Discourse Forms and Vernacularisation Processes in Genres of Medical Writing 1375–1550¹

Irma Taavitsainen

University of Helsinki

This article discusses the macroforms of medical discourse in late medieval English, with focus on the transfer from Latin into the vernacular. The scope of vernacularisation encompassed all levels of medical texts, and several processes were involved. Late medieval genres of learned writing include commentaries, compilationes, encyclopaedic treatises, questions-and-answers, and pedagogical dialogues. They emerged in Latin within institutional settings, in the newly-founded universities, from the twelfth century onwards. Latin genres developed during the late medieval period, and new genres, such as consilia and practica, were added to the repertoire, and some older genres, like commentaries and compilationes, merged. The earliest English translations of learned medical treatises date from the late fourteenth century, and vernacular texts increase greatly towards the end of the medieval period. Genres of English medical writing display a great deal of variation, and genre features seem to have changed in the vernacularisation process and afterwards within the period. The original institutional functions were lost, and new functions and applications created, reflecting the dissemination of knowledge to wider and more heterogeneous audiences.

Introduction

Prologues, introductions and other prefatory materials provide a fruitful source for medical historians,² as well as for linguists interested in sociolinguistic and pragmatic issues of language use. They give insights into past practices of scientific

Anneli Aejmelaeus & Päivi Pahta (eds.) 2012 Translation – Interpretation – Meaning

<u>COLLeGIUM</u>

Studies across Disciplines in the Humanities and Social Sciences 7. Helsinki: Helsinki Collegium for Advanced Studies. 91–112.

¹ The research of this article was partly funded by the Research Unit for Variation, Contacts and Change in English at the University of Helsinki. The article was submitted for publication in 2008.

² For example, Andrew Wear's book (2000) relies to a large extent on metatextual materials, introductions, prefaces and epilogues to medical treatises. Such prefatory material is, however, fairly rare in the medieval period, but becomes increasingly common and extensive in early modern times. See Taavitsainen 2002a.

and medical writing and reveal attitudes towards the vernacular. Such information is important, as it assists us in interpreting the hidden meanings that lay behind the choice of the language of writing in the multilingual world of medical discourse in the late medieval period.

But bycause there is a co~men sayeng in the mouthes of many me~ now a dayes, that it is a profanyng of lernyng, & a meanes to bring it in to contempte, so to set it forth in the vulgar tonge, that euery man indifferently may rede it & study it. To this I wyll brefely answere, that this sayeng is not only agaynst many great learned mennes actes and examples, but also agaynste manyfest reason: (Record 1547, f. 5r-5v.)

The above quotation is from the prefatory part of *The Vrinal of Physick*, 1547. Robert Record dedicates the book to professional medical practitioners, the Wardens and the Surgeons in London, but states in the text that it is intended for the benefit of all (see below). The dedication contains a long passage about the motivation for using the vernacular, including a reference to the origins of scientific writing (see below):

They that wrote in Greke, wrote in their owne vulgare tong: & so dyd they that wrote in Latyn, write in their commen speche. (Record 1547, f. 7r.)

This discussion had begun as early as by the fourteenth century, however, and Record seems to echo some of the earlier passages. The most famous justification for writing in the vernacular deals with Biblical translations and is found in the *Dialogue between the Lord and the Clerk*, which serves as a prologue to Trevisa's 1387 translation of Higden's *Polychronicon*. The English version was made for his patron, Lord Berkeley:

Aristotils bokes and other bokes also of logic and of philosophy were translatid out of Grue into Latyn... [Also holy writ was translated out of Ebru into Grue and out of Grue into Latyn], and than out [of] Latyn into Frensshe, than what hath Englisshe trespassed that hit myght not be translated into Englisshe? (Trevisa 1387; Wogan-Browne 1999, p. 133.)

Trevisa's text is from the first boom of vernacularisation, which included medical treatises. Robert Record's is from the dawn of a new era in scientific writing.³ Thus, the above citations serve to frame the time period in focus in this article.

^{3 1543} marks an important year, as two revolutionary books containing new knowledge came out: Andreas Vesalius' *De Humani Corporis Fabrica* and Nicolaus Copernicus' *De Revolutionibus Orbium Coelestium.*

Vernacularisation: Scope and Motivations

The first English medical texts of the Middle English period emerged during the latter half of the fourteenth century, after a gap of almost 150 years.⁴ The complex motivations for vernacularisation have received a great deal of attention lately (see Wogan-Browne et al. 1999). On the one hand, the process seems to be connected with nationalistic feeling and the desire to enhance the status of the language; on the other, it was commonplace to apologise for and express misgivings about the use of the vernacular for learned purposes, and it is also known that some translations had charitable origins (Getz 1990). The scope of vernacularisation encompassed all levels of medical texts: surgical treatises with academic origins, like Guy de Chauliac's surgeries and learned phlebotomies, compendia with theoretical knowledge and practical applications, miscellaneous collections, recipes and remedies, rules of health, prognostications and astrological treatises. This was an important phase in the history of English medical and scientific writing, and constitutes the initial point of a continuum of more than six centuries. The influence of classical models was profound, but has been little researched and often underestimated in the history of English. Translation practices and various other processes, such as adaptation and abridgement, to mention perhaps the most important means of rendering the content of Latin originals into English, provide an intriguing and challenging field of study for linguists, philologist, and historians of science alike. The scope of vernacularisation in English, as in other European languages, is not yet fully known. The field is open for discoveries of textual affinities, as well as for the firmer anchoring of texts to their sociohistorical background (for a recent achievement, see Tavormina 2006).

Aim and Structure of This Article

My aim is to discuss the macroforms of medical discourse, i.e. traditions and genres in the scientific and medical register of writing, as they were transferred into English in the late medieval period by translation, adaptation and reinterpretation. This level of language has not received much attention, as it does not easily lend itself to comparison, and a great deal remains unknown about the background of Latin scientific discourse. I shall first discuss the characteristics of discourse, traditions and genre developments in Latin medical prose, as presented by historians of science and classical scholars, and then proceed to their vernacular counterparts in order of genre, from the most learned to the more "popular" (for a definition of

⁴ The MEMT appendix contains a trilingual glossary from 1330; the next texts to appear are perhaps the surgical texts by Chauliac, other surgical texts, and some other learned texts, such as the Phlebotomy text quoted below (see the MEMT catalogue).

these terms, see below). I shall focus on the transfer of discourse forms from Latin into English and present text passages to illustrate this process. I am interested in how the macroforms of discourse were translated, and how their meanings and interpretations became different. My survey is based on the recent literature on vernacularisation and on my own work on the discourse forms of late medieval English medical writing (Taavitsainen 2002a, 2004a, 2005).

