



Received 06 May 2011 · Accepted 27 May 2011

Medical case reports and scientific thought-styles

Irma Taavitsainen · University of Helsinki (Finland)

ABSTRACT

This article continues a series of studies connected with the Scientific Thought-styles project (1995-), and discusses the formation of genre conventions of vernacular medical case reports in a long diachronic perspective. The theoretical background is explained first, with accompanying material from medical history and the philosophy of science. The epistemological status of the genre is on the practical side: besides theories, experience is valued, and relating what happened in a typical case of illness is the core function of the genre. In addition, the function of enhancing the efficacy of the cure grows prominent in some texts. Case studies are narratives of illness and endangered human life, and the model of natural narratives (Labov & Waletzky, 1967) can be identified in these stories. The method of analysis is qualitative and relies on illuminative examples from two electronic corpora *Middle English Medical Texts* (2005) and *Early Modern Medical Texts* (2010). The article finishes with a modern example that shows a shift to non-human technical facts.

Keywords: medical writing, scientific thought-styles, genre conventions, stylistic features, narratives, vernacularisation, medical corpora.

To understand the present, and no doubt to foresee the future,
we must take a long and comparative historical view.
(Crombie, 1995, p. 225)

1. Introduction

The above statement is generally valid and applies to scientific writing and its conventions: it is possible to understand present-day practices only if we understand how they have come about, know about past conventions and can relate them to the changing patterns of thought in scientific thinking. Thus ESP in a diachronic perspective is an important theme that offers a potential for various approaches. The object of study, the diachronic development of conventions in scientific and medical writing is extremely rich and fascinating, and there is an abundance of interesting themes to probe into. Looking at the situation from a broader perspective, we are fortunate to have several projects working towards similar goals, as together we can achieve a fuller picture of what took place in the history of scientific writing in various disciplines and various layers of writing.

In this article I shall first outline the position of medicine within the field of science, then describe the Scientific Thought-styles project which has been going on at the University of Helsinki for more than fifteen years.¹ The project aims at

¹ See <<http://www.helsinki.fi/varieng/domains/scientific%20thought.html>>.

describing stylistic changes in medical English in a long diachronic perspective in a multifaceted sociohistorical framework. For our work we have compiled new electronic corpora that provide fresh material of a broad variety and several levels of writing. Two parts have been released for public use: *Middle English Medical Texts* (2005) and *Early Modern English Medical Texts* (released in Dec. 2010). With the help of these new resources we can offer a more detailed and accurate picture of changing thought-styles, and there is a potential for much more. My own studies have long focused on genres and their dynamics (e.g. 1994, 2001a, 2002, 2009a). The empirical part of the article relates to this theme and offers a study of medical case reports in our corpus materials of the diachronic development and functions in English 1375-1700. I shall assess their macrolevel genre functions and genre features in the early periods. My approach is discourse-analytic and qualitative.

2. Science and medicine

Medicine has a special position among sciences as it includes both theory and practice. It has its place among other learned university disciplines and occupations involving technical skills with practical applications, but medicine is important in everyday life, too, as regimens of health and medical advice concern everybody. Medicine counts as a natural science with its theoretical foundations derived from antiquity, systematised and modified by Arab scholars. The rationality created within European culture has been described as “a vision explored and controlled exclusively by argument and evidence” in search of “principles at once of nature, including human nature, and of argument itself” (Crombie, 1995, p. 225). The essence of scientific thinking has been the advancement of knowledge through the identification of soluble problems, depending on expectations arising from antecedent commitments concerning both the nature of things and the style of argument (Crombie, 1995, p. 232). Medicine was the spearhead of the vernacularisation boom in the late medieval period with a great variety of translations, adaptations and even some new compositions in English (see Pahta & Taavitsainen, 2004). Medical texts in English are heterogeneous reflecting their writers’ and readers’ levels of education. Medical practitioners have varied backgrounds from theoretical studies at universities to learning the trade by apprenticeship or even less

formally through imitation and practice, and the audiences range from university-trained doctors to less educated people including women. These differences are evident in the styles of writing.

3. Towards a new history of scientific and medical writing

The Scientific Thought-styles research project builds on an interdisciplinary approach inspired by the philosophy of science and a comparative historical view. The point of departure is a diachronic perspective on scientific thinking, the core question being what has continued and what has changed (Crombie, 1994, p. 6). In broad brush strokes, different periods are connected with different styles of thinking and making decisions recorded in written texts, employing different linguistic and stylistic features, but the picture is much more complicated when different layers of writing are taken into account. In our view, it is equally important to know what has remained constant as what has changed in the development of stylistic features of scientific writing. The kinds of evidence for scientific knowledge vary: scholasticism is logocentric and texts accordingly rely on quotative evidence seen in their frequent use of speech act verbs of saying. The source of knowledge was often “that someone said so”, i.e. the quotative, or “hearsay” as the mode of knowing, and there was a firm reliance on axioms derived from ancient authorities (Taavitsanen & Pahta, 1998). In contrast, empiricism is based on observation, with sensory verbs of perception predominating. In the sixteenth and seventeenth centuries, the new scientist is characterised as “the rational experimenter and observer”, marking a different orientation in which reliance on ancient scientific sources has given way to a new thought-style (Crombie, 1995, p. 231). The approach of scientific thought-styles opens up a challenging research paradigm and we aim to gain new knowledge of the conventions of modern scientific writing and works towards a new history of medical writing. Features that characterise scholasticism and empiricism on the learned level of writing can be established by comparing texts written by scientists with academic qualifications writing for their peers, but this layer is just one of many, and medical ideas and writings for broad heterogeneous audiences are different, as medical texts were not only written within the scientific community for professional use, but also for lay audiences (see Pahta & Taavitsainen, 2010).

