

Corpus of Early English medical writing 1375–1750

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1 Corpus-based genre studies

Scientific writing is a general label with a great deal of variation at any period. Empirical evidence of variation within genres of the early periods has been produced by studies of the Helsinki Corpus of English Texts, as they have shown that umbrella categories like ‘religious treatises’ or ‘scientific writing’ contain very heterogeneous texts (Meurman-Solin 1993, Taavitsainen 1993, 1994a). Multipurpose multigenre corpora like the Helsinki Corpus contain a limited number of texts representing each genre, and thus it is evident that a one-genre corpus with a larger number of texts will yield a more detailed account of the evolution of that particular genre. The new lines of development in stylistic studies applied in corpus linguistics (eg Biber 1988) and discourse analysis (Schiffrin 1994) applied to professional languages provide a good starting point for developing a new approach to corpus-based genre studies. For such applications, we are compiling a corpus of early English medical writing.

2 Scientific writing and thought-styles

Modern scientific writing can be characterized by its lexicogrammatical features (see Halliday and Martin 1993). These conventions are an outcome of a long evolution, with texts building on earlier ones in a continuum. Western science was initiated by the ancient Greek scientists in their search for principles of nature and, at the same time, for principles of argumentation for presenting their ideas. New generations of scientists based their studies on texts written by their predecessors; changes were gradual and took place within the old frame. The line continues from scholasticism to empiricism and then to rationalism, and the outline is characterized by the dichotomy between, on the one hand, science that blindly relies on authorities in contrast to empiricism, and

on the other hand, rationalistic views. Different periods are traditionally connected with different styles of thinking and making decisions. The question of what continued and what changed through different historical contexts remains central in the historical analysis of scientific movements (Crombie 1994:6). Thought-styles change, and the underlying philosophy of science can be verified by analysis of language. Scientific conceptions, objects of inquiry, methods, evaluations, and intellectual commitments are mediated to us through language, both microlevel linguistic features and macrolevel argumentative structures. The co-occurrence patterns of various linguistic features make up the text, and an assessment of textual strategies reveals how knowledge is communicated. For example, striking differences between scholastic writing and empiricism can be verified at the interpersonal level in the involvement features, at the textual level in the way of argumentation and at the ideational level, for instance, in the modality of knowing (Taavitsainen 1994b). Scholastic writing employs prescriptive phrases, impersonal structures and the passive voice in imitation of Latin scientific writings, while texts of the Royal Society period are written as first person narratives with low modality. The issue of vernacularization has received increasing attention lately, and our corpus will help us trace the process in Early English medical writing.

3 A Corpus of Early English Medical Writing

Our intention is to study the evolution of medical writing within the variationist framework of stylistics and discourse analysis. The corpus will serve as material for our research project ‘Scientific thought-styles: the evolution of English medical writing’ (see above), and later on it will be made available to the public. The present size of the corpus is only circa 300, 000 words, but we aim at a total of circa one million words. Shorter texts are included in toto, and in order to have representative material for pilot studies, we have at this point included extracts of circa 10, 000 words from more comprehensive treatises. In the final version of the corpus we aim at including full texts whenever possible, as extracts are not sufficient for all our research purposes. In the first phase, we concentrate on Late Middle English and Early Modern periods.

3.1 Period division

The present time span of the corpus is 1375–1750, and it is divided into two periods (1375–1550 and 1550–1750). The time limits of the late medieval part of the corpus, 1375–1550, do not coincide with the traditional period division made in diachronic studies of English. They are based on relevant extralinguistic criteria in the social history of science: the first year designates the time of the re-appearance of vernacular writings in medicine and the second the break-down of the medieval way of thinking. Texts before 1550 unquestionably repeat the old patterns. The new way of thinking started to penetrate medicine in the latter half of the sixteenth century: old scholastic thinking was still present, but started to be replaced by new patterns of thought and new methodology based on observation. At this point we have not divided these periods further. The introduction of printing could serve as a dividing line in Late Middle English, though the change was perhaps minimal. The first books were general guides to health and plague treatises, frequently found in manuscript books as well. Some of the early prints were translations and some were new compositions (Bennett 1969:97–109). In the Early Modern English period a suitable dividing line could be found for instance in the establishment of the Royal Society (see 3.2.3).

3.2 Classifications of texts

Inherent linguistic variation in the texts of the early periods can be approached from several angles. Language-external factors, such as the level of the authors education, social position, and the target audience, are all reflected in language use. But changes may take place within the genre without any changes in its position; a case in point is scientific writing for a strictly academic audience both before and after the dawn of the new science. Various principles of classification can be applied for anchoring linguistic variation to its sociohistorical and generic background. The underlying traditions, different types of audience, sources, and the subgenres of writing all cause linguistic variation and are possible parameters of the corpus.

3.2.1 Traditions of writing

A good starting point for the assessment of inherent variation in the Late Middle English period is provided by the classification of medical texts according to their different origins (Voigts and McVaugh 1984:

21). Academic textbooks and remedy books are the opposite poles in this characterization, as the underlying traditions are very different. This division looks promising in corpus studies (Taavitsainen 1994a), and lexical studies (eg Norri 1992) have established considerable differences in the terminology between the different types. Our selection of material covers all editions of Middle English medical writing available to us. The range is wide. One end of the scale is represented by translations of learned Latin treatises; remedies as well as verse instructions for healthy living are at the other end. Theoretical treatises form the extreme end of scientific writings, bordering on philosophy. The position of surgical books seems somewhat problematic in this scale. According to Voigts and McVaugh (1984), they belong to the academic tradition, but although these texts mostly originate in learned circles, they have a place among practical sciences as well. The transmission of remedies and guidebooks, such as lunaries, is extremely complicated as they have acquired their extant form according to the needs of the writers, audience, or available materials (Taavitsainen 1988). Some of the recipe collections may have originated from universities, but in general they should be less dependent on foreign exemplars as the native tradition was long and the conventions of writing established early (see Görlach 1992:747).