Medical Discourse, Traditions of Writing and Genre Dynamics

In modern linguistics, discourse is a rich term with several meanings; here, medical discourse refers collectively to the communicative practices of the medical profession, both written and spoken. Both traditions and genres fit under this hypernym. A "tradition" of writing can be defined as a continuing series of texts building on one another, with a great deal of intertextuality. These traditions are an underlying category, each containing several genres. Genres can be defined according to the functions that they fulfil in society (cf. Swales 1990). Genres are important operational tools and constitute dynamic systems which undergo change and variation. Sociocultural needs change over time, and genres change accordingly: old genres become adapted to new functions, new genres are created, and genres that have lost their function cease to exist (see Taavitsainen 2001a). Some genres survive in written vernaculars from earlier periods; e.g. the body of late Old English literature includes some medical texts, but their scope is fairly narrow, as only remedy-book materials containing practical advice, recipes, prognostications and charms have been preserved. Learned translations of academic and surgical texts into the vernacular were new in the late medieval period. They emerged in the last quarter of the fourteenth century in English, whereas the remedy-book tradition goes back to the tenth or eleventh century (Voigts 1984, Pahta and Taavitsainen 2004).

The issue of the three traditions of medical texts, learned academic and surgical treatises and writings in the remedybook tradition, is complicated for several reasons. Surgical texts are easy to identify because of their subject matter, but academic writing is a difficult category, as medieval universities were monolingual in Latin, and thus vernacular texts, even if they derived from academic sources, lost their institutional function by definition (Taavitsainen 2004a). One example of the most learned layer of vernacular medical writing in the fourteenth century is that of a learned bloodletting treatise that derives from the academic tradition. It is quoted below to show the nature of discourse in the academic tradition at the first phase of vernacularisation. The passage deals with the timing of bloodletting:

It is to wete bat in flebotomie 4 byngis are principalli attendid: sc., custome, tyme, age, & vertue. In moste hoote tyme forsob it owib not to be donne ne ful cold tyme ne in recent or newe mone. be reson or skelis is redi spede: in somere & moste aboute be caniculere dayes mannys bodi ouer mersure is disoluyd; by dissoluyng it is moche inaynyte or anentisib. Þerfor if by flebotomie it be more inanyssched it is to eschewe or bewaer bat be pacient falle not into sum sekenesse of inanicioun. Anober reson ber is for in so hoot tyme ber is more trubblynge of humorys & by flebotomie it scholde be made more, bat perauenture ber schold folowe som ober noynge. In ful colde tyme [{not{] to be donne, for be humours are compatte & vnable to be brou3te ou3te, & banne good are raber brow3te banne euel. Also in newe mone it owyb not to be don, for bann bodiis [{are{] inanisched or voide of humours & be flebotomie ber schold be more inanisched. (MEMT; PHLEBOTOMY, pp. 40–41.)

Medicine was both a learned university discipline and an occupation involving technical skills. Medical education comprised both general theories and specialist doctrines and practical applications through apprenticeship. The development of learned genres in Latin from the twelfth century onwards took place within an institutional context, with the newly-founded universities forming centres of medical learning (Crisciani 2000, 75–78). More practical, non-institutional writings dealing with similar topics are extant in great numbers both in Latin and in vernacular languages, especially from the fifteenth century on (see eVK2 and eTK).

Before the appearance of universities, medicine was taught in the households of noble patrons or in medical schools attached to monasteries or cathedrals. From the eleventh century onwards, the Latin West began to seek out a more complete version of ancient wisdom. Italy was at the forefront of these developments in terms of both the formation of writing conventions and the establishing of textual traditions, and that country had many new institutions and expanding scientific horizons. The twelfth century has come to be seen as the starting point for a long medical Renaissance, and intellectual traditions that had evolved over four hundred years eventually began to resolve a broad range of issues to define a new science of medicine, which grew out of a range of equally new areas of scholarly investigation (McVaugh and Siraisi 1990, 9). The influence of the new translations from Arabic on natural philosophy and medicine was first felt in the twelfth century; for example, the Constantinian translations date from this period. The centre of medical knowledge was Salerno in Italy, and the most important product of the school of Salerno was the fully developed textbook, known as the Articella, a collection of classical medical knowledge combined with Arab learning (French 2003, 72, Ottosson 1984, 60). Universities became institutionalised in the thirteenth century, and there was general agreement about the form and contents of medical teaching throughout Europe. Oxford and Cambridge, like other universities, were monolingual in Latin, and formed part of a pan-European educational network which paid no regard to the vernacular. These institutional developments promoted the creation of discourse forms in a more formalised direction.

During the period discussed here, the growth of towns in Europe was rapid and various kinds of corporations started to develop. Teachers of medicine formed masters' guilds and taught their pupils to the level of master, thus controlling the continuity of the trade (French 2003, 70). An important step towards the institutionalisation and full development of medical training took place in England with the establishment of guilds of practising barber-surgeons in the late fourteenth century. Guilds started to record their official documents in the vernacular, and groups such as the Barber-Surgeons of York presented a collection of all kinds of useful information in their 1486 guild book, which was in both English and Latin. It is likely that the medical treatises in this book were used in instruction, but otherwise vernacular medical literature was probably non-institutional.

By the end of the fourteenth century, conventionalised discourse forms had been created to present and organise knowledge in Latin; these can certainly be called genres according to the definition given above. Genres of Latin writing had become legitimate modes for disseminating learning, but they developed and changed over the course of the period discussed here: new writing forms and genres were created, such as the consilia and practica, new diseases were treated, and new fields emerged, such as astrological physic and medicinal alchemy. Vernacular texts occupied an intermediate position between the world of learning and more popular attitudes, between ars and vulgus, as demonstrated by the German versions of Bernard of Gordon's Lilium medicine (original 1305), also translated into Middle English, French, Castilian, Gaelic and Hebrew (Demaitre 1998, 88). The genre conventions of scientific writing in English show a great deal of variation, and are still far from established in the fifteenth century and even later. When translated or otherwise transferred into the vernacular, discourse forms lost some of their original meaning. Their reinterpretation is demonstrated by the way they were appropriated: theories and doctrines are explained in detail in learned Latin texts, but become fairly stereotypical commonplaces with a variety of applications that enhanced the practical side of medicine when transferred into the vernacular (see below).

The Multilingual World of Medical Discourse

Latin was the language of medieval science. It retained its *lingua franca* position up to the end of the seventeenth century in England (Webster 1979), and still served in this function much later. The transmission of Western science begins with Greek learning, and continues with knowledge disseminated into Latin via Arabic, and into Western vernaculars in the late medieval period. During the first phase of vernacularisation, scientific and medical ideas were expressed in Latin, but later on texts began to be translated into various vernaculars and the circle of learning widened. This was a pan-European phenomenon, with translations appearing at about the same time in many vernacular languages, including French, Portuguese, German and English (see below). The discourse world of medicine was multilingual (see Pahta 2004). A textual hierarchy was established: Graeco-Roman texts represented the highest level of learning and provided the model and the standard towards which vernacular treatises aspired. The evolution of vernacular scientific writing can only be understood against this background. The difficulties of translation are discussed by Robert Record in 1547:

But now as touching myne entent in writyng this treatise in the english. Though this cause might seme sufficient to satisfy many men y=t= I am an englysh man, & therefore may most easely and plainly write in my natyue tonge rather then in any other: yet vnto the~ that know the hardnes of the mater, this answer shuld seme vnlykely: consideri~g that it is more harder to translate into suche a tonge, wherein the arte hath not ben written before, then to write in those tonges that ar accustomed, and (as I might say) acquainted with the termes of the science. Nother is it so easy a thing (as sum easy occupyed folke do thinke) to translate well. For vnles that a man be able to perceyue not onely the wordes, but also the phrase and kyndes of the speking of the tong, out of which he doth translate, he shall not be well able to translate. And if any man do not beleue me in this, I say no more, but let him proue it... (Record 1547, f. 2v-3r.)