This project investigates the development of medical writing with the types and causes of variation and changes in sociohistorical contexts. Linguistic and stylistic features are related to underlying ideology, scientific methodology, traditions of writing, authors' education, and the levels and scope of audiences. Texts are produced in historical contexts to meet the communicative needs of their users, and language-external facts are needed in order to interpret how people in the past negotiated meaning in these texts. Our approach is philologically informed as context plays an important role in all its aspects and levels, from the broad cultural and sociohistorical context, to situational and textual contexts, and the narrow linguistic cotext is also important. Our work relies on empirical bases, and the creation of a three-part electronic database for public use is part of our plan. The new material makes it possible to pose new questions about the subject-matter and illuminate the lines of development of medical writing more accurately in greater detail.

4. The Corpus of Early English Medical Writing (1375-1800)

Our corpus compilation has progressed in stages. The *Corpus of Early English Medical Writing* consists of three diachronic subcorpora, containing a representative sampling of medical writing, ranging from the strata of highest learning to practical health guides written for the general public, reaching even the semiliterate in almanac lore. The composition of each corpus reflects the extralinguistic reality of medical writing during the relevant time period. Some common principles apply to all three, e.g. shorter texts are included in toto and longer texts are represented by extracts, but the periods and the volumes of medical writing are so different that each period has a plan of its own. The new digital age has made the inclusion of images and hyperlinks possible, which open up a new contextualization avenue to corpus compilers. We adopted this approach in the second part and will continue in the third.

4.1. Middle English Medical Texts (MEMT, 2005)

The first component begins with the emergence of the learned register of writing c. 1375 and was originally designed to serve as material for the Scientific

Thought-styles project as we began our studies from the beginning of the vernacularisation boom. This is the time when the first learned scholastic writings were translated into vernacular languages in continental Europe as well as in England. It is not an exaggeration to state that the new computerised database has revolutionised our ideas about the early stages of language for special purposes, and work on authentic source material of the early stages of scientific writing has proved older views to be one-sided and overgeneralised.² The early history has been and is still being rewritten, and instead of Chaucer, we should begin with medical texts of the first vernacularisation boom, such as the *Phlebotomy*, writings of learned surgeons such as Chauliac, Mondeville, and Lanfranc, and texts of classical origins rendered for the first time in the vernacular in the late medieval period.³

MEMT contains vernacular English texts of the scholastic period. It consists mainly of editions of medical treatises from c. 1375 to c.1500, and we made an effort to include everything that was available at the time. In addition, we transcribed some texts from original manuscripts as the early editions were lacking in accuracy, but the texts merited inclusion. MEMT brings a great deal of new material to researchers' use as it contains several unpublished theses and texts that are not readily available elsewhere.

4.2. Early Modern Medical Texts 1500-1700 (EMEMT, 2010)

The second component provides continuity to the first as it begins where MEMT ends, in 1500, and finishes at a point, 1700, which is defined by medical

² But dissemination of knowledge is slow. The 2008 award-winning book on the development of scientific writing in English by David Banks deals with Chaucer's *Astrolabe* (in accordance with Halliday's seminal article from 1988) as the only scientific text from the medieval period, and with Francis Bacon and Robert Boyle as representatives of the 16th and 17th centuries. Thus it completely ignores the wealth of early scientific texts in various fields in English in the late medieval period, and reduces the early modern period to some highlights.

³ A collection of edited vernacular texts from the academic end of the scale was published in 2006 (ed. by Tavormina). This collection was under work at the time when MEMT was published.

history as the final breakthrough of the vernacular along with the shift in balance from Latin to English. EMEMT represents a new way of thinking in corpus compilation in many respects. Like MEMT, it contains a representative selection of texts across the entire field of contemporary English medical writing, ranging from theoretically-oriented texts rooted in academic traditions to popularised and utilitarian texts, with a complete catalogue and short descriptions of each. New features include an image gallery, hyperlinks to online references (subject to subscription), normalised versions of texts with standardised spellings to facilitate the application of corpus linguistic methods, and improved functionalities for statistical analysis and for exporting search results to MS Excel. The corpus was released for public use accompanied by a book, *Early Modern English Medical Texts: Corpus Description and Studies*. This volume gives an introduction to the background, structure, special features and uses of the corpus. It also gives an idea as to how the corpus has previously been explored and how it can be used in the future. EMEMT is organised into six categories represented by a substantial amount of text material that allows various types of research tasks even on the basis of individual categories and comparisons between them.⁴ The categories are based on the fields and topics of texts, and they contain several genres and texts targeted at various user groups. The corpus will also prove useful for researchers in cultural history and the history of science and medicine, and the image gallery provides material for book and art history. A longer diachronic perspective can be achieved by combining material in MEMT and EMEMT, as has been done in this article.

