Transactions of the Philological Society

PhilSoc The Philological Society

Transactions of the Philological Society Volume 120:3 (2022) 427–446 doi: 10.1111/1467-968X.12249

Check for updates

SEMANTIC SHIFT IN MIDDLE ENGLISH: FARMING AND TRADE AS TEST CASES

By Louise Sylvester, Megan Tiddeman and Richard Ingham
University of Westminster

(Submitted: 29 October, 2020; Accepted: 2 October, 2022)

Abstract

This paper presents a study undertaken as part of the *Technical Language and Semantic Shift in Middle English* project. Our dataset (totalling 4,628 words and 2,215 senses) is drawn from an expanded corpus of the *Bilingual Thesaurus of Everyday Life in Medieval England*. This lexis has been arranged into a semantic hierarchy, based on the categories devised for the Historical Thesaurus of English, in order to address a much discussed feature of language change that has not been investigated using a lexical corpus. The project aims to use this digitised hypernymic framework to track shift at various levels of technicality, collate data on borrowing and obsolescence, and examine the linguistic ecology of the Middle English period from a semantic-hierarchic viewpoint.

Autohyponyms from two domains (Farming and Trade) were collated and compared with the wider corpus for specificity, lexicalisation and language of origin. Our findings suggest that terms which narrow or broaden in meaning tend to start off at the more general levels of the hierarchy and shift from semantic spaces which have a higher than average number of co-hyponyms. Autohyponyms appear more likely to be of French than of Old English origin, prompting further questions about borrowing and sense development.

Résumé

Cette contribution présente une étude pilote réalisée dans le cadre du projet *Technical Language and Semantic Shift in Middle English* (*Langage technique et glissement sémantique en moyen anglais*). Notre ensemble de données (comprenant 4628 termes et 2215 sens) est tiré d'un corpus étendu du *Bilingual Thesaurus of Everyday Life in Medieval England*. Ce vocabulaire est organisé selon une hiérarchie sémantique fondée sur des catégories taxinomiques du *Historical Thesaurus of English*. Notre objectif consiste à étudier des particularités souvent discutées du changement linguistique que l'on n'a pas encore analysées jusqu'à présent dans le cadre d'un corpus lexical. On vise donc à utiliser une structure hyperonymique et numerisée pour suivre le changement à plusieurs niveaux de technicité, pour rassembler les données sur l'emprunt et l'obsolescence, et pour examiner l'écologie linguistique de la période du moyen anglais.

Les autohyponymes de deux domaines sémantiques (Agriculture Et Commerce) ont été identifiés et comparés avec le corpus plus large, en matière de spécificité, de lexicalisation et de langue d'origine. Selon nos résultats, il se peut que les termes qui subissent une restriction ou une extension sémantique se trouvent initialement aux niveaux plus généraux de la hiérarchie, et qu'ils partagent leur espace sémantique avec un nombre de co-hyponymes supérieur à la moyenne. De plus, il semble qu'une grande proportion des autohyponymes étudiés viennent du français plutôt que du vieil anglais, ce qui soulève

© 2022 The Authors. *Transactions of the Philological Society* published by John Wiley & Sons Ltd on behalf of The Philological Society. Published by John Wiley & Sons, 9600 Garsington Road, Oxford OX4 2DQ and 350 Main Street, Malden, MA 02148, USA. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

14679688, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

d'autres questions concernant l'emprunt polysémique et le développement sémantique. [French]

1. Introduction

This paper presents the results of a study undertaken as part of the *Technical Language and Semantic Shift in Middle English* project at the University of Westminster.[1] The project aims to address outstanding questions about the processes of semantic shift and lexical obsolescence and replacement. The main focus of the project is on how changes in semantics and lexis differ at the various levels of the semantic hierarchy. In this paper, we are concerned with the semantic shifts of narrowing and broadening and, in particular, how autohyponyms compare to our wider corpus in three key ways. These are specificity (i.e. at what level of the semantic hierarchy do words which undergo semantic shift tend to occur); lexicalisation (i.e. is there a pattern to richness of lexicalisation or otherwise of categories in which these terms are found); and language of origin (i.e. are loanwords or native terms more likely to undergo semantic shift). The processes of specialisation and generalisation have long been identified in histories of English and are well rehearsed in the textbooks. Smith's historical study of English, for example, observes that various labels have been given to the processes of semantic shift, 'such as "narrowing" and "widening"' and offers *meat*, formerly 'food', latterly 'meat', and *bird*, in Old English 'young bird', in PDE 'bird' (Smith 1996: 120; see also Ullmann 1962: 228–31). Trask's introductory textbook of historical linguistics (Trask 1996: 42) makes the same observation, offering two examples of broadening in English, *dog* and *arrive*, with a further example from Basque, and three examples for narrowing all belonging to English, *girl*, *deer* and *meat*. The *bird* and *meat* examples are also discussed in Kay & Allan (2015) and the *meat* example is noted in McMahon (1994). It seems from the accounts that the phenomena of semantic broadening and narrowing are ubiquitous in the history of English, though the repetition of the same examples across the literature suggests that it is worth examining this type of semantic shift over an extended data set.

We are taking greater specificity of meaning, legible through the increasing number of components in the definitions as we move down the semantic hierarchy, to equate to technicality (see Wright 1995; Sylvester 2016). The issue of the different levels of the semantic hierarchy at which lexical obsolescence and replacement or semantic shifts took place is thus vital in order to examine possible shifts of vocabulary items downwards to greater specificity or upwards to less specificity. The lexical data are arranged in a semantic hierarchy based on the taxonomy and categories devised for the *Historical Thesaurus* (*HT*). The classification of the *HT* is formed from the modified folk taxonomy that was devised for it (Kay & Samuels 1975). The classification has three major divisions: (1) The World, including the physical universe, plants and animals; (2) The Mind, covering the mental activities of human beings; and (3) Society, which deals with social structures and artefacts. Within these three major divisions the data, comprising the entirety of the vocabulary contained in *OED2*, is arranged in numbered hierarchical categories. Each category consists of a defining heading followed by all the words that have ever been used as synonyms or near synonyms for that sense, arranged chronologically, with their dates of usage.

The *HT*'s taxonomy has been slightly adapted for our project in order to reflect a specifically medieval worldview.[2] The data for our project are based on a corpus of words

[1] We would like to thank the Leverhulme Trust for funding this three-year project (2018–2020).

[2] For example, in the *HT* classification *cow* appears in a subcategory entitled Group Ruminantia (sheep, goats, cows, etc.) which is a subcategory of Mammals; in the *BTh cow* is in the category Individual animals, which is a subcategory of Animals, which appears under Animal husbandry within the domain of Farming. The arrangement of the lexis into a semantic hierarchy was carried out by the project's first Research Fellow, Dr Harry Parkin, to whom we extend our grateful thanks.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

collated from the Middle English section of the *Bilingual Thesaurus of Everyday Life in Medieval England* (*BTh*)[3] which is arranged into seven occupational domains: BUILDING, DOMESTIC ACTIVITIES, FARMING, FOOD PREPARATION, MANUFACTURE, TRADE and TRAVEL BY WATER. The initial data for our project included only the most specific terminology since general terms used in domain-specific ways were not included in the *BTh* (see Sylvester et al. 2017; Sylvester & Marcus 2017). It was realised that shifts are impossible to track without adding the terms at the higher levels of the semantic hierarchy, and so these were incorporated into the main dataset along with lexis from two new additional domains – HUNTING (deemed to be an aristocratic pursuit) and MEDICINE (representing the professional class) – to broaden our view of medieval society.

We are further interested in using the data to examine the idea that semantic shifts constitute a form of systemic regulation, ensuring a balance between the proliferation of synonyms for maximal precision and the communicative need for speakers to understand each other (Samuels 1972: 64–7). Collecting together of terms relating to specific senses under definitional headings allows us to see whether semantic shift may be prompted by richness of lexicalisation; that is, the regulation of categories containing large numbers of synonyms. This question also seems worth examining given the suggestion that lexicalisation may be used as a proxy for frequency, a measure which is difficult to obtain for medieval data (see Fitzmaurice et al. 2017).

