

PUNCTUATION IN EARLY MODERN ENGLISH SCIENTIFIC WRITING:
THE CASE OF TWO SCIENTIFIC TEXT TYPES IN GUL, MS HUNTER 135¹

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ABSTRACT

Among the different topics studied by palaeography, punctuation has traditionally been disregarded by scholars for being considered arbitrary and unsystematic (Salmon 1988: 285). However, some studies carried out over the last few decades have demonstrated that the English punctuation system underwent a process of standardisation which started in the Middle English period, from a purely rhetorical to a grammatical function. Moreover, it was towards the sixteenth century when a set of punctuation marks was introduced (i.e. the semicolon), a fact that restricted the functions of major punctuation marks up to that time, such as the period and the comma (Salmon 1999: 40). The present paper analyses the punctuation system in Glasgow University Library, MS Hunter 135 (ff. 34r–121v), a volume that is most suitable for such a study as it contains two different text types belonging to the genre of medical writing: a surgical treatise and a collection of medical recipes. The results confirm that the different punctuation marks are unevenly distributed in the texts under study and, more importantly, their main functions are found at different levels within the text.

Keywords: Early Modern English; scientific writing; punctuation; palaeography; corpus linguistics.

1. Introduction

Punctuation may be defined as “the practice, art, method, or system of inserting points or ‘stops’ to aid the sense, in writing or printing” (*OED* s.v. *punctuation*,

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n. 3.a). However, there has been some controversy as to the functions of these ‘stops’ in the history of English, being generally considered as arbitrary and unsystematic (Salmon 1988: 285; Rodríguez-Álvarez 1999: 27–30; Alonso-Almeida 2002: 207–210; Calle-Martín 2004: 407–422).

It would be neither possible, nor particularly rewarding, to attempt a detailed analysis of the punctuation of individual writers in this period, since so much depended on education, on the writer’s purpose and general predilections (Salmon 1999: 31).

Even though the conventions of punctuation started to standardise due to the circulation of printed texts, Salmon (1999: 40) argues that “the period is one of experiment and uncertainty in the use of some of these punctuation marks which, to some extent, depends on the preference of the individual compositor”, hence the need of individual approaches to the phenomenon. In spite of the historical disregard, the topic attracted the attention of scholars towards the end of the twentieth century, who proposed several categorisations of punctuation, i.e., rhythmical versus logical, rhetorical versus grammatical, or elocutionary versus structural (Lucas 1971: 2–3). Approaches to individual texts, furthermore, demonstrate an evolution from the rhetorical to the grammatical in the history of English.³ In Old English, for instance, Calle-Martín and Miranda-García found a rhetorical use of punctuation in the *Apollonius of Tyre* (2005a; see also Mitchell 1980 for the modernization of OE punctuation). In Middle English, Arakelian’s analysis of the punctuation system in a biographical treatise demonstrates that the grammatical function predominates (1975). In this same vein, Rodríguez-Álvarez (1999) and Calle-Martín and Miranda-García (2005b) accounted for the structural functions of punctuation in fifteenth-century vernacular deeds and a Middle English arithmetical treatise, respectively. Finally, studies in early Modern English punctuation by Alonso-Almeida and Ortega-Barrera (2014) in sixteenth-century medical recipes and by Calle-Martín and Miranda-García (2007) and Calle-Martín (forthcoming) in sixteenth-century handwritten and printed legal material corroborate the diachronic transition of English punctuation, from rhetorical to structural purposes.⁴

³ According to Lucas, “the historical development of the use of punctuation in English seems to be a gradual process of re-drawing the boundary-line in favour of structural (and expository) at the expense of elocutionary territory” (1971: 4).