4.3. Late Modern English Medical Texts (LMEMT 1700-1800)

At present we are working on the third component of our medical corpus plan. The 18th century provides a challenge in many respects, not least because

⁴ The categories are: 1) General treatises and textbooks, 2) Treatises on specific topics, 3) Recipe collections and *materia medica*, 4) Regimens and health guides, 5) Surgical and anatomical treatises, and 6) *Philosophical Transactions*. In addition, we have included an Appendix: Medicine in society of texts that are not strictly medical but are related to medicine in various ways.

the material increases in volume and there are overlaps in several areas. As before, we have adopted an inclusive view of the domain so that the corpus covers all possible aspects of medicine, including both elite and household practices. The target size is about the same as in EMEMT. The period represents a transition from the thought-styles of the earlier periods to more modern approaches to medicine, and can perhaps best be categorised as “enquiry as a thought-style”. The goal is to demonstrate a diversified and dynamic picture of English medical writing, with an emphasis on the communicative functions of genres and texts in a sociohistorical frame. The special features of medical history 1700-1800 will be taken into account in the development that led to the emergence of laboratory medicine, stricter professionalisation, and the first employment of industrialised forms of communication to reach mass audiences in the following century (Jones, 2010).

5. Genre dynamics

Genres are created to meet the needs of discourse communities (Swales, 1990) and they undergo change and variation as sociocultural needs change: old genres become adapted to new functions, new genres are created, and genres that have lost their functions cease to exist. Thus genres constitute inherently dynamic cultural schemata used to organise knowledge and experience (Taavitsainen, 2001a). The dynamics are, however, much more complicated as empirical evidence of the early modern period shows that innovations take place in the topmost academic genres, whereas much scientific writing continues in the old vein, and features typical of high learning in the scholastic period acquire new overtones and become adapted for new functions (Taavitsainen, 2009a). The underlying commitments can be seen in genre conventions of medical writing: the commentary is a product of the logocentric style, while the experimental essay records knowledge obtained by observation. The case study with a narrative of the course of illness as its main constituent probes into an essential aspect of human life, namely that life cannot always be perfect regardless of whether the definition of health is based on the balance of humours or absence of sickness. The formation of genre conventions is connected with the search for principles of nature and human nature, and thus

the genre of medical case reports can be regarded as an essential component of medical thought-styles.

As a genre, the case study has continued throughout the history of medical writing with its roots in Latin case reports called *consilia* and *practica*, presenting typical cases of illness and how they should be treated. These genres were cornerstones of medieval teaching at universities. In the vernacular, the institutional functions were lost, and the practical sides became enhanced in genres which came from academia, such as commentaries (Taavitsainen, 2004). The position of case studies was central, and case reports run through MEMT and EMEMT, occurring in various traditions and types of writing, the genre continuing in LMEMT as well.⁵

Case reports bring additional aspects to the genre map of medical writing as narratives are an area where literary and linguistic studies meet.⁶ Case reports can be approached as narratives and their structure can be compared to the patterns of natural narratives established on the basis of empirical material of tape recordings from the 1960s giving people's accounts of events when their lives were in danger. The original research article on natural narratives states that "The basic narrative units ... are defined by the fact that they recapitulate experience in the same order as the original events" (Labov & Waletzky, 1967/1997, pp. 20-21). The model can easily be applied to narrative texts of various sorts. Toolan (1988, p. 148) presents a sequence of questions to be posed in the analysis, and it can also be applied to medical case reports in a diachronic perspective.⁷ In a full form, natural narratives begin with an abstract and a

⁵ A diachronic study of the formation of conventions from the late modern to the present-day has been conducted on a qualitative basis (Taavitsainen & Pahta, 2000).

⁶ On the whole, narrative passages are not very common. In addition to case reports, narratives in medical writing include anecdotes derived from the classical world and religious stories in the late medieval period. In the early modern period, mimetic dialogues with narrative elements are added to the repertoire, and teaching dialogues with literary frames are also encountered (Taavitsainen, 2011).

⁷ Toolan's stages in the narrative are as follows: Abstract: what, in a nutshell, is the story about? Orientation: who, when, where? Complicating action: What happened and then what happened? Evaluation: So what? How or why is this interesting? Result or resolution: What finally happened? Coda: That's it. I've finished and I'm bridging back to the present situation.

statement of orientation, followed by complicating actions and an evaluation section with explanations on why the story is interesting. In addition, there is a transfer point (coda) back to the present, which in the present material means back to the medical treatise proper. Written narratives in correspondence, for instance, in the late medieval and early modern periods follow similar principles: they are structured episodically and reflect on prototypical human experience (Fludernik, 2007). In my analysis I shall pay particular attention to their structure. The assumption is that the stories are told in a simple way in accordance with the principles of natural narratives and with an iconic ordering of events; moreover, it is assumed that they state explicitly what their point is and why it is worth telling.