The means to express scientific ideas did not exist in the vernacular, as the register of learned medical writing was completely new in the fourteenth century. Early translators had to struggle to find ways of expressing the complicated relations and abstract ideas of learned medicine (see Pahta 1998, and Pahta and Carrillo Linares 2006). An extract of highly abstract early expository prose is given below as an example of the style of abstract writing in the vernacular. The passage below is transparent, but vernacular writers encountered severe problems in finding expressions for complicated relations and causes.

[]Incipit Liber Cerebri}] [\f. 40v\] The brayn naturaly is cold and moist to suscepcioun or takyng and therfor as of dyuers lightly it turnyth, and as to moevyng membris leuyth and yevith the mobilite, and as to calefaccion and drie spirite to the hede of temperat breth bryngith in of whos myngis is cold, drie and thikke. Withyn whom forsoth bien divisions or departynges. In the first is saide fantastic, the secund racional, in the thridde memorial. Withyn fantastic and racional is a cloth sumwhat cold and drie and thikker in so moche, whiche dividith racional and memorial havyng in hym a litel weike and thyn flessh. Of memorial forsoth proceden 2 weike canals and moist as the mary in the spindel of the bak, whiche percen al the compact made, and comen vnto the fantastic testule bi the whiche fantastic spirite and racional willith to commende memory, and eftsones of memorial to leede to racional and fantastical. (MEMT; DE HUMANA NATURA, pp. 54–55.)

This is a learned treatise which includes definitions and exposition. The problems illustrated here were sometimes insurmountable in the earliest phase of vernacularisation, and the result is not always "a glowing example of fifteenth-century scientific English prose", but a "less than completely comprehensible translation" (Tavormina 2006, 383 on the *Commentary on the* Prognostics, see below). Even in the mid-sixteenth century, Robert Record writes about the same difficulty. The

means of expressing scientific ideas in English developed considerably within the 150 years from the beginning of vernacularisation, and the conventions of writing were fairly well established in the mid-sixteenth century.⁵

Readership

The question of the target audience of vernacular texts is important, as according to the definition of genre given above, genre developments depend on the audience, and genres are created to meet the needs of discourse communities.⁶ In the late medieval period, the medical profession consisted of heterogeneous groups of practitioners with different educational backgrounds. Physicians, surgeons, and perhaps even some apothecaries had university education; barber-surgeons established guilds and formalised their training in the late Middle Ages; midwives were women with practical training and experience; itinerant specialists like bonesetters and oculists were mainly a feature of rapidly growing towns; and there were also herbalists, wisewomen and others with heterogeneous backgrounds. Various divisions have been suggested, such as clerical and elite practitioners versus tradespeople and ordinary practitioners. Literacy was restricted mostly to the elite group, but in the fifteenth century the rising upper middle classes were eager to learn and improve their knowledge of useful matters like health (Siraisi 1990). They formed a new and widening readership for medical handbooks. The core genres of learned Latin writing were targeted at a small elite group of learned physicians and surgeons. The genres of these books included commentaries and compilationes, encyclopaedic treatises, question-and-answer forms, pedagogical dialogues, consilia, and practica; some treatises were called sermons, but without further specification of the term. The Latin situation provides a starting point for the assessment of vernacular genres, but the users of vernacular texts and the genre map of the books used by wider audiences are somewhat different, as will be shown below.

In earlier scholarship, language and audience were thought to correlate; Latin was associated with learned writing for professionals, and vernacular languages with more popular texts for lay audiences. Recent research has proved that this distinction does not hold, but rather the pattern is more complicated. For example, surviving evidence indicates that statements that texts are addressed to "the poor" and "unlearned" in prologues and dedications are not to be taken at face value. The real consumers can be assessed through text-external evidence, such as

⁵ Two phases of vernacularisation have been distinguished, with 1475 as the watershed between the first and second phase.

⁶ The term was originally coined for applied linguistics (Swales 1990), but it can easily be extended to medieval medical literature to mean groups of people connected by texts, either as a community or as individuals. For a discussion of medieval medical discourse communities, see Jones 2004, 23–26.

library catalogues, wills, and ownership inscriptions. According to this evidence, the owners and potential readers of medical texts were mostly people of high rank in society and professionals in the field of medicine. For example, French copies of the popular verse encyclopaedia Sidrak and Bokkus (see below) were owned by important figures in English political life, including Simon Burley, tutor to Richard II (Burton 1998, Volume 1, xxxiii). Guy de Chauliac's surgical writings constitute highly learned compilations, and these texts were also translated into vernacular languages. The distribution of extant copies shows how learned knowledge was disseminated throughout Europe. The Latin originals (c. 1360) were targeted at the doctors of three leading faculties of medicine, Montpellier, Bologna and Paris, and doctors and clerks of the papal court (McVaugh 1997); thirty-three Latin manuscripts are extant. In the fifteenth century, Chauliac's works were translated into several vernaculars, with at least three anonymous translations and at least fourteen different manuscript copies in Middle English (see Taavitsainen 2004b). The audiences for the vernacular versions must have been more heterogeneous, but conclusive evidence is lacking. Some of the manuscripts show no signs of wear or of being used at all. Rather, they seem to have been display objects, with the vernacular performing a new function in the prestige register of scientific writing.

Robert Record is also explicit about his readership:

I haue written this lytle treatyse to all men in commen, that they may lerne to haue sum knowledge in their owne vrines, and thereby may be the better able to entstructe the physicion, in this thyng at the least, what sorte of vrine they haue made from tyme to tyme, syth the beginning of their sycknes. (Record 1547, f. 4.)

This comment is somewhat puzzling, but can be interpreted as an indication of the author's commitment to the wider distribution of knowledge, the establishment of common ground, and the improvement of the level of knowledge among more extensive layers of society; the same motivation is encountered even today when scientists write for the wider audiences about professional matters.

Genres of Medical Discourse

Commentaries and Compilationes: Latin and Vernacular

Commentaries and compilations were at the heart of the intellectual mainstream of scholasticism after the establishment of the university institution. According to medieval literary theory, commentaries are distinguished from compilations by the fact that the commentator takes the responsibility for the conclusions drawn. The commentator's own materials are "annexed for the purpose of clarifying" the issues, whereas the compiler attributes opinions to others, writing "the materials of others, adding, but nothing of his own" (Minnis 1979, 387, quotations from Bonaventura translated by Minnis).