⁴ In the sixteenth century, a number of punctuation marks are introduced (i.e. the semicolon) and, more importantly, “punctuation ceases to be regarded primarily as a guide to the spoken language and becomes an aid to clarity in the printed work” (Salmon 1999: 40). In this vein, Dawson and Kennedy-Skipton state that the punctuation system “fully developed by the end of the 16th century, and in the course of the early Modern English period scribes

It must be noted that all the studies on early Modern English material have approached the topic by focusing on a single text type, leaving no room for the comparison with other text types produced in the same period and belonging to the same genre. For the purpose of this paper, an early Modern English scientific manuscript has been selected as source of evidence. The selection of such material seems to be most appropriate for the objectives of the present paper, as not only was it created towards the middle of the sixteenth century (a moment in which, according to the above-mentioned scholars, the functions of punctuation started to standardize for the sake of a more grammatical nature), but it also contains two treatises belonging to different traditions within early Modern English scientific writing, i.e. a surgical treatise and a collection of medical recipes (which will allow for the detection of textual variation in the use of punctuation). Thus, the present paper has been conceived with the following structure: Section 2 offers the methodology and presents the manuscript under study; Section 3 deals with the definition of genre and text type, crucial to understand the differences between the two treatises under study; Section 4 provides the analysis, where the use of the different symbols of punctuation is described and the punctuation systems in both treatises are compared to each other; and, finally, the discussion and the conclusions are put forward in Section 5.

2. Methodology and source of evidence

The present research stems from a Spanish research project based at the University of Málaga, where a group of historical linguists work in collaboration with other national and international universities, among which we can find Murcia, Oviedo, Glasgow, Oslo, and Poznań. The aim of the project is twofold: 1) to prepare semi-diplomatic editions freely offered online together with the high-resolution images of the original manuscripts; and 2) to compile a normalised and POS-tagged corpus of early Modern English scientific writing.

The source of evidence for the present study is MS Hunter 135 (henceforth H135), a case in point in the production of early Modern English scientific writing containing a version of Guy de Chauliac's surgery with interpolations of Henry de Mondeville and others, and a collection of medical recipes (Voigts 1995: 261). In the former, the author provides the patient with medicines to heal the injury, apart from the surgical operation itself, whereas in the latter a list of remedies for different maladies is provided.

employed the punctuation symbols that we use today, albeit with noticeable differences" (Dawson and Kennedy-Skipton 1968: 18; see also Petti 1977: 25).

H135 is housed in Glasgow University Library. Referenced MS Hunter 135 (T.6.17), it is a sixteenth-century volume containing five treatises, the second and approximately half the third being the object of study in the present paper, that is, ff. 34r–121v (Young and Aitken 1908: 122)⁵.

- *Medica Qvaedam* (ff. hv–32v), Latin and English by unknown author⁶.
- *De Chirvrgia Libri IV* (ff. 34r–73v), English by unknown author.
- *Medica Qvaedam* (74r–159v), Latin and English by unknown author.
- *Practica Chirvrgiae* (ff. 159v–208v), Latin by John Arderne.
- *Medica Qvaedam* (ff. 208v–234v), Latin and some English by unknown author.

38,830 words, punctuation included, were transcribed, normalised, POS-tagged and, by means of *AntConc 3.4.4* (Anthony 2014), all the concordances of the punctuation marks in H135 were subsequently retrieved. These concordances were then exported to an Excel spreadsheet and classified according to the punctuation mark (period, comma, etc.). Finally, the instances of each punctuation symbol were analysed in the light of their use in the text.

3. Genre and text type: a working definition

The text types under study belong to the same genre and, therefore, were created in the same context. The idea of context is related to the fact that each form of communication, whether written or spoken, has a purpose that ultimately determines its nature. Thus, different purposes will feature different characteristics and structure; hence the possibility of identifying the intentions of the sender of the message by the way language is constructed (Eggs 1994: 4).

Taavitsainen's study of medical writing in late Middle and early Modern English views genres as "inherently dynamic cultural schemata used to organise knowledge and experience through language. They change over time in response to their users' sociocultural needs" (2001: 139–140; see also Taavitsainen 2004: 75).⁷ This definition fits perfectly with the historical development of early English

⁵ These two texts constitute the English component of H135: a surgical treatise (19,348 words) and a collection of medical recipes (19,482 words).

⁶ This part of the manuscript is mainly composed of an alchemical treatise (ff. 3v–23v) in Latin and English as well as a geographical treatise (ff. 24r–32v) in English.