6. Medical case studies in a diachronic perspective

6.1. Case histories in Latin and the epistemic status of the genre

In the medieval period and subsequent centuries, the core of medical instruction was based on typical cases of disease. Two different but interconnected genres emerged in Latin at the universities in the 13th century. These were *consilia* and *practica*. The genre of *consilia* was modelled from law and consisted of pieces of medical advice on particular cases, offering diagnoses and suggesting therapy (French, 2003, p. 121). *Practica* dealt with particulars of a disease and treatment and became a university genre which received growing intellectual attention. Literature dealing with pestilence, for example, is connected with this genre. Surgical case histories are different and were probably influenced by Arabic models; they were not used in institutional teaching. In their original form in Latin, the specialised core genres of case narratives were used by a small elite group of learned physicians and surgeons at the universities, and thus we cannot expect to find them as such in vernacular texts. Siraisi (2007, p. 65) deals with medical histories, emphasising the epistemological status of narratives of experience, and how the position of medicine with regard to both theory and praxis shows in the narratives. A passage from MEMT shows how medical authorities considered the issue of narrating illness, and it is significant for the

present purpose that the epistemic connection is explained in the vernacular referring explicitly to authorities in the logocentric mode:

And to remoue false opinions of ignorant men, **for witnes I putte experience.** **Auicen**, forsoþ, seiþ, **‘experience ouercomeþ reson’**; and **galien in pantegni** seiþ, ‘No man [\f. 142v\] ow for to trust in reson al-oon but 3it it be **proued of experience.**’ And he seith in anoþer place, **‘Experience without reson is feble, & so is reson withoute experience** fest vnto hym.’ (Arderne, late 14th century/1910, p. 4)

This is a key passage as it reveals the epistemic status of the case narratives of the manifestations and course of illness, and shows that such passages had an important function in vernacular texts, reflecting the underlying thought-style in an important way.

6.2. Late medieval English case studies

Examples of case studies can be found in different layers of writing in the vernacular and the stories vary a great deal. Example (1) demonstrates how narrative passages are embedded in the topmost layer of learned medieval medical writing. The passage originates from the academic level, namely Benvenutus Grassus’ specialised ophthalmological treatise from the earliest phase of vernacularisation. The Latin text is a learned commentary, but in the vernacular the layers become confused and genre features blurred. The passage below shows how unsystematic the references are, and it is difficult to know who the “I” and the “he” are. Both pronouns are likely to refer to Benvenutus who wrote in the first-person singular in Latin, while the third-person pronoun was used by the vernacular translator to refer to Benvenutus in paraphrasing the original text. The narrative tells how the narrator had witnessed the cure, and there is a clear emphasis on the role of experience in gaining knowledge. Besides the pronominal shifts, the most conspicuous linguistic feature is the use of the past tense, which stands out as a marker of the narrative text type of the passage, especially as the surrounding text is expository (see Werlich, 1982):

- (1) **And of thys sekenes I founde** moyste yn Barbarye among the Sarasyns. **And when I was þer, quod he, I founde** women vsyng thys cure: They toke the braunches of the fyg tree and turnyd the eyelyddys, and with the leuys they rubbyd the sore place tyl the eyedys weren all blodye. **And many were amendyd** þerby, but yt lastyd not long. **And som rubbyd** þat fatnes wyth suger; for a tyme þei were amendyd, but soon after yt tornyd ayen into the fyrste estate. (Grassus, late 14th-15th century/1996, p. 70)

Example (2) comes from another learned text from the same period. This specialised treatise contains several extensive narratives. The story below follows the pattern of a natural narrative. It begins with an orientation (a young man), followed by an abstract (infected & cured). The events proceed in chronological order, and the middle of the story contains an emphatic direct quote in which the patient expresses his gratitude and joy at regaining his health. At the end there is an evaluation, explaining why the story is told and why it is significant. A special efficacy statement is provided by the additional qualification “the connyngest man”, which increases the significance of the cure as the community regained its best worker. The final sentence serves the same efficacy function. In general, direct speech quotations are exceptional and give additional weight to the story. As this is a medical treatise, recipes are embedded in the narrative, and there are several layers in the text. In example (2) the storyline is told in bold, and italics are used to mark the linear chronological sequence of events:

- (2) **A yonge man of xxx yere age flegmatic of complection contadiusly was infected & in this wise cured.** ... **he was enionid** to exercese ... **his mete was degestible** as yong moton ... *The day folowing I gave* to hym. [Recipe] ... *that same nyght was geuyn* a clister laxatif and *after that* this pouder folowing thus. [Recipe] *this taken after half a noure* **he slept tyll the moron.** *this done* **he was ioynid** ... *The next day folowing he toke* this syrop [Recipe] *and this toke* ... *ther upon at iij o the clok was ioynid* to a stew ...*on the next day at iij after none* ... and *that same nyght he sayde to his phisician* Syr I thanke good I am hole and delyvered of my grete greuans and weygt ffor now I may lyft my armis to myn hed and I may cast stonis and allso walke withoute a staffe. what sholde I doo more. *then the fyscion sayde* use stylly thy diet and yf thou have not a sege take *beffore soper* a clister & *at v o the clok* agayne take the pouder a fore sayde diapapaveris and *in the mornyng* take the syropp beffore sayde and *at iij o the clok* agayne ...