Commentaries were used both for research in reconciling ancient authorities and in teaching. The twofold nature of medicine is demonstrated by the fact that, in addition pointing out the truth and meaning of the work, the commentator had to mention its usefulness (Crisciani 2000, 79). Each discipline had a canon of authoritative texts; the commentary tradition comprised several layers, from Greek to Latin and Arabic, and it continued to develop even after the high point of the twelfth century (see Minnis et al. 1988). Textual transmission took the form of systematic and often heavily glossed and annotated versions of ancient knowledge. Commentaries reflect the logocentric mode of scholastic science, with its reliance on axioms, i.e. statements accepted as being true, though they are not necessarily so. The source of knowledge was "that someone said so", i.e. the quotative. The reporting of the opinions of various authorities is an evidential feature of scholastic texts. The layered nature of medical learning is reflected in the hierarchy of authorities that are referred to in the vernacular. Galen and Hippocrates are frequently mentioned in learned and specialised treatises; next in frequency come Arab authors, such as Avicenna, Rhases, Haly Abbas and Averroes, and medieval Latin authors; general references to doctors, leeches, physicians and masters prevail in more popular layers of writing (Taavitsainen and Pahta 1998, 169).

Another high-register genre of learned scholastic writing, one which also reflects logocentric science, is that of compilationes. This genre is important for the dissemination of knowledge, and became widely used in its various forms in the vernacular. Texts in this genre had a twofold didactic function. First, they provided easy access to authoritative passages and convenient ways of finding important opinions. Secondly, they made these authorities available to readers who were not able to work their way through the originals (Minnis 1979, 402–3). These two high-level genres of scholasticism converged at the end of the medieval period, and it is often difficult to make a distinction between them and classify texts as belonging to one or the other. The textual histories of several works, including the Articella components, are extremely complicated, and may contain several layers of intertwined commentaries and compilations. This practice of building upon various discourse forms was probably widespread. Alongside authentic texts, pseudoauthorial texts were written by near-contemporary authors and transmitted and, to complicate the medieval genre map further, any important text in the Middle Ages could be subject to commentary; even occasional commentaries on recipes can be found.

Vernacular texts pose several problems, starting with the identification of genres. The learned genres of commentaries, *compilationes*, and question-and-answer forms were institutional in nature. In the vernacular, these genres may have gained new applications; understanding of such new uses and functions

is central to the study of the dissemination of knowledge to the wider public. A recent discovery (Tavormina 2006) reveals that even classical Greek texts were translated into English in the late medieval period. The translator often had obvious difficulties with his task. The vernacular text might show characteristics of the commentary genre, but fail to indicate its affiliation. However, the contrary seems to be more common: a text may be explicitly called a commentary, or the word "comment" may occur in the title, but, in contrast to genre expectations, the text may contain explications of key terms and concepts, meaning that the discourse features of the ensuing text are not in accordance with the Latin genre features of the title. A survey of those manuscripts indicated to be commentaries in the eVK2 revealed that translations focus on the more utilitarian types of academic text, such as urinoscopies. Instead of quoting authorities and reconciling their views with the author's own opinion, these texts strive to make their content easily accessible. The role of the translator varies: some, such as Benvenutus Grassus, seem to have distanced themselves from the text while some acted as editors, selecting and excerpting materials, as is the case in John Arderne's surgical texts. There is no stability of form, and it seems that the genre was not conventionalised in the vernacular. It is evident that the criteria of taking responsibility for one's opinions, drawing conclusions, and conciliating conflicting views do not hold in vernacular texts, and many of them simply list the opinions of various authorities on a topic.

Encyclopaedias in Latin and the Vernacular

The techniques of compilation reached a high level of sophistication in medieval encyclopaedic treatises, and they had multiple uses and audiences. *De proprietatibus rerum*, by Bartholomaeus Anglicus, was originally composed in Latin c. 1245 and intended to be used by friars to illustrate their sermons (Seymour *et al.* 1992, 11). In addition to religious matters, it includes natural history and medical lore; some copies, owned by members of the high aristocracy, had handsome illustrations of medical practices and of the universe. A large part of the work overlaps with medical literature and seems to have served as a model for vernacular writing in the following centuries (see below). A medical encyclopaedia, the *Breviarum Bartolomei*, was produced towards the end of the fourteenth century by John of Mirfield, a London priest. It records all medical authorities of the day, but also charms and prayers, and may have been used in a hospital (Getz 1998, 50). This kind of wide range of material is commonly found in vernacular encyclopaedic treatises.

One of the top achievements of medieval science was Batholomaeus Anglicus' learned encyclopaedia *De proprietatibus rerum*. It was translated into English by Trevisa in 1398/9 as *Of the Properties of Things*, and represents the learned end of the continuum of scientific writing. It is of interest from the point of view of this study that some chronological developments can be detected in the transmission

of this text, specifically in Wynkyn de Worde's edition from c. 1495. An examination of this book shows how the work became interpreted and appropriated a century later, with adaptations for a wider audience. On the one hand, pictures were added to act as visual texts, demonstrating the practical applications of theories that circulated in manuscript texts, such as those on the appropriate times for various actions, hunting, hawking, the giving of medication to the sick, and astrological prognostications. On the other hand, the use of Latin in the rubrics is maintained, giving the readers an indication of the treatise's affiliation with academic science, the language of which was Latin (see Holbrook 1998). This book represents the learned end of the continuum, but the scope of vernacular encyclopaedic treatises was a broad one. A more popular group of treatises focuses on astrological medicine and its applications. The differences are obvious: learned compilationes assemble loci communes or commonplaces of knowledge into coherent wholes, whereas at the other end of the continuum, the techniques of scientific writing merge with normal book-making practices. The Wise Book of Philosophy and Astrology sets out with the encyclopaedic aim of explaining the existing world order, but after the first part this plan merges with more haphazard book-making practices: all kinds of useful prognostications are gathered together in manuscripts, with the compilers using what seems to be a technique of free association to combine the information they had at hand. Thus, the beginnings of the versions are identical, but after the common core the rest of the treatise is different in each manuscript (see Taavitsainen 1988 and the Handlists of The Index of Middle English Prose). This practice resembles the compilation technique used for commonplace books. It was customary to gather useful texts, which also circulated independently, into manuscripts for personal use. The distinguishing feature of a commonplace book is its purpose: miscellaneous items were copied for the compiler's own personal use, interest and amusement. The best example of this genre in Latin medical writing is the commonplace book of Thomas Fayreford (see Jones 1998). Commonplace books also exist in the vernacular, The Commonplace Book of Robert Reynes of Acle being one of the best known examples. It contains medical and prognosticatory materials in a simple form:

[\f. 11v\] [}[\Directions for Blood-letting\]}]

Ysodor seyth be auctoryte of Ypocras bat ber arn iii dayes bat no man owyth to be lete blood. bat is for 'to' seyn, the vii day of be [{calende{] of Apryl, the fyrst day of August and the last day of Decembyr etc.