⁷ Taavitsainen proposes a similar definition of genres, seeing them "as a mental frame in people's minds which gets realised in texts for a certain purpose in a certain cultural context" (2001: 140). Taavitsainen also connects genres to the idea of appropriation, "the process by which meaning is negotiated and produced and the ways in which discourses affect the reader and lead to a new form of comprehension of oneself and the world" (2004:

medical writing, as it was during the fourteenth and fifteenth centuries when texts of this kind started to be created in English for the first time, and the genre conventions had to be created. In this period, we witness a shift from Latin and/or French to English as the lingua franca of science in Tudor England (Pahta 2001: 205–206). Socially-biased as they are considered to be, genres vary and new genres are created when they are needed in society.

Text types, on the other hand, represent the linguistic realisations of genres, that is, they contain a series of linguistic features that may or may not belong to a common genre. Given this, a genre or register can contain different text types which may share the specific schemata of their genre and, at the same time, contain different linguistic features.⁸ Consequently, text types differ from genres in that the former are characterised by their internal linguistic elements whereas the latter are shaped by way of extra-linguistic features (Biber 1988: 70; see also Lehto 2015: 31).⁹ According to Taavitsainen, a text type is

a codification of linguistic features, but its individual members contain these features in various degrees in various combinations. Text types are heterogeneous, the borderlines are fuzzy and the features overlap. Some prototypical text type features, such as sentence forms, have been identified, but the actual texts seldom exhibit these in pure form. Thus, the analyst has to go further and consider the overall structure and purpose of the text (2001: 142; see also Taavitsainen 2004: 75).

If this categorization is applied to medical writing, medical texts for learned and lay people employ different linguistic features and vocabulary, as context is made up of different layers that include the micro-level co-text (linguistic features) and the cultural, intellectual and historical macro-level (genre conventions) (Taavitsainen & Fitzmaurice 2007: 25–26; Taavitsainen 2011: 95).¹⁰ Thus, different text types may accelerate the diffusion of certain linguistic

76). This being so, the meaning of different texts would be recreated any time they are read for the first time by a different reader.

⁸ The term register has been employed by Claridge to refer to a broader category which comprises “both oral and written productions based in particular on situational, social, and professional contexts and the field or domain of discourse”, i.e., the scientific register (2012: 238).

⁹ According to Kohonen (2001a: 197), the definition of text type has been historically divided into two different aspects. On the one hand, analysing texts in terms of extra-linguistic parameters (addressor, addressee, purpose, discourse situation, etc.). On the other, analysing texts in terms of formal parameters, that is, the co-occurrence patterns of morpho-syntactic features (Biber 1988). In the present study, however, those studies within the first aspect are considered to belong to genre studies, whereas those within the second aspect are identified as text type approaches.

¹⁰ In the present paper, the surgical treatise and the collection of medical recipes present divergences in the use of macro-textual (i.e., textual organization) and micro-textual punctuation.

features, where “the linguistic patterns of texts associated with an important and powerful institution seem to spread much more easily than those of other, less prestigious texts” (Kohnen 2001b: 115).¹¹

4. The inventory of punctuation symbols and their functions in H135

The following punctuation symbols were found in H135: the period (.), the comma (,), the perioslash (/), the virgule (/), the colon (:), the semicolon (;) and the parenthesis ((-)).

4.1. The period¹²

The punctus became, according to Parkes, the most common punctuation mark after the twelfth century, “used to indicate all kinds of pauses, to introduce quotations, and to separate” (1992: 42, 1978). Towards the fifteenth century, however, the functions of the period narrowed down to barely the flagging of sentence boundaries, as the full stop nowadays does (Petti 1977: 25). In H135, there are 113 instances of the period in the surgical treatise and 340 in the medical recipes. At the sentential level, the period is found to have the following functions:¹³

a) *After titles:*

- (1) To cleare Eies which ar not sore. Take rew, vervine, rede roses celidonie still them and this water is goodd./ For the fever quotidian, tertian or quartane Take monfeare camamile bursa pastoris rede nettell (f. 76r).

b) *To mark off the end of a section:*¹⁴

- (2) And whethe apposteme is done awaie and the woun chaungid again to his first kynde, then heale it lyke as other woundes. Off restoringe of good fleshe in a wounde The causes whre the fleshe is not sonne restorid and genderid againe in a wound are thre (f. 58v).