The sonday he toke his syrop ... This completed all his pustules were anoynted that remaynid ... [Recipe] ... The vij day ... delyverd of all maner of spotts or pokkis and soo whole and went to his labour. and this was the connyng[e]{st{]} man of byldyng of howsys that was in all rome. yet ther was injoind to hym to take certayne days a pill comon of yera ... that it shulde never come agayn. (Torrella, 15th century/1937, p. 466)

Case reports are frequent in John Arderne's surgical treatises. Most of them have an efficacy function. For example, the passage below (3) includes the speech act of boasting in praise of the surgeon's skills. The structure of the narrative follows the pattern specified in connection with natural narratives. It begins with an orientation, but with the surgeon as the main protagonist with details of the time and place of his practice. An abstract about healing follows and the events are told in chronological order with the emphasis on other doctors' failure to provide a cure for the patient. Evaluation includes the narrator's self praise of the perfect cure with additional details of the patient's long life afterwards, as an additional proof of his success. The passage is fairly long, as it mentions the wide renown that the surgeon gained with this cure, and the admiration shown by men of high status. Such passages are not found in present-day case narratives:

- (3) [**I, I**] **John Arderne** fro the first pestilence that was in the 3ere of oure lord 1349 duellid in Newerk in Notyngham-shire vnto the 3ere of oure lord 1370, **and ther I helid many men** of fistula in ano. Of whiche the first was Sire Adam Eueryngham ...; whiche Sire Adam, forsoth, ... 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, þe forseid Adam hastied for to torne hom to his contre. ...

At last **I, forseid Iohn Arderne**, y-sou3t and couenant y-made, come to hym and did my cure to hym and, oure lord beyng mene, **I helid hym perfitley 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 þur3 al ynglond**. And the forseid duke of lancastre and many othir gentile3 wondred ther-of (Arderne, late 14th century/1910, p. 2)

Recipes in remedy books do not contain case reports, although efficacy is an important optional component of the recipe structure in the early periods (Jones, 1998; Taavitsainen, 2001b; Mäkinen, 2011). The conventionalised phrase *probatum est* refers to the value of experience; it occurs ten times in MEMT, as the final remark added to the end of recipes, e.g. "And put in þe iðe of þe clere duringe þre daies at eue and at morwe. And he shal be hole. Probatum est." (Gilbertus Anglicus, 15th century/1991, p. 54).

6.3. Early Modern English case narratives

Konrad Gesner (1516-1565) has been mentioned as one of the Latin authors who employs narratives in his work (Siraisi, 1991). The English translation is from the mid-sixteenth century (1559) and contains several short narratives. Example (4) follows the explanation of the distillation method with an illustration of a vessel used in the alchemical experiment.⁸ The narrative is a description of a chemical process recorded as an eye-witness report. The common denominator of all narrative passages in Gesner's work is the emphasis on experience, and these short narratives are of epistemological importance. The time of writing is of interest here, as the use of the narrative is different from the earlier ones; perhaps this use can be regarded as a predecessor of the way narratives came to be used in the new philosophy of science in the Royal Society period. One of the cornerstones of the new philosophy was the principle of the "matter-of-fact" (Dear, 1991; Taavitsainen & Pahta, 1995). Scientific processes had to be explained in great detail so that others could perform them and achieve the same results. Replicability became a scientific criterion. The short narrative below contains a seed of this way of thinking.

- (4) **Therefore as I did once see it, at the first** a troubled matter runneth oute, caryinge foorthe the more subtill substaunce of the thinge: **after that** a more

⁸ Alchemy overlapped with medicine, as The Philosopher's Stone would provide the ultimate cure for all diseases. Paracelsian medicine focused on chemical and mineral cures.

cleare water commeth oute, **at the last** oyle, whiche delareth the sauoure rather of a thyng burnt **then** of that thinge weroute it ranne. **In this manner the destillation of waters also of herbes and floures may be done:** but that waye is far better which is by descension downwarde &c. ... (Gesner, 1559/1969, pp. 226-7)

In addition to the eye-witness narrative, Gesner's work has some case narratives. Extract (5) is interesting in a different way as it gives evidence of the negative effect of a medicine, and admits fault: the medicine could have been old or preserved in the wrong vessel.

- (5) Alsine...Wemen commend it greatly, and som say **they haue tried it themselues. I saw it of late ministred in vain.** But that **when I tasted it,** had like to haue made me womit perauenture because it was somewhat to old, or els because it was gathered in leaden lembeks. (Gesner, 1559/1969, p. 25)

A text from the latter half of the sixteenth century by Walter Bailey (1529-1592) contains interesting examples with an emphasis on the epistemological function. Example (6) below is very much in line with the scholastic thought-style, as the mode of knowing is hearsay, which was the key to the logocentric thought-style in the late medieval period.⁹ The empirical case report shows the status of narratives as scientific evidence. An eye-witness story is expanded from one case to several, to apply to a number of people as the efficacy of the cure.

- (6) (Arnoldus de Villa nova) ... One (saith he) which was blinde, and did see nothing in long time, by using this wine one yeare, was restored to his sight ... **And there are yet alive** (saith he) **witnesses of good credit, which have made prooffe hereof in themselves,** which could not reade without spectacles, but by the use hereof have recovered their sight to read small letters. (Bailey, 1586/1616/1975, p. 4)

⁹ The author, Walter Bailey, is an interesting author as he shows features that mark incipient changes, e.g. he is one of the first to express the growing disbelief in ancient authorities (Taavitsainen 2002, 2009b).

The narrative in example (7) below provides an expanded efficacy statement. The physician is the central figure narrating the events in the first-person singular. The opening of the narrative contains an assurance of its truth value and a typical story-telling opener “once I met”. Orientation is provided by specifications of the location and the age of the patient. An abstract can perhaps be pinpointed in the words “perfect sight”, as it stands in contrast to the expectations, considering his advanced age, and calls for an explanation. The story itself tells how the patient preserved his perfect eyesight. Efficacy is enhanced here by the statement that the truth of the story was confirmed “by many old men” and witnesses of high rank: the Physician to the Queen and the Bishop of Ireland –their status is meant, of course, to enhance the truth value of the statements.