Her may a man knowyn in what monyth and what houre of be day is best bledyng for dyuers complexiouns. In Marche, Apryl and May reynyth blood, and he arn hote and moyst. In the monyth of lune, lule and August reynyth red colour, and it arn note and drye. [\f. 12r\] In the monyth of Septembyr, Octobyr and Nouembyr reynyth blak colour, and it arn drye and colde. In be monyth of Decembyr, lanuar and Ffeuer3er reynyth fleume, and he arn colde and moyste. Sanguine men and fleumatyk men owyn to bledyn abowtyn vndern, bat they ben fastyng, and coleryk men fro an our afor vndern

tyl noonn. And a malecolyous man owyth to bledyn abowtyn noun. But no3t aftyr mete, ne aftyr slepe, ne aftyr hatyng, for thanne arn þe [{humores{] medelyd þe goode with the wykke, and if he blede, than þe goode [{humores{] schuldyn goon owte as well as þe wyk. (MEMT; REYNES, DIRECTIONS FOR BLOODLETTING, pp. 157–158.)

An early vernacular encyclopaedic work combining various literary and non-literary genres is *Sidrak and Bokkus*. This work includes texts belonging to several different genres, from saints' lives to romances to scientific, medical and philosophical treatises (Burton 1998, Honkapohja 2004). It circulated widely in several vernaculars in the fourteenth and fifteenth centuries. Unlike learned encyclopaedias, *Sidrak and Bokkus* is not coherent, and the 362 scientific and medical sections are dispersed throughout the text. The style is a simple one with rhyming couplets. The poem deals with the theoretical and abstract issues of human intellect in the following way (cf. the passage from *De humana natura* above):

[\f. 155v\]] 'Telle me now, if bou can: Wherof comeb naturel wit of man?' 'Off pouere hernes it comeb vnto, [pouere 'power'; hernes ' of brains'] Pure herte and pure blood also; And be be tweie pure of thise bre And be bridde noght so ne be, Right clere witt may not be bore As bogh al bre togidre wore, For wiboute v3e seeb no man so As bat he may wib tweie do. Be herte and hernes neuere so good And derke in him bi be blood, Herte and hernes it drinkeb tul And makeb be witt derke and dul; Be be herte good and blood bright And be hernes merke and light, Greetly wole light hernes greue Al bat be ober two wolde 3eue. And be planetis in her going In man worchib al bis bing.' (MEMT; SIDRAK AND BOKKUS, p. 613.)

Question-and-Answer Forms and Pedagogical Dialogues in Latin and Vernacular

Question literature has several layers and traits, each of which develops over time. The oral methods of teaching used in universities contributed to the development of learned written genres. The conventions of scientific argumentation took shape as follows: the *lectio* influenced the commentary, and oral disputations provided the model for the use of questions and answers in written discourse. Theoretical and practical experience could be combined, as seen in Latin in Taddeo Alderotti's commentary, which was the result of ten years' teaching combined with professional practice (Crisciani 2000, 79). Likewise, Guy de Chauliac had a university career and long history of medical praxis. In the late medieval period, oral communication was still an important means of disseminating knowledge. Public disputes provided a useful teaching method. Their written counterpart became conventionalised at universities in the thirteenth and fourteenth centuries, as continuation of a longstanding tradition that started with Aristotelian treatises. The formulae were similar in both oral disputes and the written genre. The basic pattern of questions and answers was elaborate: the question was posed first, the pros and cons were then considered, and the sequence concluded with either an affirmative or a negative answer. In the next phase, the issue was elaborated using descriptions, definitions and explanations, and a review of the opinions advocated by various authorities. Influences intertwined, and the medieval commentary also contributed to the development of this part of the question genre (Siraisi 2001, 144-8). At the end, the main argument was raised again and the problem was answered.

Over time, a standard stock of questions was established (Cadden 1993, 114; see also Minnis *et al.* 1988, 212). The Latin collections are known as Salernitan questions and they were in wide circulation both in verse and in prose. Their sources are more complicated than the name indicates, however: some questions can be traced to Salerno, some, showing Arabic influences, to Montpellier and Paris and many seem to stem from classical collections of Greek *problemata* (Lawn 1979, xiv-xxiii). Salernitan questions as such are not found in the vernacular, although references to Salernitan teaching are frequent in late medieval medical literature in English. A poem called *The School of Salerne*, printed at the beginning of the seventeenth century, gives simple advice derived from medieval sources and provided a stock of commonplaces for centuries to come:⁷

The Salerne Schoole doth by these lines impart, All health to England's king, and doth aduise From care his head to keepe, from wrath his harte. Drinke not much wine, sup light, and soone arise, When meat is gone long sitting breedeth smart: And after noone still waking keepe your eies, When mou'd you find your selfe to nature's need Forbeare them not, for that much danger breeds, Vse three physitians still, first doctor Quiet, Next doctor Mery-man, and doctor Dyet. (*The Salerne Schoole* 1607, p. 125.)

⁷ The three doctors are one of the commonplaces in English literature. This poem mentions them, but attestations are also found before and after, and they belong to the common pool of knowledge related to Salernitan health advice.

Another major group of question-and-answer texts is found amongst pedagogical dialogues. These derive from classical models as well, but have different underpinnings, beginning with Greek literature from Socrates through Plato and Aristotle, and continuing throughout history to the modern day, with Boethius' *De consolatione philosophiae* as the most influential medieval text of this genre. The dialogue takes place between Lady Philosophy and the Prisoner, and it provided the model of pedagogical dialogues for centuries (Lerer 1985, 19). The stereotypical roles of a teacher and a pupil were identical to the wisdom literature frame, where knowledge is passed down from one generation to the next via a father, mother, wise old man or teacher giving instruction and the son, daughter, foolish young man, or pupil receiving it. Boethius' text was translated several times into the various vernaculars, and is appeared in English in the Old, Middle and Early Modern periods.

The elaborate patterns of Latin writing were not transferred as such into the vernacular, but the basic form of questions and answers was common in medical and other didactic literature. Some examples of the pattern can be found in medical texts from the fifteenth century, but there seems to be a time lag in the application, as this discourse form occurs more consistently only in the sixteenth century, e.g. in *Guido's Questions* (1579), remodelled from Chauliac's surgical treatises. An earlier example is provided by the fifteenth-century *Thesaurus pauperum*.

[}Capitulo .vij.}]

Brother I pray the that thou telle me of hurtynges and of medecynes that ben good for hurtynges.

Brother in many maner wise men ben hurt and in diuers places and som hurtynges ben old and som beth newe and right as hurtynges ben diuers so they haue dyuers medicines... (MEMT; THESAURUS PAUPERUM, f. 32v.)