Semantic shift, obsolescence and replacement of lexis may take place under specific conditions, and so the Middle English period was selected on account of the pressures exerted in particular by French following the Norman Conquest. One question the project seeks to address is whether there is a tendency for borrowed terms to broaden in sense once established in English, providing superordinate terms and leaving the native vocabulary to express the more technical senses (or vice versa). The difficulty of distinguishing between sense development that takes place once a term is established in the borrowing language, and polysemous borrowing has occasionally been discussed, for example in Durkin & Allan (2016), Durkin (2018) and – focusing specifically on historical metaphor – in Allan (2014) and (2015). The case studies examined here indicate that the borrowing of only one sense of a polysemous loanword is common but that when polysemy occurs in the recipient language, it usually mirrors that in the source language.

2. METHODOLOGY

The Middle English corpus for our project contains 4628 words arranged into 2215 sense categories.[4] Words are organised into Hierarchical Levels (HLs) ranging from HL1 to HL7, with the most general terms (hypernyms) appearing higher up the hierarchy and the more specific terms (hyponyms) found lower down. Each HL is further sub-divided into Category Levels (CLs), ranging from CL0 to CL4 – again, lexemes increase in technicality the further down the CLs we progress.

Although CLs cannot provide a consistently quantitative measure of specificity (as we go on to discuss), our hierarchy's framework provides an essential tool for comparing borrowing and shift across hyponymic and hypernymic levels. An extract from the hierarchy is given below: it shows that the semantic category **Ploughing equipment** is located at HL5, below

[3] The *Bilingual Thesaurus* is now available online at https://www.thesaurus.ac.uk/bth/. The project was supported by a grant from the Leverhulme Trust (2013–2015) and headed by Professor Richard Ingham and Professor Louise Sylvester.

[4] As Durkin (2009: 227) notes, the identification of senses remains a controversial subject with approaches varying between semanticists and lexicographers (both synchronic and historical). The approach used in the *MED* has attracted criticism in the past for its failure to distinguish between sense and usage (see, for example, Möhren 2000; Trotter 2012). During the preparation of the hierarchy, all efforts were made to fit the lexis from the *BTh* into a sense structure adapted from the *HT* following consultation of both the *MED* and the *OED*.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Farming at HL4. All vocabulary within this sub-domain is then arranged in CLs of increasing specificity: the hypernym *plough-gere* is found at the highest level, CL0, followed by the set of co-hyponyms *sulou*, *plough* and *sul* (all meaning 'plough') at CL1. More specific terms relating to parts of the plough (i.e. the 'plough beam', 'sheath', 'share-beam' and 'mould board') can all be found at CL2. The most technical lexis in this section relates to 'parts of parts of the plough' and this is labelled as CL3 (e.g. *sulou-al* and *plough-fot*, both synonyms for the sense 'Device attached to plough-beam to regulate ploughing depth'). Note that dates of attestation are included for each term, as is the case in the *HT*, and we have added the information about language(s) of origin using the information given in the *MED*.[5]

An expanded section at Hierarchy Level 5 ('Ploughing equipment') showing lexis at Category Levels 0 to 3[5]

1. The World **[HL1]**
1.4. Food and Drink **[HL2]**
1.4.3. Farming **[HL3]**
1.4.3.5. Tools and implements **[HL4]**
1.4.3.5.1.Ploughing equipment **[HL5]**
plough-gere c1419-1446 *Old English;Old Scandinavian Old Scandinavian* **[CL0]**
.Plough
sulou a1150-1450+ *Old English* **[CL1]**
plough ?c1200-1450+ *Old English;Old Scandinavian*
sul a1225-?a1300 *Old English*
..Plough-beam
plough-bem a1325-1450 *Old English;Old Scandinavian Old English* **[CL2]**
bem c1350-1450+ *Old English*
shaft(e) 1383 *Old English*
...Fastening device on the front of a plough-beam
clivie a1325-c1350 *Old French* **[CL3]**
...Device attached to plough-beam to regulate ploughing depth
sulou-al a1333 *Old English-Old English* **[CL3]**
plough fot a1400-c1400 *Old English;Old Scandinavian Old English*
..Sheath
shethe 1350-1450+ *?Old English* **[CL2]**
..Share-beam
rest(e) 1301-1450+ *Old English* **[CL2]**
chippe 1323-1450+ *Old English*
hed a1325-1450+ *Old English*
plough hed a1325-1450+ *Old English;Old Scandinavian Old English*
...Share-beam for horse-drawn plough
hors chippe a1362 *Old English Old English* **[CL3]**
...Piece of iron attached to a share-beam
hed-strake 1337 *Old English-Old English*
..Mould-board
sheld-bred a1325-c1450 *Old English-Old English* **[CL2]**
mold(e)-bred 1343-1450+ *Old English-Old English*
shelfe-rest(e) c1400 *Old English-Old English*
sulou-bord 1450+ *Old English-Old English*

[5] In the online version of the *Historical Thesaurus*, HLs (forming the main skeleton of the hierarchy) are listed on the left, whereas CLs (relating to the HL you have selected) are listed on the right. Words appearing directly under the HL label are classed as CL0 in our hierarchy. Words listed under 'Sub-categories' with one number (e.g. 01, 02, 03) equate with CL1, those with two (e.g. 02.01) with CL2 and those with three (e.g. 02.01.01) with CL3 etc. Rather than replicate the numerical labels for categories used by the *HT*, our hierarchy has a simpler system, based on dots.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

As can be seen in this extract from the hierarchy, we are dealing with both hyponymy and meronymy as categories of semantic relations i.e. both '*x* is a kind of *y*' and '*x* is a part of *y*'. As Sylvester (2004: 239) notes while discussing the organisational principles of the *HT*: "meronymy forms the basis of the classification of some of the more technical categories of nouns [. . .] This seems to be cognitively salient: the part-whole relation is important because, like class inclusion, it is a hierarchical, inclusion relation that is transitive and can give structure to the lexicon".

The present study focuses on a sub-set of vocabulary from within the hierarchy belonging to the semantic domains of FARMING and TRADE. It is hoped that they will provide a useful contrast, with the former perceived as more inward-looking and traditional, and the latter as more outward-looking and open to foreign influence. These test cases will help us determine how best to conduct a wider empirical investigation of the terminology at particular hierarchical levels, analysing semantic shift and its relationship with lexical borrowing in the Middle English period. This paper focuses on narrowing and broadening as types of shift within our two chosen domains, and seeks to answer the following three questions, comparing results with the project corpus as a whole:

(1) Specificity: are words which narrow/broaden (i.e. autohyponyms) more likely to be in the upper or lower levels of the hierarchy?
(2) Lexicalisation: do words which narrow/broaden share their semantic space in the hierarchy with a greater or lesser number of co-hyponyms?
(3) Language of origin: are words which narrow/broaden more likely to be of native or of French origin?

Eighty-one words were selected from FARMING (forty-four words) and TRADE (thirty-seven words) which exhibited a narrowing or broadening of sense within the late medieval period i.e. between 1100 and 1500. We were keen to extend the timeframe for analysis and establish what happened to this lexis from the sixteenth century onwards. To this end, the *OED* was also consulted to track subsequent patterns of shift for these words and to see whether the core meaning was ultimately replaced by a newer sense or if the word in question remained polysemous. It is important to note that a core meaning does not have be entirely replaced for shift to be categorised as narrowing or broadening from a diachronic perspective; indeed the definition of an autohyponym is a word which exhibits vertical (or linear) polysemy (i.e. one word stands for both the restricted and generalised meaning).[6] The classic, textbook examples of autohyponymy always involve sense replacement (as we saw in the examples quoted above) but equivalent cases in our data were not particularly numerous. Out of our eighty-one autohyponyms, well under half (thirty-one) involved core sense replacement such as this (based on contemporary attestations in the relevant *MED* and/or *OED* entries). For the remaining fifty words, general and restricted senses existed side-by-side until obsolescence or Present Day English (PDE).[7] Examples of the former type include *romongour* (meaning 'trader' and 'horse-trader'), which had died out by a1450, and of the latter, *park* (meaning

[6] Cf. Koskela (2011: 129): "We can speak of vertical polysemy as arising through broadening to the extent that the narrower of the senses is the more established one – or initially was so, in cases of conventional vertical polysemes whose senses are now equally established. An example of this might be the case of cat 'domestic cat' > 'any felid'. In narrowing, the opposite applies: the broader of the senses is (or initially was) more strongly established."