- (7) **In truth, once I met an old man in Shropshire**, called M. Hoorde, above the age of **84**. yeeres, who had at that time **perfect sight**, and did read small letters very well without spectacles: he told me, that about the age of forty yeare, finding his sight to decay, he did use Eyebright in ale for his drinke, and he did also eat the powder thereof in an egge three dayes in a weeke, being so taught by his father, who by the like order continued his sight in good integrity to a very long age: **I have heard the same confirmed by many old men**. Rowland Sherlooke an Irish man, **Physician to Queene Mary, did affirme to truth**; that a **Bishop in Ireland** perceiving his sight to waxe dim, about his age of fifty yeares, by the use of Eyebright taken in powder in an egge, **did live** to the age of eighty yeares, **with good integrity of sight**. (Bailey, 1586/1616/1975, p. 7)

A different function of case narratives can be found in a professional text on obstetrics translated from French in 1612 (example 8). Experience is emphasised here as well, and warnings are given against overhasty conclusions. The case reports focus on narratives of erroneous judgements and beliefs. The passage deals with the difficulty of defining whether a woman is with child in some cases, and although some of the cases below can be considered sensational, the scientific point is clear and empirical knowledge is enhanced to the mode of knowing, namely learning by others’ experience.

- (8) ...which hath **hapned vnto many men**, that haue beene **well esteemed, both for their learning, and experience**. And wee haue seene the experience

hereof in some women, which were (without all question) thought to be so great, that the Midwife was euen ready to receiue the child: ...The which hapned vnto Mad. P. to her great grieffe, who was deliuered of certaine gallons of water, when she thought assuredly that she had beene with childe. I saw the contrary happen to the daughter of M. Marcel: who was **judged by foure of the chiefe Physitians, and as many Chirurgions, and two Midwiues**, not to haue beene with childe; and yet being dead, there was found in her body, a child betweene six and seuen months old. And **of late memorie, some of the most expert Physitians, and Chirurgions of our time**, vndertooke the cure of an honest woman; and from the third vntill the eighth moneth of her time, administred vnto ...At length in the ninth moneth, she thinking that she had had the Chollicke, was brought a bed of a faire daughter, being verily perswaded euen then when she was in trauaile that she was not with child, as she had assured vs, all the time that she went. ...**The ancient and moderne writers** haue left some signes whereby we may foretell it, which are collected from the Husband, from the Wife, from the Child, and from the Midwife. (Guillemeau, 1612, pp. 2-3)

My last example (9) comes from Shakespeare's son-in-law from the year 1657. It is a concise story from his famous notebook. His collection contains narratives of various length, but mostly they are concise like the one below concerning his patients' diseases, and their cures and effects. All these stories are told in much the same way, conforming to the pattern of natural narratives. The orientation is given at the beginning, but in contrast to John Arderne, for instance, the patient is the main focus, not the physician, and the patient's details are given. An abstract follows (was cured thus). The events proceed in chronological order, and an evaluation concludes the passage.

- (9) **Mrs. Smith of Stratford upon Avon, aged 54, being miserably afflicted with a hot Distillation in her Eyes, so that she could not open them in the morning, was cured thus.** *First there was administred for four nights together when she went to bed, [Recipe] ... In the interim, to the Eyes was applied the following [Recipe] Of which there was dropt one or two drops into the Eyes, laying upon them all night a double linnen Rag wet in the same; this mitigated the heat. After I commanded to distill one or two drops of the following into the eyes twice or thrice a day: [Recipe] By these she was cured.* (Hall, 1657, p. 4)

7. Conclusions

This brief outline of the diachronic development of the genre shows how case narratives were an essential part of early English medical writing in the late medieval and early modern periods. The epistemological status of the genre is explicitly explained in the vernacular: besides theories, experience is valued, and transmitting medical knowledge by relating what happened in a typical case of illness is the core function of the genre. The practical side of the profession is emphasised. Case narratives were employed for other purposes as well, and the function of enhancing the efficacy of the cure grows prominent in some texts. In some rare cases the narratives could help to improve the methods of making medicine, as erroneous attempts in preparing some concoctions are also included.

The above examples showed that the pattern of natural narratives can be detected in the early case reports, which is not surprising as these stories are life stories and relate to fundamental aspects of endangered human life. In the history of medicine, case reports remained important until the statistical approach changed the epistemological status of individual case reports from the common core to reviews of exceptional and rare courses of illness. The development took place in the nineteenth century, with a transfer from individual cases to multiple case reports and statistical assessments with probabilities.