The questions are straightforward, sometimes even blunt, and the influence of the underlying monological treatise is evident in the answers. After the opening question quoted above, the reply consists of a long passage about the topic without any dialogic features. As mentioned above, *Sidrak and Bokkus* is an early work in question-and-answer format (see above). The discourse form is found earlier in verse than in prose, perhaps due to the mnemonic virtues of rhymes in oral delivery. The dialogue has been characterised as a "catechism" without conflict (Burton 1998, Volume 1, xxvii): the pupil bluntly accepts the teacher's instruction without further queries.

Case Studies, Consilia and Practica in Latin and the Vernacular

In the medieval period and for centuries afterwards, the core of medical instruction was based on the description of typical cases of disease (see Taavitsainen and Pahta 2000). In Latin, there were two different interconnected genres: *consilia* and *practica*. The genre of *consilia*, which emerged in the thirteenth century, originated from law and provided medical advice on particular cases by offering diagnoses and suggesting therapeutic treatment (French 2003, 121). In contrast, *practica* dealt with the particulars of a disease and treatment. The latter became a university genre, attracting increasing intellectual attention, and categories such as plague literature are connected with this genre. The format of surgical case histories was probably influenced by Arabic models, and these were not used in institutional teaching. Narratives describing the course of an illness are commonly found embedded in academic and surgical treatises, e.g. in Benvenutus Grassus' learned ophthalmology and John Arderne's text. Recipes in remedy books may contain occasional case reports to prove the efficacy of the cure.

I helid many men of fistula in ano. Of whiche the first was Sire Adam Eueryngham of laxton-in-the-clay The forsaid sir Adam, forsoth, suffrand fistulam in ano, made for to aske counsel at all the leche3 and cirurgien3 that he my3t fynde in Gascone, at Burdeux, at Briggerac, Tolows, and Neyrbon, and Peyters, and many other places. And all forsoke hym for vncurable; whiche y-se and y-herde, be forseid Adam hastied for to torne hom to his contre. And when he come home, he did of al his kny3tly clothinges and cladde mornyng clothes, in purpose of abydyng dissoluyng, or lesyng, of his body beyng ni3 to hym. At last I, forseid lohn Arderne, y-sou3t and couenant y-made, come to hym and did my cure to hym and, oure lord beyng mene, I helid hym perfitely within half a 3ere; and aftirward, hole and sounde, he ledde a glad lif by 30 3ere and more, ffor whiche cure I gatte myche honour and louyng bur3 al ynglond. (MEMT; ARDERNE, FISTULA, p. 1.)

Remedy Book Materials: Recipes, Charms and Prognostication

Remedy books are a difficult category, as these texts contain both popular and learned materials, the latter of which may have entered the vernaculars earlier, and there are several diachronic layers of influence and borrowing. This tradition involves several different genres, such as recipes, charms and prognostications. Recipes have received a great deal of attention in recent scholarship. They are a well-defined procedural genre, but even so, their transmission is extremely complicated and there is a great deal of intertextuality within the genre (see Mäkinen 2006). In recent studies, the approach of treating recipe collections as "discourse colonies" (Carroll 2003, Hoey 2001) has proved useful and provided new insights into this complicated transmission, as well as how the books were compiled and what their intended audience might have been (Alonso Almeida 2005, 2008). Recipe collections are found both on their own and embedded within

a wide range of texts. Recipes in texts belonging to different traditions of medical writing in Middle English show different degrees of textual standardisation: in remedy books, recipes follow a standardised format, but in academic and surgical texts they are more varied. The difference can be explained with reference to the different functions of recipes in these traditions: in learned treatises, they provide illustrations of healing practices, as in Benventus Grassus' learned treatise on ophthalmology. Recipe collections intended as a resource for quick reference seem to have been fairly standardised as early as the fifteenth century, with explicit titles and a regular structure (Taavitsainen 2001b). The difference is illustrated by the two recipes below:

And yit sum oper ther be bat by occasyon of obtalmie ar gretly troublyde yn bere eyen, fumous and often wepyng for evyll keepyng and for that they ete contraryous metys. But yit bei arn not vncurable. Wherfor yf ony such come to your cure, ffyrst pourge hys brayne with thies peletys: Take polypodie, esule, myrabolanys, cytryne, rubarbe ana ounce 1; masticys, cubibys, saferon, spygnarde, nucys Indicem, cynamon ana a drame. And ban medyll them with mylke and yeue to the seke after hys strength. And after thys purgacion, yeue hym morne and yeue of the electuarie dyolibanum or Salernitanum, os yt ys sayd beforn in the cure of the iij curable cateract. And on the morn put yn hys ey of the powder callyd puluis nabetys (the makyng therof and the vertu yt schal be tau3t hereafter yn the cure of the iij pannycles). And at eve put theryn of the powder callyde puluis Alexandrini, as it ys seyd a lytle before. And thys do tyll the pacyent be ful hoole, and yn meanetyme kepe hym from contraryus metys. (MEMT; BENVENUTUS GRASSUS, pp. 61–62.)

For to draw oute a thorne: tak the barke of the hauthorne and stamp hit wele in red wyne, and do hit on the sare als hate als thu may suffrye hit; the rancle sal abate, the thorn sal ga oute, the sare sal slake. (MEMT; RECIPES 1, p. 52.)

Conclusions

Vernacularisation processes are complicated and require further study. The converging development of commentaries and compilations, for example, is likely to have taken place in Latin writing, as the traditions of commentary and compilation approached one another. Medieval commentators were influenced by the practices used in compilations, and attitudes changed as it became clear that the works of revered *auctores* contained compilations. Compilation practices acquired sophistication and refinement, especially in the thirteenth and fourteenth centuries (Minnis 1979, 386–7, 413). It is no surprise that commentaries and compilations overlap and converge in vernacular texts and that it is difficult, sometimes impossible, to distinguish between them. Perhaps it is not even necessary to do so.

Compilations form a broad category in the vernacular: some texts that are thematically compilations become fused with commentaries, and at the other end of the scale, the process of compilation overlaps with the type of activity found in the making of commonplace books. In general, vernacular medical texts have a bias towards instruction and practical knowledge. There is a great deal of variation between individual texts. More theoretical treatises are also found, but these illustrate the difficulties of making vernacular languages function in the new prestige register. The late medieval period is an important time for establishing genre conventions in vernacular writing. In the fifteenth century, the scale of medical writing varied a great deal: there were texts with theoretical considerations transferred from Latin exemplars, but there were also reduced adaptations and applications. The difference between learned and popular layers of writing was reflected in some pertinent features of scholasticism, such as the scale of authorities (see above); the degree of specificity is another indication of the level of writing (Taavitsainen 2005). It seems possible to trace the transmission of scientific ideas to various audiences by means of a detailed comparison of content and style of writing. More studies on the Latin background and detailed assessments of features of vernacular writing are needed before more definitive conclusions can be drawn.