[7] For the purposes of this study, an attestation is considered PDE if it is recorded in the *OED* from the nineteenth century or later. This is necessary because of the *OED* entries which have not yet been revised, many of which date from the nineteenth century.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

'enclosed royal hunting ground' and 'any large, enclosed piece of ground'), which is still found in both senses today.[8] Crucially, overall, only eighteen words in the corpus undergo shift involving core sense replacement in the Middle Ages (again, based on available lexicographical data) e.g. *do* (from 'fallow deer' to 'female fallow deer') and *mercer* (from 'merchant' to 'merchant who deals in textiles'). In a further fifteen cases, while a new meaning was attested prior to 1500, definitive semantic shift seems to have occurred later, in either the sixteenth, seventeenth or eighteenth centuries e.g. *braun* (from 'any meat' to 'meat from a boar or a pig') and *chaffaren* (from 'to trade goods' to 'to bargain over goods').

These facts highlight two important points. The first concerns the general pervasiveness of polysemy within the lexicon, generally accepted as an essential stepping-stone to semantic shift, as Sweetser (1990: 9) emphasises: "No historical shift of meaning can take place without an intervening stage of polysemy" (see also Blank 1999: 131; Koptjevskaja-Tamm 2011: 1).[9] We should remember that these transition periods may be masked by the extant historical record, which can suggest a sudden, wholesale shift from one meaning to another, but they almost certainly occurred (Durkin 2009: 226). The second point is that semantic shift can occur not just gradually but slowly, sometimes over several centuries.[10] It is therefore vital to look beyond 1500 to the present day in order to study the range of outcomes resulting from borrowing and other pressures unique to the later Middle Ages.

3. Preliminary Observations

We encountered two main issues while gathering data for this study: namely, finding and selecting terms to include in our narrowing/ broadening subset, and deciding between HLs and CL as the best measure of technicality in our data analysis.

3.1. Collating the data subset

We acknowledge the inherent but inescapable difficulties of conducting any historical linguistic analysis which relies on dictionary citation dates. While first citation dates are the only evidence we have available, we recognise that there are uncertainties involved in using this evidence to record a sense of a word as appearing before another. With this in mind, we examined our dataset of autohyponyms to see how many instances there were where Senses 1 and 2 were attested twenty-five years or less apart (the figure traditionally used to represent a single generation). It was found that this occurred in only sixteen out of eighty-one cases (20%). We can therefore be reasonably confident in the accuracy of our dataset (in terms of whether a word narrowed or broadened) and the results obtained below from the analysis of this dataset. It is also worth stating that while frequency was not a variable which we used to collate the autohyponyms, there are only four words in the subset where there is only one recorded citation in Middle English for either Sense 1 or Sense 2. By definition, none of the words analysed are hapaxes as they all appear under at least two senses and the vast majority

[8] Note that the original, narrower sense is now limited to toponyms such as *Windsor Great Park* (cf. OED3 sub *park*).

[9] We use the term *polysemy* here in the traditional sense, as distinct from homonymy (cf. Cruse 2000: 109) rather than as part of a "graded phenomenon" which encompasses contrastive polysemy (i.e. homonyms) at one end to complementary polysemy (i.e. polysemes of common origin) at the other (Omazić & Schmidt 2008: 97–8).

[10] This does not mean, of course, that there are not cases where semantic shift could be relatively quick particularly where loanwords were involved. Durkin (2018: 268) highlights the case of the verb *carry* as an example where "the impact of borrowing from Anglo-Norman on the core lexicon of Middle English was rapid, with an innovated meaning of what originated as a rather technical term in transportation becoming a significant competitor for a long-established core use of a native word [*bear*] within decades of its borrowing into English".

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

cannot be classed as particularly rare with 91% (seventy-four out of eighty-one) remaining in use in some sense until PDE.

At first sight, it may seem that eighty-one words represent a very small section of our two chosen domains, which total 1,442 words between them. Future analysis of the hierarchy as a whole will tell us more, but it was surprising to find that our current corpus did not contain as many autohyponyms as we had expected. To a certain extent, the selection criteria applied were responsible for this outcome i.e. our focus on examples where a generalised or restricted second sense emerged in the late Middle Ages. This was considered essential to our overall aim of investigating semantic shift in the context of the particular lexical environment of medieval England (cf. Sylvester 2018: 249–50). Many other examples from FARMING and TRADE were rejected because a second sense appears only after 1500 e.g. *haberdasher* which narrows in meaning from 'dealer of various small goods, including dress articles and hardware' to a 'dealer of dress articles' around the seventeenth century. *Hard-ware* highlights another common issue: we know that broadening occurred (in this case from 'small items of metal, such as nails and arrow heads' to 'utensils and tools in general') but it is difficult to characterise the timing of this shift based on the current lexicographical record.

A wider problem is identifying the type of shift that is in play. Categories of semantic change are not universally agreed upon by scholars. Natural categories (i.e. animals and plants) are by far the easiest to fit into a hyponymic taxonomy and indeed twenty-eight of the autohyponyms in FARMING belong to this group e.g. *foul* ('bird' to 'domestic fowl'), *gos* ('goose' to 'female goose'), *rabet* ('young rabbit' to 'rabbit'), *pigge* ('young pig' to 'pig'), *kirnel* 'seed of any fruit or nut' to 'seed of a stone fruit or nut'. Nevertheless, even natural categories can be problematic when looking at instances of shift – we have many examples in the corpus of words taking on an extra meaning which could, at first sight, be construed as broadening: *stagge* expanded to mean 'young, unbroken horse' as well as 'male deer'; the definition of *colt* in the *MED* includes the young of camels as well as horses or asses; and *kid* could refer to a young goat or a young roe deer. Yet these senses do not form the semantic relation '*x* is a kind of *y*' in which one of the pair can be used as an inclusive term for both. We have no record of *stagge*, for example, narrowing from or broadening to a hypernym meaning 'male animal in general'. In such cases (and in similar non-animate examples such as *shipen(e)* being used for both 'sheep-house' and 'cattle-house'), we are dealing with polysemes and not autohyponyms. However, we have included *stagge* in our data subset as it does shift in meaning from 'male deer' to 'male deer in its fourth or fifth year', which can be classified as narrowing according to our definition.

There are also several examples of metonymic change in both FARMING and TRADE. There is ongoing discussion within cognitive linguistics about what actually constitutes metonymy and how it differs from hyponymy. We see it here as a process of physical or conceptual contiguity within a single domain (cf. Geeraerts 2006: 13; Durkin 2009: 242) where one sense 'stands in' for another e.g. from our corpus, *cocket* shifting from 'the seal on a customs document' to 'customs document'; *hanse*, 'merchant guild' to 'fee to enter merchant guild'; *croupoun*, 'horse's rump' to 'crupper: harness that goes on rump'; *daierie*, 'a dairy farm' to 'a herd of dairy cows'. Kövescses & Radden (1998) cite examples of autohyponymy which they class as metonymy whereas Durkin (2009: 242) suggests metonymic change can also be perceived as broadening as it involves extension in meaning. In general, however, most consider the categorial shift involved in narrowing and broadening as a type of vertical or linear polysemy and hence entirely distinct from the phenomenon of metonymy, which is a type of non-linear polysemy, along with metaphor (Cruse 2000: 110–3; Seto 2003; Koskela 2011). Ultimately, we decided not to include metonyms in this study and focus solely on autohyponyms whose movement can be most usefully tracked up and down the hierarchy. However, given the prevalence of metonymy as a kind of semantic shift, we hope to devise strategies for best analysing its effects within our project corpus in the future.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

3.2. Hierarchy versus CLs as a measure of technicality

It is widely accepted that technicality manifests itself through lexis, but the definition of 'technical language' in the medieval period has not been widely addressed. It has generally been assumed that technicality resides in 'the correct use of linguistic features obligatory or expected in a specific text type' (Görlach 2004: 105). Sylvester (2016) investigates distribution as a diagnostic of technicality, comparing the occurrences of vocabulary from the semantic field of dress and textiles in administrative texts and romances. Her results showed that the boundaries separating practical or instructive texts from literary works were not strictly drawn in the medieval period and so a new diagnostic, not related to text type, was needed, since we cannot assume that technicality was confined to 'technical texts' as we perceive them today. In this paper we are making use of a semantic hierarchic approach to define technicality in the lexis. This idea was first suggested by Wright (1995), who based her account on that of Lyons (1977); Wright argues that technicality entails restriction of meaning and classifies vocabulary items in her corpus of manuscripts according to their superordinate and hyponymic relations, noting the relationships between terms which occur in the base language (Latin) and those which are in the L2 (English). Analysis of the hyponymic relations of the vocabulary of a semantic field produces a hierarchy which begins with the most general terms (such as plant in a botanical taxonomy) and proceeds downwards (for example, tree ~ birch ~ silver birch). A component of meaning is added each time, thus as we proceed down the hierarchy the terms become more and more precise in their meanings. As noted above and in line with Wright's argument, we take greater precision to equate to greater technicality of sense. We have thus focused on organising our data via a system of taxonomic classification based on hyponymic relations, with vocabulary becoming more fine-grained in meaning (or more technical) the further down we move from the superordinate term at the top.