The most striking change in these narratives concerns the doctor's role. John Arderne does not hesitate to praise his own skills and elements of boasting are clear. In his text the protagonist is the surgeon, not the patient. The examples from the early modern period quoted in this article take the patient's side, but the development of the genre has several characteristics. According to our previous study (Taavitsainen & Pahta, 2000), several case studies in the nineteenth century contain two intertwining narratives, one of the patient and the other of the doctor, and often the latter is the more dominant. Present-day case reports tell the story from the patient's point of view and assume an impersonal tone. The emphasis is on the disease and its course, and the natural narrative pattern does not apply as the emphasis has shifted to the non-human facts of test results and laboratory findings. The following extract displays the conventionalised

genre features of a modern case report, given as a regular column “case reports”, as in the following example:

A 62-year-old lady presented with a 2-week history of lower abdominal pain and loss of appetite. Her past history included chronic obstructive pulmonary disease (COPD). Clinic examination showed a 16 weeks size firm mobile mass in the lower abdomen. The transabdominal scan revealed a 9 x 9 x7 cm multicystic... CA 125 level was 615 UI/ml. The abdomino-pelvic magnetic resonance imaging (MRI) showed a large complex mass ...The CT scan revealed ...The patient was scheduled for surgery ... (Bats et al., 2010, p. 1362)

Case studies are a regular feature in several specialist journals and they still play an important, though different, role in medical education, centuries after their first emergence in the vernacular. They do not belong to the core of medical teaching as they did in the early periods, but bring forth unusual manifestations of illness, which are worth paying attention to. Thus the epistemic function of enhancing experience remains valid.

References

Corpora

- Middle English Medical Texts.*** (2005). CD-ROM with MEMT Presenter software. I. Taavitsainen, P. Pahta & M. Mäkinen (compilers). Amsterdam & Philadelphia, PA: John Benjamins.
- Early Modern English Medical Texts.*** (2010). CD-ROM with EMEMT Presenter software. I. Taavitsainen, P. Pahta, T. Hiltunen, M. Mäkinen, V. Marttila, M. Ratia, C. Suhr & J. Tyrkkö (compilers). Published together with I. Taavitsainen & P. Pahta (Eds.), *Early Modern English medical texts: Corpus description and studies.* Amsterdam & Philadelphia, PA: John Benjamins.

Primary sources

- Arderne, J.** (late 14th century/1910). *Treatises of fistula in ano, haemorrhoids, and chylsters by John Arderne* (Early English Text Society O.S. 139.), (D. Power, Ed.). London: Kegan, Paul, Trench, Trübner & Co.
- Bailey W.** (1586/1616/1975). *Treatises concerning the preservation of eie-sight. The first written by Doctor Baily sometimes of Oxford: the other collected out of those two famous phisicians Fernelivs and Riolanus* (4th ed.). Oxford: Ioseph Barnes for Iohn Barnes. Reproduced in facsimile in *The English experience* No. 709. Norwood, NJ & Amsterdam: Walter J. Johnson and Theatrum Orbis Terrarum.
- Bats, A. S., Rockall, A. G., Singh, N., Reznek, R. H. & Jeyarajah, A.** (2010). Perforation of a malignant ovarian tumor into the recto-sigmoid colon. *Acta Obstetricia et Gynecologica Scandinavica*, 89, 1362-1363.
- Gesner, C.** (1559/1969). *The treasure of Evonymvs, conteyninge the vvonderfull hid secretes of nature, touching the most apte formes to prepare and destyl medicines, for the conseruation of helth:...* London: Iohn Daie. Reproduced in facsimile in *The English experience* No. 97. Amsterdam & New York, NY: Theatrum Orbis Terrarum and Da Capo Press.
- Gilbertus Anglicus.** (15th century/1991). *Healing and society in medieval England: A Middle English translation of the pharmaceutical writings of Gilbertus Anglicus.* (F. M. Getz, Ed.). Madison, WI: The University of Wisconsin Press.
- Grassus, B.** (late 14th-15th century/1996). *Benvenutus Grassus, the wonderful art of the eye: A critical edition of the Middle English translation of his De probatissima arte oculorum.* (L. M. Eldredge, Ed.). East Lansing, MI: Michigan State University Press.
- Hall, J.** (1679). *Select observations on English bodies of eminent persons in desperate diseases. First written in Latin by Mr. John Hall, physician: After Englished by James Cook, author of the Marrow of chirurgery. To which is now added, an hundred like counsels and advices, for several honourable persons: By the same author...* London: J. D. for Benjamin Shirley.
- Torrella, G.** (15th century/1937). An early English manuscript on syphilis: A fragmentary translation from the second edition of Gaspar Torrella's *Tractatus cum consiliis contra pudendagram seu morbum gallicum.* (E. L. Zimmermann, Ed.). *Bulletin of the Institute of the History of Medicine*, 5, 461-471.

