the conservative form *hath*.

Despite being in-laws, St Michel's relationship with Pepys was unequal in that St Michel's naval career depended on Pepys's patronage (Latham 1983: 375). He addressed Pepys as 'Honoured Sir' or 'Most Ever honoured Sir' and signed off as 'Your Most faithfull and Obedient Servant' or 'Your Honour's Most Dutifull and Ever Obedient Servant'. As a social superior who could afford more intimacy, Pepys addressed St Michel as 'Brother Balty' or simply 'Brother' and subscribed 'Your truely affectionate Brother to serve you'. As Lesley Milroy (2004: 550) points out, personal social networks are not independent of broader social and economic frameworks constraining individual behaviour.

⁷ Pepys has over 30,000 words in the CEEC and Balty some 6,400. Charles and Mary Stuart have 8,600 and 11,500 words, respectively. The rest vary between 6,000 and 3,500 with Dorothy Spencer having only some 1,100 (with 14 instances of *has* and none of *hath*). They form part of a wider community of 99 contemporary writers.

There is also evidence to suggest that Pepys used *hath* in his less private writings, especially when he was younger. In order to establish what those shorthand figures that had multiple readings stood for in the diary, Latham (1983: lvi) examined all available documents that Pepys wrote in longhand between 1660 and 1699, including his Navy White Book, his letters in various libraries and archives, Heath's edition of his family letters (the one also used in the CEEC) and Howarth's edition of his *Letters and second diary*. The forms Latham examined included the symbol used for the various allomorphs of *have*. He concluded that in that decade Pepys wrote *hath* far more often than he wrote *has*, and for that reason *hath* was adopted for the diary edition.

Although Latham obviously did not pay attention to register variation when he made this choice, his impression appears to be justified. The vast majority of Pepys's letters in the CEEC come from the 1670s and attest to Pepys's preference for *has*. This is the trend that continues and intensifies in his letters in the next two decades included in the CEEC Extension. Taking a look at some earlier and less personal letters from the 1660s outside the corpus we find that Pepys used *hath*, for example, when writing to John Evelyn. But his usage changes in the 1670s: as shown in (7), he already mixes *has* and *hath* when writing to the King in January 1670.

(7) Sir

Your Majesty's having been pleased with one hand to receive what **has** been offered you in charge against the Officers of your Navy, I cannot without offence to your justice doubt your vouchsafing me the other, for what in most humble manner I come to tender your Majesty in their and my own behalf, being a duplicate of what **hath** lately gone from me in answer to the observations of the Commissioners of Accounts. (De la Bédoyère 2006: 82–3; spelling modernized)

If we were to assess who was the more progressive writer in the corpus material with respect to the (has) variable, the King or his subject, the answer would be the King. Charles II wrote his private letters in the 1660s, Pepys mostly in the 1670s. But since there were also other progressive writers in the 1660s both at Court (Dorothy Spencer, see (8)) and in the City (Thomas Oxinden) writing in their private capacity, we cannot infer brokering influence one way or the other. It would rather appear that the change had advanced to a stage where the incoming form had found a firm footing both within the capital and outside it.

(8) Tis a dangerous thinge I finde for Ladyes to brage of power in State affaires and I am confident it **has** caused that to be don that would not have bine to any other gentlewoman. Her brother is extremely concerned in her disgrace wh. **has** bine nowe a greate while to satisfy those who did not wishe her in favour. I believe nobody is unwilling she should showe herselfe in the Drawingroome, the Queene **has** taken no notice of this businesse except very privately. (Dorothy Spencer, 1668; CEEC GIFFARD, 98–9)

6 Discussion

Reconstructing social networks in a historical context is inevitably an exercise in *informational maximalism* in order to 'to gain a maximum of information from a



Figure 5. Replacement of subject *ye* by *you* (modified from Nevalainen & Raumolin-Brunberg 2003: 172)

maximum of potential sources' (Janda & Joseph 2003: 37). The closer we move from broad 'socio-centric' approaches to 'ego-centric' applications of social networks, the more pressing such sources become (Conde-Silvestre 2012). But the two analytic approaches can also be brought to bear on each other.