However, as we outlined above, our hierarchy is modelled on the *HT*, which uses broader divisions (HLs) with sub-sections then subdivided into smaller categories (CLs). When focusing on hyponymy, we discovered that an analysis of CLs as independent markers of technicality was the more reliable method. HLs are useful but only in a very general sense. In the broadest terms, they provide us with an essential framework and common sense tells us that moving from **Farming** (HL3) to **Herding/pasturing/confining** (HL6) involves increased specificity of reference. However, we noticed that HLs are not a consistent or quantitative indicator of technicality in individual cases and at any specific level. For example, due to the idiosyncrasies of the taxonomies involved in **Farming**, ducks and swans are found at HL6, but geese are at HL5. Similarly, in **Trade and Finance**, a feather-seller is at HL4 whereas the supposedly less specialised bread-seller is lower down the hierarchy at HL5.

The reason is that HLs were designed to cover a huge range of lexis (i.e. every word in *OED2*) and provide an organisational skeleton for the semantic fields within the thesaurus – this is very much an intellectual construct based on the subjective 'world view' that the *HT* editors wished to adopt (Kay 2004: 67; Fischer 2004: 55; Molina 2008). Overall, the broader the domains become the greater the number of possible ways to organise them. Therefore, we should not attach much intrinsic value to the fact that **Farming** starts at HL3 and **Trade and Finance** at HL2, for example. This does not mean in itself that the former represents a more 'technical' semantic field than the latter, it is just a coincidental by-product of the *HT*'s main layout: **Farming** (HL3) > **Food and Drink** (HL2) > **The World** (HL1) / **Trade and Finance** (HL2) > **Society** (HL1). It seems, therefore, that HLs are best reserved for analysis within a single domain only.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Conversely, CLs represent a much better basic marker of specificity of reference which can be compared across domains. Lexis found at CL0 (regardless of HL) equate to Superordinate or Basic Level Terms, such as 'pig', 'egg', 'to sow' and 'ploughing equipment' in FARMING and 'merchant', 'to buy', 'money' and 'payment' in TRADE. Basic Level Terms (Rosch et al. 1976) are not always easy to identify but can be defined as words which are cognitively salient, prototypical, typically acquired first in childhood language acquisition, and most frequent in everyday use. Unsurprisingly, lexis found at CL4 offers the greatest level of precision, such as *hert* ('male red deer in its fourth or fifth year') and *sterling* ('type of English money which represents the standard currency of the country').

It is important to note that CLs do not offer a flawless solution in 'quantifying' the hyponymic relation we wish to analyse here. However, the vast majority (94%) of our subset of eighty-one autohyponyms showed an increase in CL for narrowing and a decrease for broadening, or (rarely) had the same CL number for both senses. For example, *orf* narrows in meaning from 'livestock' (CL0) to 'sheep' (CL1), *florin* broadens from 'gold coin from Florence' (CL1) to 'any foreign gold coin' (CL0); *bestial* (CL0) broadens from 'livestock, cattle' to 'animals in general' (CL0). As regards the five cases where a word's CL numbers appear 'contrary' to its shift, this occurs when the two senses of the word from our project corpus are not found within the same sub-section of the *HT* hierarchy. For instance, the broader sense of *wardein* ('herdsman/animal-keeper') is found at HL6-CL2 under **Herding/Pasturing/Confining** whereas the narrower sense ('beekeeper') is found higher up at HL5-CL1 under **Beekeeping.** In this example, neither the HL or the CL can be used to numerically reflect the restriction of sense that occurs. Such discrepancies, while in the minority, seem to be unavoidable when inserting a lexical dataset into the established *HT* structure.

4. Results

Table 1 presents the autohyponyms identified within the two domains with totals under each CL for Sense 1 and Sense 2 of each given word (before and after specialisation/generalisation). For example, *doke* ('duck') starts off at CL0 for Sense 1 and narrows to mean

Table 1. Category Levels for sense 1 and sense 2 of the autohyponyms in Farming and Trade

	Farming (Sense 1)		Farming (Sense 2)	
	Before narrowing	Before broadening	After narrowing	After broadening
CL0	14	3	5	7
CL1	12	5	11	2
CL2	5	1	13	2
CL3	2	2	3	0
CL4	0	0	1	0
Total	33	11	33	11
	Trade (Sense 1)		Trade (Sense 2)	
	Before narrowing	Before broadening	After narrowing	After broadening
CL0	15	2	7	11
CL1	8	11	12	1
CL2	0	0	4	1
CL3	1	0	1	0
CL4	0	0	0	0
Total	24	13	24	13

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

'female duck' for Sense 2 at CL1. This means we have recorded the word at CL0 in the column labelled 'Farming Sense 1: Before Narrowing' in Table 1, and at CL1 in the column labelled 'Farming Sense 2: After Narrowing'. Similarly, *forwe* broadens in meaning and moves up the hierarchy from CL3 ('furrow made by a plough') to CL2 ('any kind of ditch or trench'). Therefore, it is recorded at CL3 in the column labelled 'Farming Sense 1: Before Broadening' and at CL2 in the column labelled 'Farming Sense 2: After Broadening'.

Overall, we find that semantic narrowing dominates over broadening in both domains: only eleven out of forty-four words broaden in FARMING and thirteen out of thirty-seven in TRADE. This is not unexpected as specialisation is widely accepted as a more common phenomenon than generalisation: 'narrowing of meaning is one of the commonest forms of semantic change among words which start off as synonyms' (Kay & Allan 2015: 32; see also Trask 1996; Ullmann 1962).

Furthermore, we have far more nouns (seventy-five) than verbs (six) in the authohyponymic subset — one in FARMING (*agisten*) and six in TRADE (*bargainen, chaffaren, chaungen, marchaunden and outren*). This is, again, unsurprising as "pairs of lexical items related by hyponymy are far more frequently found among nouns than among adjectives or verbs" (Croft & Cruse 2004: 142).

4.1. Specificity

Our first question concerned the distribution of lexemes across the upper and lower CLs of the hierarchy. In Table 2 and Graph 1, we can see how the relative distribution throughout the whole corpus and that of the domains of FARMING and TRADE is broadly the same:

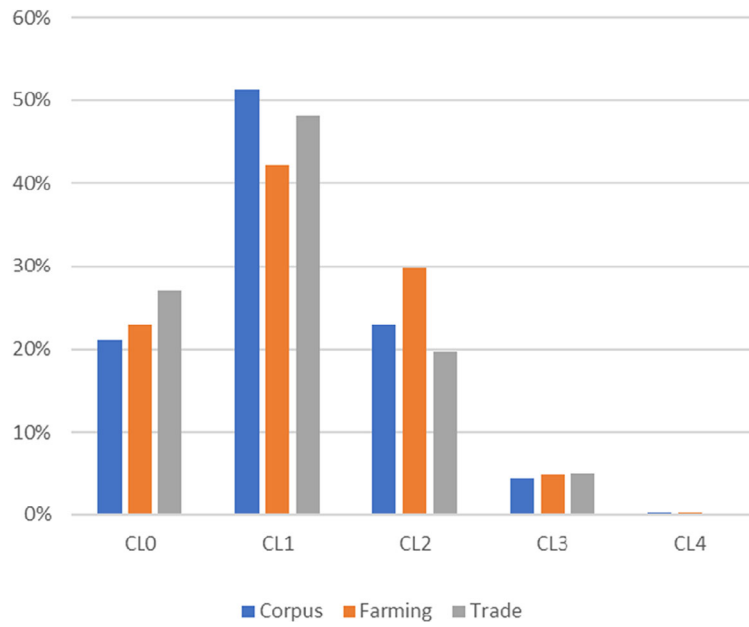
CL1 (i.e. the second most general CL in any given section of the hierarchy) is the most populated, followed by CL0 and CL2 on either side. There is a very sharp decrease when moving down to the more technical levels of vocabulary: only around 5% of words appear at CL3 in any domain and less than 0.5% appear at CL4. There is a modest but noteworthy difference between the most heavily populated CLs, however. FARMING has a higher proportion of words at CL2 than TRADE and its greatest concentration of lexis is at CL1 (42%) and CL2 (30%) whereas TRADE is clustered more heavily around CL0 (27%) and CL1 (48%). This suggests that the corpus collated for the FARMING domain in our project is marginally more 'technical' and split into finer gradations of meaning.