Secondary sources

- Banks, D.** (2008). *The development of scientific writing: Linguistic features and historical context*. London & Oakville: Equinox.
- Crombie, A. C.** (1994). *Styles of scientific thinking in the European tradition: The history of argument and explanation, especially in the Mathematical and Biomedical Sciences and Arts* (Vols. 1-3). London: Duckworth.
- Crombie, A. C.** (1995). Commitments and styles of European scientific thinking, *History of Science*, XXXIII, 225-238.
- Dear, P.** (1991). Narratives, anecdotes, and experiments: Turning experience into science in the seventeenth century. In P. Dear (Ed.), *The literary structure of scientific argument: Historical studies* (pp. 135-163). Philadelphia, PA: University of Pennsylvania Press.
- Fludernik, M.** (2007). Letter as narrative: Narrative patterns and episode structure in early letters, 1400 to 1650. In S. Fitzmaurice & I. Taavitsainen (Eds.), *Methods in historical pragmatics* (pp. 241-66). Berlin & New York, NY: Mouton de Gruyter.
- French, R.** (2003). *Medicine before science: The business of medicine from the Middle Ages to the Enlightenment*. Cambridge: Cambridge University Press.
- Halliday, M. A. K.** (1988). On the language of Physical Science. In M. Ghadessy (Ed.), *Registers of written English: Situational factors and linguistic features* (pp. 162-178). London & New York, NY: Pinter Publishers.
- Jones, C.** (1998). Formula and formulation: "Efficacy phrases" in Medieval English medical manuscripts, *Neuphilologische Mitteilungen*, 99, 199-209.
- Jones, P. M.** (2010). Talk at a symposium on Late Modern English medical texts at the University of Helsinki, 22 October.
- Labov, W. & Waletzky, J.** (1967/1997). Narrative analysis: Oral versions of personal experience. In J. Helm (Ed.), *Essays on the verbal and visual arts: Proceedings of the 1966 annual spring meeting of the American Ethnological Society* (pp. 12-44). Seattle: American Ethnological Society. Reprinted in *The Journal of Narrative and Life History*, 7, 3-38.

- Mäkinen, M.** (2011). Efficacy phrases in Early Modern English medical recipes. In I. Taavitsainen & P. Pahta (Eds.), *Medical writing in Early Modern English* (pp. 158-178). Cambridge: Cambridge University Press.
- Pahta, P. & Taavitsainen, I.** (2004). Vernacularisation of scientific and medical writing in its sociohistorical context. In I. Taavitsainen and P. Pahta (Eds.), *Medical and scientific writing in late medieval English* (pp. 1-18). Cambridge: Cambridge University Press.
- Pahta, P. & Taavitsainen, I.** (2010). Scientific discourse. In A. H. Jucker & I. Taavitsainen (Eds.), *Historical pragmatics* (pp. 549-586). Berlin & New York, NY: Mouton de Gruyter.
- Siraisi, N. G.** (1991). Girolamo Cardano and the art of medical narrative. *Journal of the History of Ideas*, 52(4), 581-602.
- Siraisi, N. G.** (2007). *History, medicine, and the traditions of Renaissance learning*. Ann Arbor, MI: University of Michigan Press.
- Swales, J.** (1990). *Genre analysis: English in academic and research settings*. Cambridge: Cambridge University Press.
- Taavitsainen, I.** (2001a). Changing conventions of writing: The dynamics of genres, text types, and text traditions. *European Journal of English Studies*, 5, 139-150.
- Taavitsainen, I.** (2001b). Middle English recipes: Genre characteristics, text type features and underlying traditions of writing. *Journal of Historical Pragmatics*, 2, 85-113.
- Taavitsainen, I.** (2002). Historical discourse analysis: Scientific language and changing thought-styles. In T. Fanego, B. Méndez-Naya & E. Seoane (Eds.), *Sounds, words, texts and change: Selected papers from 11 ICEHL, Santiago de Compostela, 7-11 September 2000* (pp. 201-226). Amsterdam & Philadelphia, PA: John Benjamins.
- Taavitsainen, I.** (2004). Transferring classical discourse conventions into the vernacular. In I. Taavitsainen & P. Pahta (Eds.), *Medical and scientific writing in Late Medieval English* (pp. 37-72). Cambridge: Cambridge University Press.
- Taavitsainen, I.** (2009a). The pragmatics of knowledge and meaning: Corpus linguistic approaches to changing thought-styles in Early Modern medical discourse. In A. H. Jucker, D. Schreier & M. Hundt (Eds.), *Corpora: Pragmatics*

and discourse. *Papers from the 29th International conference on English language research on computerized corpora (ICAME 29)* (pp. 37–62). Amsterdam & New York, NY: Rodopi.

- Taavitsainen, I.** (2009b). “Joyful News out of the Newfound World”: Medical and scientific news reports in Early Modern England. In A. H. Jucker (Ed.), *Early Modern English news discourse: Newspapers, pamphlets and scientific news discourse* (pp.189-204). Amsterdam & Philadelphia, PA: John Benjamins.
- Taavitsainen, I.** (2011). Narratives as literary commonplaces in Late Medieval and Early Modern medical writing. In G. Olsen (Ed.), *Current trends in narratology* (pp. 254-273). Berlin & New York, NY: De Gruyter.
- Taavitsainen, I. & Pahta, P.** (1995). Scientific ‘thought-styles’ in discourse structure: Changing patterns in a historical perspective. In B. Wärvik, S. K. Tanskanen & R. Hiltunen (Eds.), *Organization in discourse: Proceedings from the Turku Conference* (pp. 519–29). Turku: University of Turku.
- Taavitsainen, I. & Pahta, P.** (1998). Vernacularisation of medical writing in English: A corpus-based study of scholasticism. *Early Science and Medicine*, 3, 157–85.
- Taavitsainen, I. & Pahta, P.** (2000). Conventions of professional writing: The modern medical case report in a historical perspective. *Journal of English Linguistics*, 28, 60-76.
- Tavormina, T.** (Ed.). (2006). *Sex, aging, & death in a medieval medical compendium: Trinity College Cambridge MS R.14.52, its texts, language, and scribe.*
- Toolan, M.** (1988). *Narrative: A critical linguistic introduction* (London: Routledge).