The citation below is once more from Robert Record's 1547 treatise. In the mid-sixteenth century, there seems to have been an awareness of parallel developments in other European countries. The nationalistic feelings expressed here were advocated as early as Trevisa's prologue. A great deal had happened since, and the time was ripe for a new era to begin. The second quote (see page 00) of Robert Record's prefatory materials continues:

Besydes that, haue we not infinite exa~ples of lerned me~ in Germany, Frau~ce & Spayne, which wrote of Physike in their own to~ge? yea, is not our own England full of exa~ples? How many bokes of practyses, how many Herballes & other lyke bokes of Physicke hath there ben put furth many yeres passed? And yet vnto this day do not lerned wyttes sleepe. How moch is all England bounde to that worthye knyght, & lerned clerke, syr Thomas Elyote, whiche tooke the paynes to buylde a castell of helth for all English men (besides many other goodly bokes that he hath put furth in the vulgare tong) wherby a man may lerne bothe to gouerne him selfe so, that though he escape not all sycknesses quyte, yet he shall eschew the great daungers of them. England may reioyce of soch a knyght: yea, England hath to few that foloweth soch example. But if Englande hadd as many welwyllyng doers, as she hath cruell and spytefull disdayners, then were England the flower of al Realmes in the worlde. (Record 1547, ff. 7r-7v.)

References

Alonso Almeida, Francisco 2005. All Gathered Together: On the Construction of Scientific and Technical Books in 15th-Century England. *International Journal of English Studies* 5(2), 1–25.

- Alonso Almeida, Francisco 2008. Middle English medical books as examples of discourse colonies: G.U.L. Hunter 307. In Isabel Moskowich-Spiegel & Begoña Crespo-García (eds.) Bells Chiming from the Past Cultural and Linguistic Studies on Early English. Costerus NS 174. Amsterdam/New York, NY. Rodopi. 55–80.
- Burton, T.L. (ed.) 1998–1999. Sidrak and Bokkus: A parallel-text edition from Bodleian Library, MS Laud Misc. 559 and British Library, MS Lansdowne 793. Early English Text Society: Oxford University Press for the Early English Text Society. 311–312.
- Cadden, Joan 1993. *Meanings of sex difference in the Middle Ages: Medicine, science and culture*. Cambridge: Cambridge University Press.
- Carroll, Ruth 2003. Recipes for Laces: An Example of a Middle English Discourse Colony'. In Risto Hiltunen & Janne Skaffari (eds.) *Discourse Perspectives on English*. Amsterdam and Philadelphia: John Benjamins. 137–165.
- Crisciani, Chiara 2000. Teachers and learners in scholastic medicine: Some images and metaphors. *History of universities* 15, 75–101.
- Crossgrove, William 1998. Introduction. In William Crossgrove, Margaret Schleissner & Linda Ehrsam Voigts (eds.) *Early science and medicine: A journal for the study of science, technology and medicine in the pre-modern period* 3/2, Special issue: *The vernacularization of science, medicine, and technology in Late Medieval Europe.* 81–7.
- Demaitre, Luke E. 1998. Medical writing in transition: Between *ars* and *vulgus*. In William Crossgrove, Margaret Schleissner & Linda Ehrsam Voigts (eds.) *Early science and medicine: A journal for the study of science, technology and medicine in the pre-modern period* 3/2, Special issue: *The vernacularization of science, medicine, and technology in Late Medieval Europe.* 88–102.
- EMEMT: *Early Modern English Medical Texts* 2010. Compiled by Taavitsainen, Irma, Päivi Pahta, Turo Hiltunen, Martti Mäkinen, Ville Marttila, Maura Ratia, Carla Suhr and Jukka Tyrkkö, with software by Raymond Hickey. Amsterdam: John Benjamins.
- eTK: a digital resource based on Lynn Thorndike and Pearl Kibre, *A Catalogue of Incipits of Mediaeval Scientific Writings in Latin* (Cambridge, MA: Mediaeval Academy, 1963) and supplements. Availble online at <<u>www.medievalacademy.org/BooksOnline.html</u>>
- eVK2: an expanded and revised version of Linda Ehrsam Voigts and Patricia Deery Kurtz, Scientific and Medical Writings in Old and Middle English: An Electronic Reference, CD (Ann Arbor: University of Michigan Press, 2000). Available online at <<u>www.</u> <u>medievalacademy.org/BooksOnline.html</u>>.
- French, Roger 2003. *Medicine before science: The business of medicine from the Middle Ages to the Enlightenment.* Cambridge: Cambridge University Press.
- Getz, Faye Marie 1990. Charity, translation, and the language of medical learning in medieval England. *Bulletin of the history of medicine* 64, 1–17.
- Getz, Faye Marie 1998. *Medicine in the English Middle Ages*. Princeton, New Jersey: Princeton University Press.
- Hoey, Michael 2001. *Textual Interaction: An Introduction to Written Discourse Analysis*. London and New York: Routledge.
- Holbrook, Sue Ellen 1998. A medical scientific encyclopedia 'Renewed by goodly printing': Wynkyn de Worde's English *De proprietatibus rerum*. In William Crossgrove, Margaret Schleissner & Linda Ehrsam Voigts (eds.) *Early science and medicine: A journal for the study of science, technology and medicine in the pre-modern period* 3/2, Special issue: *The vernacularization of science, medicine, and technology in Late Medieval Europe*. 119–56.
- Honkapohja, Alpo 2004. "A Little Jest the Befell in the East"- A Genre Study of Sidrak and Bokkus. MA Thesis. Department of English, University of Helsinki.

Index of Middle English Prose 1995–2008. Handlists 1–18. Cambridge: Boydell and Brewer.