¹¹ Kohnen describes the function of text types as “that of a catalyst, i.e. as an agent which facilitates a change and is responsible for the spread, but not for the origin of a construction” (2001b: 111).

¹² In the present paper, the terms ‘period’ and ‘punctus’ are used interchangeably to refer to the period.

¹³ Note that the original line division has not been preserved in the examples of this paper.

¹⁴ The term ‘section’ is employed in the present paper to refer to the different parts of the texts under study. In the case of the surgical treatise, these parts would be dedicated to different surgical operations as well as the treatments needed to heal the wounds. Within the collection of medical recipes, in turn, the term section is employed to refer to the different recipes contained in it.

- (3) And when thou wilt gilt any mettell heet it a litill in the fier and ley thervpone thie water so ioned with a fether and let it drye. For the sawce flewin Take dragance when he is moost brimmest roote and all and drie it in the soone (f. 113v).
- c) *To mark off the beginning of a new statement:*
- (4) then ley thervpon lynet wet in the white of an egge and oyle of Roses together and when the ache and priking is debatid heale it vp with vnguentum viride and of the canker in fleshlie places I shall speake hereafter. Scropules do springe in the neck and in the throate and in the liskes and glandules also and for to knowe glandules and Scrophule (ff. 50v–51r).
- (5) for the megryne or forehede wark. Take the white of dove dounge musterd sede and pepper. bray them all together and in braying temper yt with good stronge viniger vntill it be plaister like (f. 81v).
- d) *To precede sequential markers:*
- (6) Throughe Slyding or falling it with a stroke the foote is somewhiles brought furth of ioint and in this manner thou ought to bring it again. First thou shalt make the patient to sit vpon his ars and cause a man to hould the same legg wherof the foote is out of ioint (f. 70v).
- (7) Take a pound of new yalew wax or as mucche as you will and let it melt on the fier in a cleane pan And then poore yt into another pan or dishe wherin must be malmesey muscadell or other whyte wyne that is vere good. after take it owt of the wine, and melt it again (f. 118v).
- e) *To precede coordinate sentences:*
- (8) Therefore we may fret awaie the cankers with corrosyves and burninges and cutting. And note that sometime the lypes of the Canker on thes places spredithe abrode and somewhiles are strait together (f. 71r).
- (9) and throw a litill salt theron then take furthe thy honie while it is warme and vpon that trencher maike therof four rolls as long but not so big as thy litle finger. And let the patient or for him thrust one of the rolles over the head in his fundament (f. 78r).
- f) *To precede adverbial clauses:*
- (10) presse yt downe fast thowhe which pressinge ther shall comme oute oyle which kepe to thie vse. For it is wondrousfull precieuse for all manner of morfews (f. 45v).

(11) And within iiijor daies þe hole of the wound shall seme larger and the matter which did hing furthe shall be sowple and easie to be put vp. When it is vp trins yt suerlie with a cod. And giue this drynke folowing (f. 77r).

g) *To precede relative clauses:*

(12) I thinke to speake of stein apostemes which grow vnder the armehooles and in the share as it were pestilenc sores or bothes and those are yncurable. which sucertith and akithe and burnith so muche that the patient may not slepe wherthroughe the patient hath a sharpe fever (f. 49v).

(13) then for want of breathe drawing he startithe furthe of his slepe like one affrayed and pantith for want of winde lyke a man whose mynde were almost gone. which in Continewance of few wekes is nedie deathe for want of slepe if the patient gan get no remedye And I haue knowen one dye (f. 88r).