When these results are compared with those for the autohyponymic subset, one difference clearly stands out in terms of CL distribution. Table 3 and Graph 2 show the relative positions of these words in the hierarchy for their first sense before they narrow or broaden:

Table 2. Number and percentage of words at each Category Level, whole corpus compared to FARMING and TRADE

CL	Corpus		FARMING		TRADE	
	No.	%	No.	%	No.	%
CL0	975	21.1%	208	22.9%	144	27.0%
CL1	2,377	51.4%	383	42.2%	256	47.9%
CL2	1,059	22.9%	272	30.0%	107	20.0%
CL3	203	4.4%	43	4.7%	26	4.9%
CL4	14	0.3%	2	0.2%	1	0.2%
Total	4,628	100%	908	100%	534	100%

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License



Graph 1. Distribution of words across CLs (corpus vs. FARMING and TRADE) [Colour figure can be viewed at wileyonlinelibrary.com]

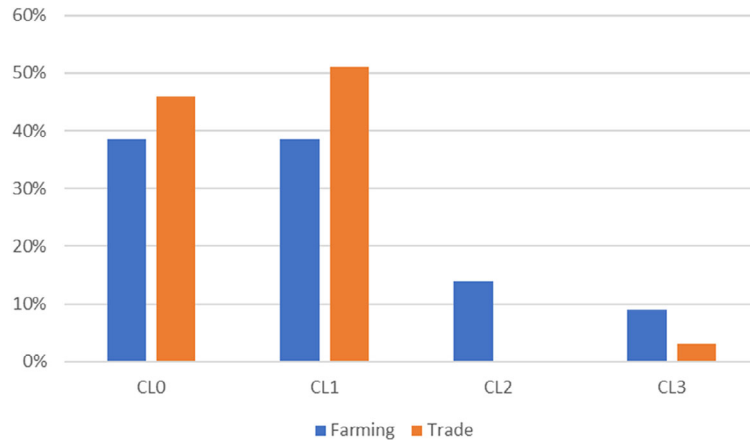
Table 3. Number and percentage of words at each Category Level: autohyponyms (AHs) only from FARMING and TRADE

CL	FARMING AHs		TRADE AHs	
	No.	%	No.	%
CL0	17	39%	17	46%
CL1	17	39%	19	51%
CL2	6	14%	0	0%
CL3	4	9%	1	3%
CL4	0	0%	0	0%
Total	44	100%	37	100%

CL0 and CL1 feature most heavily in both domains and there are proportionately, fewer words at CL2: none in TRADE (compared to 20% in that domain overall) and 14% in FARMING (compared to 30% overall).

While our data subset is small, a tentative conclusion is that words starting out at CL0 and CL1 at the top of the hierarchy sections seem more likely to shift than those lower down. Another point of interest is that large jumps up and down the hierarchy are rare. In nearly all cases, a word's CL either stays the same (e.g. *fold* which is at CL2 for both senses: 'animal pen' and 'sheep pen') or changes by one level (e.g. *chap-man* which narrows from 'trader' at CL0 to 'itinerant trader, pedlar' at CL1). Only 7 words out of eighty-one shift across two levels e.g. *agisten* moving from 'to pasture livestock' (CL0) to 'to pasture another's livestock for rent' (CL2) or *shamel* moving from 'marketplace'(CL1) to 'marketplace where meat is sold' (CL3). We have already outlined the inherent problems of 'quantifying' semantic shift above but these results highlight the need for further research to see if narrowing and broadening follow similar trends in other domains in our corpus.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License



Graph 2. Distribution of autohyponyms from FARMING and TRADE across CLs [Colour figure can be viewed at wileyonlinelibrary.com]

4.2. Lexicalisation

Secondly, we investigated lexicalisation, that is to say the number of co-hyponyms (or synonyms) which are found under any one sense in the hierarchy. For example, in the extract below taken from TRADE, eleven words are listed under the sense 'Merchandise':[11]

A section showing eleven co-hyponyms for 'Merchandise' at Hierarchy Level 3, Category Level 0

2. Society
2.8. Trade and Finance
2.8.14. Merchandise
shat a1121-a1300 *Old English*
ware a1150-1450+ *Old English*
chepinge a1225 *Old English*
merceri(e) c1300-1450+ *Old French*
chaffare a1325-1450+ *Old English*
stor(e) c1325-1450+ *Old French;Anglo-French*
marchaundise c1350-1450+ *Old French;Anglo-French*
fraught 1432-a1450 *Middle Dutch*
stuf(fe) 1448-1450+ *Latin;Old French;Anglo-French*
mercimonie 1450+ *Latin*
marchaundi(e) a1425-1450+ *Old French*

When considering the project corpus as a whole (see Table 4 and Graph 3), we find that such lexical richness is quite unusual:

The vast majority of senses (88%) in our dataset have either just one, two or three words occupying each Category Level. Only 12% of senses in the main corpus have four or more words, with fewer than 2% having ten or more synonyms at any one CL of the hierarchy.

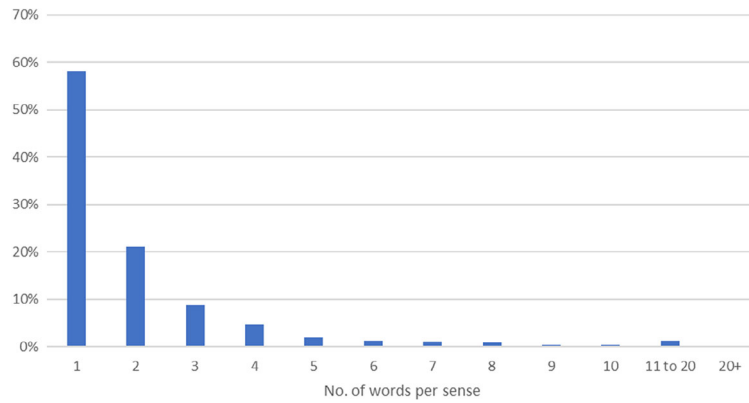
This basic pattern of lexicalisation is very similar when data is isolated for the domains of FARMING and TRADE (see Table 5):

[11] Based on attestation dates, it is clear that not all of these co-hyponyms were in use simultaneously throughout the Middle English period. However, counting the number of words per sense attested between 1100 and 1500 still offers a useful and consistent measure of lexicalisation for all the senses in the dataset.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Table 4. Number and percentage of lexical items per sense in the hierarchy in all domains

Words per sense	No.	%
1	1,286	58.1%
2	466	21.0%
3	194	8.8%
4	105	4.7%
5	44	2.0%
6	29	1.3%
7	22	1.0%
8	20	0.9%
9	9	0.4%
10	9	0.4%
11–20	27	1.2%
20+	4	0.2%
Total	2,215	100%



Graph 3. Percentage of varying numbers of words per sense across corpus [Colour figure can be viewed at wileyonlinelibrary.com]

Results are nearly identical in both cases with around 80% of senses listing one to three co-hyponyms and around 20% of senses listing four or more. This suggests that, overall, the lexical richness, or rate of synonymy, of the two domains is very similar. As with the whole corpus, rates of senses with more than 10 hyponyms are extremely low (approximately 1% for FARMING and 2% for TRADE).

However, this trend changes when we focus exclusively on autohyponyms in these domains (see Table 6):

We can see that words that go on to narrow or broaden in the hierarchy share their semantic space with a higher than average number of co-hyponyms. In FARMING, only 52% of senses have one to three words and 48% have more than three. In TRADE the pattern is very similar with 49% (one to three words) to 51% (more than three). A significantly higher proportion of words belong to categories with 10 or more co-hyponyms (9% for FARMING and 8% for TRADE).