- Jones, Claire 2004. Discourse communities and medical texts. In Irma Taavitsainen and Päivi Pahta (eds.) *Medical and Scientific Writing in English 1375-1500*. Cambridge: Cambridge University Press. 23–36.
- Jones, Peter Murray 1989. Four Middle English translations of John Arderne. In A. J. Minnis (ed.) *Latin and vernacular: Studies in late-medieval texts and manuscripts*. Cambridge: D.S. Brewer. 61–89.
- Jones, Peter Murray 1998. Thomas Fayreford: An English fifteenth-century medical practitioner. In French, Roger et al. (eds.) *Medicine from the Black Death to the French Disease*. Aldershot: Ashgate. 156–83.
- Lawn, Brian (ed.) 1979. The prose Salernitan Questions, Edited from a Bodleian manuscript (Auct. F. 3. 10): An anonymous collection dealing with science and medicine written by an Englishman c. 1200, with an appendix of ten related collections. London: Oxford University Press.
- Lerer, Seth 1985. *Boethius and dialogue: Literary method in The Consolation of Philosophy.* Princeton, N.J.: Princeton University Press.
- MEMT: *Middle English Medical Texts* 2005. Compiled by Taavitsainen, Irma, Päivi Pahta & Martti Mäkinen, with software by Raymond Hickey. Amsterdam and Philadelphia: John Benjamins.
- McVaugh, Michael R. (ed.) 1997. *Guigonis de Caulhiaco (Guy de Chauliac): Inventarium sive Chirurgia Magna*. Vol. 1: *Text*. Leiden, New York and Cologne: Brill.
- McVaugh, Michael R. & Nancy Siraisi (eds.) 1990. *Renaissance medical learning: Evolution of a tradition*. Osiris 2nd series 6. Philadelphia: University of Pennsylvania Press.
- Minnis, Alastair J. 1979. Late medieval discussions of *compilatio* and the rôle of the *compilator*. Beiträge zur Geschichte der deutschen Sprache und Literatur 101, 385–421.
- Minnis, Alastair J., A.B. Scott & David Wallace (eds.) 1988. *Medieval literary theory and criticism c. 1100–c.1375: The commentary tradition*, Revised edition. Oxford: Clarendon Press.
- Mäkinen, Martti 2006. Between Herbals et alia: Intertextuality in Medieval English Herbals. (Diss.) University of Helsinki. Available online at <<u>ethesis.helsinki.fi/julkaisut/hum/engla/</u> <u>vk/makinen/</u>>
- Ottosson, Per-Gunnar 1984. Scholastic medicine and philosophy: A study of commentaries of Galen's Tegni (ca. 1300–1450). Napoli: Bibliopolis.
- Pahta, Päivi 1998. *Medieval Embryology in the Vernacular: The Case of* De spermate. (Diss.) Mémoires de la Société Néophilologique de Helsinki 53. Helsinki: Société Néophilologique.
- Pahta, Päivi 2004. Code-switching in medieval medical writing. n Irma Taavitsainen and Päivi Pahta (eds.) *Medical and Scientific Writing in English 1375-1500*. Cambridge: Cambridge University Press. 73–99.
- Pahta, Päivi & María José Carrillo Linares 2006. Translation Strategies: *De spermate* and *De humana natura*. In Teresa Tavormina (ed.) 2006, 95–117.
- Pahta, Päivi & Irma Taavitsainen 2004. Vernacularisation of scientific and medical writing in its sociohistorical context. In Irma Taavitsainen and Päivi Pahta (eds.) *Medical and Scientific Writing in English* 1375-1500. Cambridge: Cambridge University Press. 1–22.
- Record, Robert 1547. The Vrinal of Physick. Composed by Mayster ROBERT RECORDE: Doctor of Physicke. London: Reynolde Wolfe.
- Seymour, Michael C. *et al.* (ed.) 1975/88. *On the properties of things: John Trevisa's translation of Bartholomaeus Anglicus* De Proprietatibus Rerum. Vol. 1. Oxford: Oxford University Press.
- Seymour, Michael C. et al. 1992. Bartholomaeus Anglicus and his encyclopaedia. London: Ashgate.

- Siraisi, Nancy 1990. *Medieval and Early Renaissance medicine: An introduction to knowledge and practice*. Chicago and London: University of Chicago Press.
- Siraisi, Nancy 2001. Medicine and the Italian universities, 1250-1600. Leiden: Brill.
- Swales, John M. 1990. *Genre Analysis: English in Academic and Research Settings*. Cambridge: Cambridge University Press.
- Taavitsainen, Irma 1988. *Middle English Lunaries: A Study of the Genre.* (Diss.) Mémoires de la Société Néophilologique de Helsinki 47, Helsinki: Société Néophilologique.
- Taavitsainen, Irma 2001a. Changing conventions of writing: The dynamics of genres, text types, and text traditions. *European Journal of English Studies*, Special issue, ed. by Lilo Moessner. 139–150.
- Taavitsainen, Irma 2001b. Middle English recipes: Genre characteristics, text type features and underlying traditions of writing. *Journal of Historical Pragmatics* 2, 85–113.
- Taavitsainen, Irma 2002a. Historical discourse analysis: Scientific language and changing thought-styles. In Teresa Fanego, Belén Méndez-Naya & Elena Seoane (eds.) Sounds, Words, Texts, Change. Selected Papers from the Eleventh International Conference on English Historical Linguistics. Amsterdam and Philadelphia: Benjamins. 201–226.
- Taavitsainen, Irma 2002b. Variation and Formularity: Prefatory Materials in Early Scientific Writing. In Katja Lentz & Ruth Möhlig (ed.) Of Dyuersite & Chaunge of Langage: Essays Presented to Manfred Görlach on the Occasion of his 65th Birthday. Heidelberg: C. Winter Universitätsverlag. 290–304.
- Taavitsainen, Irma 2004a. Transferring classical discourse conventions into the vernacular. In Irma Taavitsainen & Päivi Pahta (eds). *Medical and scientific writing in Late Medieval English.* Cambridge: Cambridge University Press. 37–72.
- Taavitsainen, Irma 2004b. Scriptorail 'house-styles' and discourse communities. . In Irma Taavitsainen & Päivi Pahta (eds). *Medical and scientific writing in Late Medieval English.* Cambridge: Cambridge University Press. 209–240.
- Taavitsainen, Irma 2005. Genres and the appropriation of science: Loci communes in English literature in late medieval and early modern periods. In Janne Skaffari, Matti Peikola, Ruth Carroll, Risto Hiltunen & Brita Wårvik (eds) Opening Windows on Texts and Discourses of the Past. Amsterdam and Philadelphia: Benjamins. 179–196.
- Taavitsainen, Irma & Päivi Pahta 1998. Vernacularisation of medical writing in English: A corpus-based study of scholasticism. In In William Crossgrove, Margaret Schleissner & Linda Ehrsam Voigts (eds.) Early science and medicine: A journal for the study of science, technology and medicine in the pre-modern period 3/2, Special issue: The vernacularization of science, medicine, and technology in Late Medieval Europe. 157–85.
- Taavitsainen, Irma & Päivi Pahta 2000. Conventions of professional writing: The modern medical case report in a historical perspective. *Journal of English Linguistics* 28, 60–76.
- Tavormina, M. Teresa (ed.) 2006. Sex, Aging, & Death in a Medieval Medical Compendium: *Trinity College Cambridge MS R.14.5, Its Texts Llanguage, and scribe.* Tempe: Arizona Center for Medieval and Renaissance Studies.
- The Englishman's Docter or the Schoole of Salerne or Physicall Observations for the Perfect Preserving of the Body of Man in Continuall Health 1607. London: John Helme, & John Busby. 125–148.
- Voigts, Linda E. 1984. Medical prose. In Edwards, A.S.G. (ed.), *Middle English prose: A critical guide to major authors and genres*. New Brunswick, New Jersey: Rutgers University Press. 315–35.
- Wear Andrew 2000. *Knowledge and practice in English medicine, 1550–1680.* Cambridge: Cambridge University Press.

- Webster, Charles (ed.) 1979. *Health, medicine and Mortality in the Sixteenth Century.* Cambridge: Cambridge University Press.
- Wogan-Brown, Jocelyn, Nicholas Watson, Andrew Taylor & Ruth Evans (eds.) 1999. *The idea of the vernacular: An anthology of Middle English literary theory, 1280–1520.* Exeter: University of Exeter Press.