The basic division derived from medieval writing remains valid to a great extent in Early Modern English, as eg most 16th-century medical books were based on earlier tracts.¹ The Philosophical Transactions established a new tradition with a regulated house-style policy. Our selection of materials for the later periods of our corpus is not yet complete. Our intention is to include various types of writing from academic treatises to handbooks and almanacs, journal articles and experimental essays.

3.2.2 Readership

Another possible way of classifying early scientific writings is according to their audience. The above-mentioned classification of medical writings according to their tradition also reflects this approach, in that university medicine was for physicians of the highest class. Surgical books were intended for practical use by surgeons and barber-surgeons, who were lower in rank, but it is also significant that medieval textbooks contain heterogeneous materials. The Guild Book of the Barber-Surgeons of York from 1486 provides a case in point: it contains theoretical medical treatises alongside practical texts and general advice (Taavitsainen 1994c). The context is an important indication of the position of these texts.

Remedies and medical handbooks for better living were for a large and heterogeneous group and their target audience ranged from lay people and village leeches to academic physicians. Yet, the great majority of readers of medical works in the early periods consisted of medical professionals and the social elite (Slack 1979: 237, 273), and the statement of the 'unlearned' as the target audience in several early printed books cannot be taken at its face value.

3.2.3 *Subgenres of writing*

A new starting point for classifying earlier writings may be adopted from the modern approach to ESP studies: the field is divided into subgenres and the conventions of writing are investigated within them. It is evident that the formation of the conventions of writing and the dynamics of subgenres within professional language deserve special attention. Some of the modern subgenres can be traced to the very beginnings of scientific writing in the vernacular, but the subgenres should be assessed according to realities of the past periods. This becomes more difficult the further back in time we go.

Case reports were a central subgenre in the early periods as the medical teaching consisted of accounts of illustrative and typical cases. Often these reports are found embedded in longer treatises, such as Arderne's early surgical book *Fistula in ano*. Handbooks of medical instructions are another important subgenre. They are often embedded into other types of discourse as well, but distinct 'hands-on' training treatises can be found even within the earliest stratum of medical writing, eg in practically-oriented surgical books.

The patterns change in the 17th century. An examination of the contents of the first issues of the Philosophical Transactions 1665–67 shows a variety of writings in the medical field: experimental articles, anatomical observations, book reviews, and miscellaneous articles. One major category is texts that shape new knowledge and represent 'matters-of-fact', and are thus primary accounts according to the prevailing philosophy of science. The experimental article with its well-defined style forms the core of this group. A second category consists of texts communicating knowledge that has already been reported elsewhere. Discussions and debates about topical issues in science would be a third category, and there may be others as well.

3.2.4 *Vernacularization of medical science: sources*

Vernacularization of scientific writings started in the fourteenth century,

in the aspiring intellectual climate and growing national consciousness of Chaucer's England. Medical codices of the period are often bi- or trilingual. Transfer from Latin to English can be seen in some texts very clearly, as in some treatises the language can change in the middle of a sentence, or between sentences or paragraphs.²

The dominant role of Latin in learned medical writing is self-evident in view of its role in the contemporary academic world in general. The translators of academic texts struggled with many difficulties in finding adequate expressions in English as the genre was new. Recent research into medieval manuscript collections has brought to light a number of previously unknown translations of academic medical treatises, and these have raised interesting socio-historical questions, eg concerning their audience. They provide fruitful new material for the study of the linguistic processes involved in vernacularization in this period, and also for research on the evolution of medical writing in relation to the features of medieval Latin texts, or developments in other vernaculars. The greatest difficulty, however, is that their direct exemplars are often difficult to trace, as much of the Latin tradition remains uncharted. Surgical books consisted mostly of translations as well. The best known examples are Guy de Chauliac's and Lanfranc's surgeries and John Arderne's treatises, but there were also some original compositions in Middle English, eg 'The Fair Book of Surgery' by Thomas Morstede. The most complicated patterns are seen in the transmission of texts that originated in scientific doctrines but gained wider applications and found their ways to other layers of writing. Remedy books and charms can also be traced to Latin sources, and the influence of folk wisdom on written texts has often been exaggerated.

4 The new corpus as a research tool

The above-mentioned classifications are all preliminary and are intended to provide a starting point for further studies. We hope that our research will reveal the relevance of these divisions and their relations to subgenre styles of medical writing. It will also be interesting to see whether the pattern of results obtained by the pilot studies of the Helsinki Corpus will hold true when larger and more mixed materials are assessed.

Notes

- 1 A typical work of the first half of the sixteenth century is Thomas Vicary's *anatomy* from 1548: it is based on a thirteenth-century surgical text of the academic tradition with no major changes.
- 2 Linda Voigts' study (1989) of scientific and medical manuscripts proves this beyond any doubt. Among scientific booklets and manuscripts produced in England in the Late Middle English period, at least 36 are exclusively in Latin, 15 contain both Latin and Middle English material, and the minority is exclusively in Middle English. The proportion of vernacular writing in the medical material of Voigts' survey is somewhat larger. Of the 71 entries studied, 10 are in Latin, 37 are bi- or trilingual, either containing treatises in Latin and Middle English or in Latin, Anglo-Norman and Middle English, and 24 are exclusively in Middle English.

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