Graph 4 compares the results found in Tables 5 and 6.

The graph clearly demonstrates that autohyponyms in FARMING and TRADE (the two groups of columns to the right) come from semantic spaces with a higher level of lexicalisation than is typical for these domains (the two groups of columns to the left).

Initially these results seem to uphold the functionalist theory that words undergo shift because their semantic space is 'overcrowded' with too many synonyms. This creates tension

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Table 5. Number and percentage of lexical items per sense in the hierarchy in FARMING and TRADE

Words per sense	FARMING		TRADE	
	No.	%	No.	%
1–3	315	81%	181	82%
4–6	57	15%	27	12%
7–9	13	3%	10	5%
10–20	4	1%	4	2%
20+	0	0%	0	0%
Total	389	100%	222	100%

Table 6. Number and percentage of lexical items per sense in the hierarchy: autohyponyms (AHs) only from FARMING and TRADE

Words per sense	FARMING AHs		TRADE AHs	
	No.	%	No.	%
1–3	23	52%	18	49%
4–6	14	32%	8	22%
7–9	3	7%	8	22%
10–20	4	9%	3	8%
20+	0	0%	0	0%
Total	44	100%	37	100%

in a linguistic system striving for balance between precision and communicative effectiveness (Samuels 1972) and the word's sense becomes either more restricted or generalised over time. The second senses of the words which undergo shift in our data subset show that in nearly two-thirds of cases (fifty-one out of eighty-one), words move to a level in the hierarchy which has fewer or the same number of co-hyponyms. In addition, the average number of co-hyponyms at Sense 2 is lower than at Sense 1 in both FARMING and TRADE, as shown in Table 7. However, these Sense 2 figures are still higher than the average for the corpus as a whole and for the two domains individually. More research is required to confirm the link between lexicalisation and shift and if the patterns highlighted here are unique or found within other domains.

4.3. Language of origin

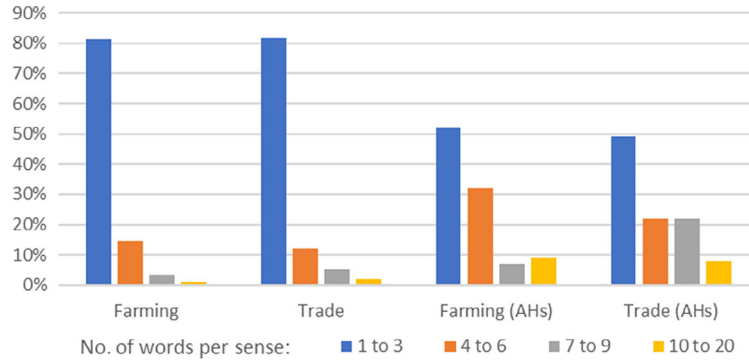
Our final area of investigation is etymological: one of the project's aims is to explore whether medieval loanwords in England are more or less likely to narrow / broaden than native terms and the role played by borrowing in the chain of events leading to semantic shift.[12] For the purposes of this paper, we focused particularly on borrowings into Middle English from French.

Table 8 sets out the language(s) of origin of all the words in the corpus and those in FARMING and TRADE only.

As regards the corpus, most words are, unsurprisingly, of either Old English (approximately 40%) or French (approximately 23%) origin, be it Continental or Anglo-French. A

[12] Language of origin and level of technicality have been analysed in two other investigations linked to the *Technical Language* project. The pilot study (Sylvester 2018) analysed thirty-three tool names in BUILDING, there appeared to be a lower concentration of French loanwords at the hyponymic (or more technical) levels than at the superordinate and hypernymic levels. A more thorough analysis was then carried on all French borrowings in the corpus (Sylvester et al. 2020) which confirmed these initial findings. These results pose interesting questions as to whether there might have been an urge to resist foreign borrowings at a certain level of technicality to protect craftsmanship or ideas within some professional communities.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License



Graph 4. Percentage of varying numbers of words per sense: all FARMING and TRADE compared to autohyponyms only [Colour figure can be viewed at wileyonlinelibrary.com]

Table 7. Comparison of average number of words per sense

	Average no. of words per sense
Corpus	2.09
FARMING	2.00
TRADE	2.11
FARMING AHs (Sense 1)	3.83
FARMING AHs (Sense 2)	3.09
TRADE AHs (Sense 1)	4.38
TRADE AHs (Sense 2)	3.93

Table 8. Language(s) of origin for words, corpus compared to FARMING and TRADE

Language	Corpus		FARMING		TRADE	
Old English	1,851	40%	527	58%	187	35%
Old French	1,064	23%	146	16%	166	31%
Latin/French	509	11%	54	6%	48	9%
Latin	324	7%	18	2%	27	5%
Other	880	19%	163	18%	106	20%
Total	4,628	100%	908	100%	534	100%

further 18% of words come from either Latin (7%) or Latin and/or French (11%), the latter group's etymologies being notoriously difficult to unravel (Durkin 2014: 236–65). Overall, we find the three main languages of late medieval England, either individually or in combination, account for 81% of cases. The remaining fifth of etymologies, labelled as 'Other' in the table, is mainly made up of Old Scandinavian, Middle Dutch and Middle Low German, together with very small numbers of borrowings from the Celtic languages (Irish, Welsh and/or Scottish Gaelic), Italian and Arabic.

When the corpus figures are compared to those for FARMING and TRADE, we see an expected divergence from this overall pattern of distribution. FARMING has a much higher proportion of native words (58%) and a lower proportion of French-origin lexis (16%) in relation to the corpus as a whole. The number of words classed as from Latin and/or French is also significantly lower at just under 6%. Conversely, TRADE has more French loanwords (32%) and slightly fewer words from Old English (35%).

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Table 9. Language(s) of origins for autohyponyms in FARMING and TRADE, compared to all words in those domains and corpus

	Total no. of words	No. of French loanwords	% of French loanwords	No. of native terms	% of native terms
Corpus	4,628	1,064	23%	1,851	40%
FARMING	908	146	16%	527	58%
FARMING AHs	44	15	34%	26	59%
TRADE	534	166	31%	187	35%
TRADE AHs	37	17	46%	12	32%

Percentages of French-origin and Old English lexis in the autohyponymic subset are set out below (see Table 9):

As we have acknowledged before, our sample is small; however, useful observations can still be made. In both domains, words that narrow or broaden include a higher proportion of French loanwords compared to the distribution of languages within that domain. In FARMING, a third of autohyponyms are borrowed from French (e.g. *agisten*, *braun*, *catel*, *ferrour*, *generacioun*, *wardein*, *wareine*, *venesoun*) as opposed to only 16% across the domain. In TRADE, 46% of the words that narrow or broaden are of French origin (e.g. *bargainen*, *brokage*, *coin*, *grocer*, *marchaundise*, *mercer*, *regrater*, *pris*) as opposed to 31% across the domain. Conversely, the rate of native lexis (i.e. of Old English origin) is more or less the same as that of the domain as a whole: 59% compared to 58% in FARMING and 32% compared to 35% in TRADE. At first glance, these results appear to suggest that Continental and Anglo-French loanwords in Middle English could be more likely to shift through restriction or generalisation of meaning than native lexis.

However, there is an issue here that needs to be addressed before any such conclusions can be drawn – how do we know if the shift we record is internal to Middle English or if the two senses (the more generalised and the more restricted) were both borrowed independently from French? A preliminary analysis suggests that instances where we can reasonably suggest that semantic shift was unique to Middle English are quite rare within our dataset. Table 10 gives an overview of these autohyponyms and whether the same shift is recorded in the major dictionaries of Middle English, Anglo-French and Continental French:

As shown in line '4' of the table, there are only seven possible candidates out of thirty-two French-origin autohyponyms e.g. *park* (which broadens from 'enclosed royal hunting ground' to 'any large, enclosed piece of ground')[13] and *rabet* (which broadens from 'young rabbit' to 'rabbit').[14] In a further minority of cases (line '1'), both Sense 1 and Sense 2 of the autohyponyms are found in all three languages: Middle English, Continental French and Anglo-French e.g. *Lombard* (which in addition to its core meaning of 'a native of Lombardy'

[13] See *OED3* sub *park*, *MED* sub *park*. The extended use (i.e. any type of field, including that used for cultivation) seems to be unique to Middle English where it is attested c1325. The sense 'large public garden' was not attested in English until the seventeenth century. Anglo-French and Continental French attest the original, narrower sense 'hunting reserve' which also shifts but to 'pen, enclosure for animals': see *AND2* sub *park*, *DMF* sub *parc*. See also *DMLBS* sub *parcus* (labelled as a Gallicism) attested from the eleventh century as 'park, enclosure' and from the twelfth century as 'pen for animals'.