The socio-centric approach can provide the researcher with the baseline against which to measure ego-centric variation. As far as linguistic change is concerned, in Tudor and Stuart England, the City of London and the Court at Westminster cut different aggregate profiles depending on the regional origin and stage of the change in progress. Of northern origin, verbal *-s*, for example, was adopted earlier in the City than at Westminster. However, as shown by the multivariate analyses of personal correspondence in Nevalainen & Raumolin-Brunberg (2003: 195), it had also gained momentum at Court by Samuel Pepys's time, when it was nearing completion in the country at large. It is hence no wonder that it should be preferred by Pepys and the King alike.

Two indexical layers can be distinguished for verbal *-s* in contemporary metatextual commentary: social (diatopic) and stylistic (diatypic). By the early seventeenth century the incoming *-s* variant had advanced to mid-range in most verbs in the CEEC data (Nevalainen, Raumolin-Brunberg & Mannila 2011: 42), but the diffusion of *has* was in its incipient stage with an average frequency of 8 per cent. In *Logonomia Anglica* (1621: 17, 59) Alexander Gil indexes *has* diatopically as a northern variant of *hath*, and always uses *hath* /hɑp/ himself, but notes that in other verbs *-eth* can shorten to *-s* or *-z*, or become *-ez* after a sibilant. In his reformed spelling he retains *-eth* /ɛp/ as an elevated or metrical variant, thus indexing it as a diatypically marked form in speech.

As suggested by the variation between *has* and *hath* in the London and Court data in 1660–81 in the CEEC, *hath* followed the path of *-s* more generally in moving from diatopic to diatypic evaluation. The evidence for social indexing is usually indirect and can be deduced from register variation, as in section 5.2, or from the way in which social aspirers react to ongoing changes, either hypercorrecting or dispreferring them (Nevalainen & Raumolin-Brunberg 2003: 150–3).

However, this was only one pattern of diffusion among several in the correspondence data. Subject *you*, for example, spread from the capital region to the rest of the country in the sixteenth century. As [figure 5](#) indicates, in the forty years between 1520 and 1560 when the Johnsons were active, no distinction can be found between the City and the Court at the aggregate level. We may assume that variation in the use of the incoming form was not locally indexed in the same way as it was with the (s) variable but that it originated in diatypic variation (Nevalainen & Raumolin-Brunberg 2003: 60–1). It hence turns out that processes of change can project patterns of diffusion that are far from uniform in social, regional and chronological terms. This is why they are not likely to be subject to uniform reinforcement even by close-knit social networks.

7 Conclusion

The population of London grew substantially between 1550 and 1650, making the capital ‘the crucible . . . in which dialects were melded’ (Bailey & Moore 2007: 245). In this article I explored the diffusion of half a dozen linguistic changes and their possible social network connections in Tudor and Stuart London. By concentrating on leaders and laggards, I showed the varying degrees to which the members of a close-knit merchant family network participated in ongoing processes of change in the mid-sixteenth century. John Johnson, the head of the family business, in fact proved to be in-between these two extremes in most of the processes, suggesting that he accommodated flexibly to the diverse linguistic influences he encountered.

As shown by the study on Samuel Pepys, combining new digital resources with social networks reconstructed by historians can provide a rich basis for linguistic network analysis. These tools encourage an exploratory approach which allows comparisons within and across networks. More focused locally than the wool merchant John Johnson, Pepys proved progressive with respect to the ongoing changes studied but not uniquely so either in the City or at Westminster. More work is obviously needed to ascertain his possible role as a community broker in linguistic terms.⁸

Lesley Milroy (2004: 567) notes that it would be helpful to have a two-level sociolinguistic analysis linking small-scale networks with larger-scale social structures which determine relationships of power. I made this linking indirectly by relating the usage of individuals in their social networks to that of their contemporaries in the wider community. This approach enabled a comparison of usage patterns in the City of London and at Westminster, which represented different bases of power at the time. It is at this aggregate level that their local linguistic similarities and differences unfolded over time, providing the backdrop for the individual histories of their inhabitants.

⁸ Various aspects of Pepys’s language have been studied by Professor Fujio Nakamura, including his use of the progressive and the auxiliary *do* with negatives. See: <http://researchmap.jp/read0020179/?lang=english>.

Author's address:

*Department of Modern Languages
University of Helsinki
PO Box 24 (Unioninkatu 40)
FI-00014 University of Helsinki
Finland
terttu.nevalainen@helsinki.fi*

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