[14] See *OED3* sub *rabbit1*, *MED* sub *rabet*. *Rabbit* has long been an etymological puzzle, presumably derived from French *rabotte* but not found as a headword in any dictionary of medieval French (cf. Durkin 2014: 279). There are two citations of *rabett* and *rabettis* in the *AND* entries sub *quaile* and sub *egret*. It is not clear whether these should be considered Anglo-French words or borrowings from Middle English. *Rabettus* (1407) and *robettus* (1473) are glossed 'small or young rabbit' in BML: see *DMLBS* sub *rabettus*. The semantic broadening of rabbit from 'young rabbit' to 'rabbit' (where it replaced the term *coney*) is unique to late Middle English, with the generalised sense emerging around 1503.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Table 10. Languages which record narrowing/broadening of the French-origin autohyponymic subset

Shift found in:	Middle English	Anglo-French	Continental French	FARMING	TRADE	Total
1.	✓	✓	✓	2	1	3
2.	✓	✓	✗	7	10	17
3.	✓	✗	✓	5	0	5
4.	✓	✗	✗	3	4	7
Total				17	15	32

develops a secondary, specialised meaning of 'native of Lombardy engaged as a banker'). [15] It seems difficult to argue here that shift in English was an isolated phenomenon and that broader and narrower senses were not being borrowed separately from medieval French. There is another small subgroup of autohyponyms (line '3') where Sense 2 is attested in Middle English and Continental French but absent from the insular French record e.g. *wareine* (narrows from 'land enclosed for breeding game' to 'land enclosed for breeding rabbits'). [16]

The largest sub-group of autohyponymic borrowings is found in line '2' of the table. Just over a half have a sense development which is unique to Middle English and Anglo-French but which is not attested in Continental French e.g. *catel* (narrows from 'personal goods and property' to 'livestock') [17] and *mercerie* (narrows from 'merchandise' to 'fine textiles'). [18] While we can at least assume that in these cases shift is unique to England, it is still very difficult to unpick the chain of events involved in sense extension and pin down which language borrowed which sense at what time. Language contact rarely works in straight lines and the countless, everyday interactions between donor and recipient are complex. Numerous scenarios are possible including parallel, independent shift in both languages, the borrowing of distinct, separate senses from Anglo-French into Middle English, and the borrowing of a new generalised or restricted sense back into Anglo-French following shift which occurred in English.

[15] See *OED2* sub *Lombard1*, *MED* sub *Lombard*, *DEAF* sub *lombart*, *DMF* sub *lombard*, *DMLBS* sub *Lombardus*. Northern Italians were synonymous throughout late medieval Europe with trade and finance. The restricted sense 'banker' first appears in English c1390 but *lombart* is used adjectivally to mean 'characteristic of a usurer, greedy for money' as early as c1174 in Anglo-French (see *AND2* sub *lombart*).

[16] See *OED2* sub *warren1* and *MED* sub *wareine*. The restricted use referring to rabbits (and hares) is attested in English from a1425 and from 1340 in Continental French (*DMF* sub *garenne*). This sense is absent from the *AND2* entry sub *garenne*, which lists the senses land used for hunting and breeding game and the legal right to use it from the late 1200s. The *DMLBS* entry sub *warenna* glosses the lexeme as '(exclusive) right of hunting (esp. rabbits or birds) in spec.(enclosed) area' (attested c1078). The sense was probably narrowing (in terms of the game it referred to) in England much earlier than Middle English-matrix citations from the fifteenth century suggest. The rabbit-specific sense of 'warren' likely did exist in Anglo-French but is missing from the extant record (for a detailed discussion, see Durkin 2012).

[17] See *OED2* sub *cattle*, *MED* sub *catel*. The restricted sense 'livestock' emerges in English a1400 (and further narrows to 'cows' only from 1555 onwards). The generalised sense has survived in PDE only in the collocation *goods and chattels*. This narrowing is found in Middle English and Anglo-French but not in Continental French: see *AND2* sub *chatel1* (attested 1307–21 as *chatel vif* i.e. 'living property').

[18] See *OED3* sub *mercery*, *MED* sub *merceri(e)*. In England, the term starts to narrow in the 1300s from 'goods in general' to 'fine textiles' (no doubt in connection with the Mercers guild which specialised in supplying fabrics). See also *AND2 mercerie*, 'mercery, wares, mainly fabrics, sold by a mercer', attested in the first half of the 1300s. In Continental French, we find both the generalised sense of 'merchandise' (see *DEAF* sub *merz*) and a narrower meaning (see *DMF* sub *mercerie*) which comprises not just textiles but various kinds of luxury goods, such as jewellery, combs, gloves and carved objects.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

5. Conclusion

The main findings of our study of autohyponyms can be summarised as follows. First, they tend to move up or down within higher levels of the conceptual hierarchy used in this research (between CL0, CL1, CL2); also, large shifts up or down several categories of meaning are very rare. This suggests that semantic shift is not arbitrary, but a process appearing to observe a contiguity principle that takes account of the relationships between conceptual levels, and furthermore that lexemes with very specific semantics are less amenable to shift than those which are less specific. It was found in addition that autohyponyms tend to shift from semantic spaces which have a higher than average number of synonyms, supporting the traditional view that pressure to avoid synonymy contributes to semantic shift. Furthermore, where replacement has occurred it has often been a slow process: only about half of the loanword adoption cases studied saw a corresponding native item apparently fall out of use in the medieval period. Finally, autohyponyms were found more likely to be of French than of Old English origin. Before this finding can be confidently interpreted, however, more investigation is needed concerning shift and borrowing in relation to contact influence. In this regard it is noteworthy that even in a period when English underwent very intensive lexical contact influence from more than one source, the incidence of semantic shift observed was small in relation to the overall body of lexis employed in the two target domains. Stability, it seems, remains a potent factor in the diachrony of lexis, pressures for change notwithstanding.

Semantic development is never straightforward or predictable, but some general tendencies can be expected to be at work in shaping the ways in which lexis evolves, such as the demands of successful communication and conceptual understanding. As expressed by Sylvester (2004: 237) – the *HT* was a significant step towards researching these issues more satisfactorily, allowing us 'to furnish vital evidence for the investigation of the ways in which the English language, as a system, regulates change'. The findings using the *HT* reported here on sense development in autohyponyms can help us towards gains in our understanding of the factors involved in semantic change.

Online references

AND = Anglo-Norman Dictionary, 1st/2nd ed.: www.anglo-norman.net
BTh = *Bilingual Thesaurus of Everyday Life in Medieval England*: https://thesaurus.ac.uk/bth/
DEAF = *Dictionnaire Étymologique de l'Ancien Français*: https://deaf-server.adw.uni-heidelberg.de/
DMLBS = *Dictionary of Medieval Latin from British Sources*: https://logeion.uchicago.edu/
DMF = Dictionnaire du Moyen Français, www.atilf.fr/dmf
HT = *Historical Thesaurus of English*: https://ht.ac.uk
MED = *Middle English Dictionary*: quod.lib.umich.edu/m/med/
OED = *Oxford English Dictionary*, 2nd/3rd ed.: www.oed.com

Correspondence
Louise Sylvester
University of Westminster
Email: L.sylvester1@westminster.ac.uk

References

Allan, Kathryn, 2014. 'An inquest into metaphor death: Exploring the loss of literal senses of conceptual metaphors', *Cognitive Semiotics* 5(1–2). 291–311.

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

ALLAN, KATHRYN, 2015. 'Lost in transmission? The sense development of borrowed metaphor', in J. Diaz Vera (ed.), *Metaphor and Metonymy through Time and Cultures*. Berlin: De Gruyter. 31–50. https://doi.org/10.1515/9783110335453.31

BLANK, ANDREAS, 1999. 'Why do new meanings occur? A cognitive typology of the motivations for lexical semantic change', in Andreas Blank & Peter Koch (eds.), *Historical Semantics and Cognition*. Berlin: De Gruyter. 61–89. https://doi.org/10.1515/9783110804195.61

CROFT, WILLIAM & D. ALAN CRUSE, 2004. *Cognitive Linguistics*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511803864

CRUSE, ALAN D., 2000. *Meaning in Language: An Introduction to Semantics and Pragmatics*. Oxford: Oxford University Press.

DURKIN, PHILIP, 2009. *The Oxford Guide to Etymology*. Oxford: Oxford University Press.

DURKIN, PHILIP, 2012. 'Etymological research on English words as a source of information about Anglo-French', in David Trotter (ed.), *Present and Future Research in Anglo-Norman: Proceedings of the Aberystwyth Colloquium*, 21–22 July 2011. Aberystwyth: Anglo-Norman Online Hub. 101–107.

DURKIN, PHILIP, 2014. *Borrowed Words: A History of Loanwords in English*. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199574995.001.0001

DURKIN, PHILIP, 2018. 'Exploring the penetration of loanwords in the core vocabulary of, exploring the penetration of loanwords in the core vocabulary of middle English:Carryas a test case middle English: Carry as a test case', *English Language and Linguistics* 22(2). 265–282.

DURKIN, PHILIP & KATHRYN ALLAN, 2016. 'Borrowing and copy: A philological approach to early modern English lexicology', in Anita Auer, Victorina González-Díaz, Jane Hodson, & Violeta Sotirova (eds.), *Linguistics and Literary History: In Honour of Sylvia Adamson*. Amsterdam: John Benjamins. 71–86. https://doi.org/10.1075/lal.25.05dur

FISCHER, ANDREAS, 2004. 'The notional structure of thesaurses', in Christian J. Kay & Jeremy J. Smith (eds.), *Categorization in the History of English*. Amsterdam: John Benjamins. 39–58. https://doi.org/10.1075/cilt.261.04fis

FITZMAURICE, SUSAN, JUSTYNA A. ROBINSON, MARC ALEXANDER, IONA C. HINE, SETH MEHL & FRASER DALLACHY, 2017. 'Linguistic DNA: Investigating conceptual change in early modern English discourse', *Studia Neophilologica* 89 (sup1). 1–18.

GEERAERTS, DIRK, 2006. *Cognitive Linguistics: Basic Readings*. Berlin: De Gruyter. https://doi.org/10.1515/9783110199901

GÖRLACH, MANFRED, 2004. *Text Types and the History of English*. Berlin: Mouton de Gruyter. https://doi.org/10.1515/9783110197167

KAY, CHRISTIAN, 2004. 'When ignorance is wisdom: Some day-to-day problems of classification', in Christian J. Kay & Jeremy Smith (eds.), *Categorization in the History of English*. Amsterdam: John Benjamins. 59–67. https://doi.org/10.1075/cilt.261.05kay

KAY, CHRISTIAN & KATHRYN ALLAN, 2015. *English Historical Semantics*. Edinburgh: Edinburgh University Press. https://doi.org/10.1515/9780748644797

KAY, CHRISTIAN & M. L. SAMUELS, 1975. 'Componential analysis in semantics: Its validity and applications', *Transactions of the Philological Society* 74(1). 49–81.

KOPTJEVSKAJA-TAMM, MARIA, 2011. 'The lexical typology of semantic shifts: An introduction', in Maria Koptjevskaja-Tamm & Päivi Juvonen (eds.), *The Lexical Typology of Semantic Shifts*. Berlin: De Gruyter. 1–20.

KOSKELA, ANU, 2011. 'Metonymy, category broadening and narrowing, and vertical polysemy', in Réka Benczes (ed.), *Defining Metonymy in Cognitive Linguistics: Towards a Consensus View*. Amsterdam: John Benjamins. 125–146. https://doi.org/10.1075/hcp.28.07kos

KÖVESCSES, ZOLTÁN & GÜNTER RADDEN, 1998. 'Metonymy: Developing a cognitive linguistic view', *Cognitive Linguistics* 9(1). 37–77.

LYONS, JOHN, 1977. *Semantics*. Cambridge: Cambridge University Press.

MCMAHON, APRIL, 1994. *Understanding Language Change*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9781139166591

MÖHREN, FRANKWALT, 2000. 'Onefold lexicography for a manifold problem?', in David Trotter (ed.), *Multilingualism in Late Medieval Britain*. Cambridge: D. S. Brewer. 157–168.

MOLINA, CLARA, 2008. 'Historical dictionary definitions revisited from a prototype theoretical standpoint', *Annual Review of Cognitive Linguistics* 6. 1–22.

OMAZIĆ, MARIJA & GORAN SCHMIDT, 2008. 'Polysemy in phraseology', in Maria Alvarez de la Granja (ed.), *Lenguaje figurado y motivación: Una perspectiva desde la fraseología*. Frankfurt am Main: Peter Lang.

ROSCH, ELEANOR, CAROLYN B. MERVIS, WAYNE D. GRAY, DAVID M. JOHNSON & PENNY BOYES-BRAEM, 1976. 'Basic objects in natural categories', *Cognitive Psychology* 8(3). 382–439.

SAMUELS, MICHAEL, 1972. *Linguistic Evolution with Special Reference to English*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9781139086707

SETO, KEN-ICHI, 2003. 'Metonymic polysemy and its place in meaning extension', in Brigitte Nerlich, Zazie Todd, Vimala Herman, & David D. Clarke (eds.), *Polysemy: Flexible Patterns of Meaning in Mind and Language*. Berlin: De Gruyter. 195–214. https://doi.org/10.1515/9783110895698.195

SMITH, JEREMY J., 1996. *An Historical Study of English: Form, Function, Change*. London: Routledge.

SWEETSER, EVE, 1990. *From Etymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511620904

1467968x, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

SYLVESTER, LOUISE, 2004. 'Categories and taxonomies: A cognitive approach to lexicographical resources', in Christian J. Kay & Jeremy J. Smith (eds.), *Categorization in the History of English*. Amsterdam: John Benjamins. 235–264. https://doi.org/10.1075/cilt.261.13syl

SYLVESTER, LOUISE, 2016. 'Technical vocabulary and medieval text types: A semantic field approach', *Neuphilologische Mitteilungen* 117. 155–176.

SYLVESTER, LOUISE, 2018. 'Contact effects in the technical lexis of middle English: A semantic hierarchic approach', *English Language and Linguistics* 22(2). 249–264.

SYLVESTER, LOUISE & IMOGEN MARCUS, 2017. 'Studying French-origin middle English lexis using the bilingual thesaurus of medieval England: A comparison of the vocabulary of two occupational domains', in Catherine Delesse & Elise Louviot (eds.), *Studies in Language Variation and Change 2: Shifting, Switching and Alternating Patterns in the History of English*. Newcastle upon Tyne: Cambridge Scholars Publishing. 217–228.

SYLVESTER, LOUISE, IMOGEN MARCUS & RICHARD INGHAM, 2017. 'A bilingual thesaurus of everyday life in medieval England: Some issues at the interface of semantics and lexicography', *International Journal of Lexicography* 30(3). 309–321.

SYLVESTER, LOUISE, MEGAN TIDDEMAN & RICHARD INGHAM, 2020. 'An analysis of French borrowings into middle English at the hypernymic and hyponymic levels of the semantic hierarchy', *Lexis: Journal of English Lexicology* 16. https://doi.org/10.4000/lexis.3576 (25 October 2021)

TRASK, ROBERT LAWRENCE, 1996. *Historical Linguistics*. London: Arnold.

TROTTER, DAVID, 2012. 'L'anglo-normand dans le middle English dictionary', in Stephen Dörr & Thomas Städler (eds.), *Ki bien voldreit raisun entendre: Mélanges en l'honneur du 70e anniversaire de Frankwalt Möhren*. Éditions de Linguistique et de Philologie: Strasbourg. 323–337.

ULLMANN, STEPHEN, 1962. *Semantics: An Introduction to the Science of Meaning*. Oxford: Basil Blackwell.

WRIGHT, LAURA, 1995. 'A hypothesis on the structure of macaronic business writing', in J. Fisiak (ed.), *Medieval Dialectology*. Berlin: Mouton de Gruyter. 309–321. https://doi.org/10.1515/9783110892000.309

14679686, 2022, 3, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/1467-968X.12249 by Test, Wiley Online Library on [23/11/2022]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License