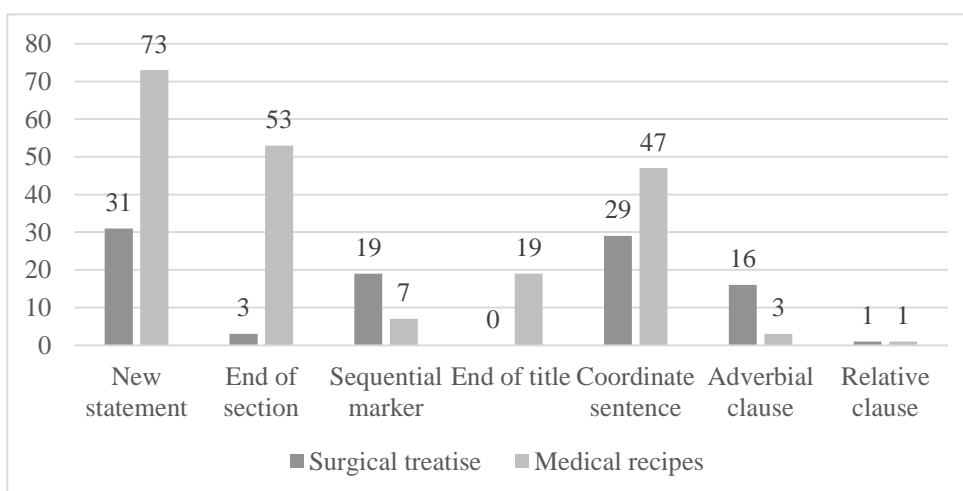


Figure 1. Functions of the period at the sentential level in H135

As observed in Figure 1,¹⁵ the period occurs with different distributions in the surgical treatise and the collection of recipes. On the one hand, the period is more widely used in the medical recipes for the introduction of new statements, the marking off of sections and titles and the precedence of coordinate

¹⁵ Due to the equal word-counts of the texts under study (19,348 and 19,482 words in the surgical text and the collection of recipes, respectively), the findings in this section are provided in raw figures.

sentences. In the surgical treatise, on the other hand, it is more frequently witnessed before sequential markers and adverbial clauses.

In addition to these uses, the period is also used at clause level with two different functions:

a) *To list the ingredients in a series:*

(14) Take tartur and powder of musterd sede of either iiij penyweight. powder of pepper, allome calcionid od eche ij peny weight, borace viij penyweight powder (f. 45r).

(15) Take half a pound of of Rosen. half a pound of parrosen. virgin v pennywaight. wax and frankensence of ether a quarter of a pound. ij drammes of Comfere an ounce of mastick of hart tallow a quarter of a pound maike powder of them (f. 106r).

b) *To precede units of measure:*

(16) Then put vpon the said water 3. pounds. of your said grownd malt letting it stand soo an howre or moore without styrring And immediatlye vpon the emptijng of your furnes haue redye 30 gallons moore which you must seethe as the fyrst Then pull vp your tapp (f. 120v).

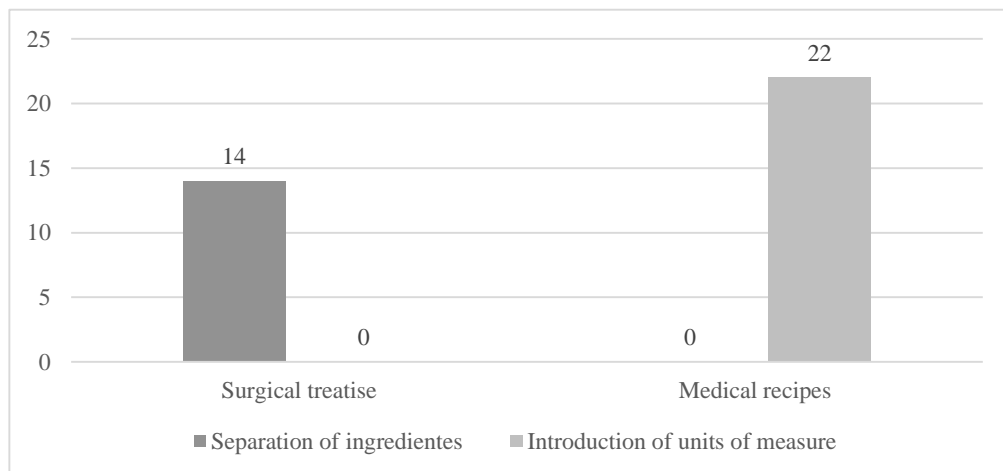


Figure 2. Functions of the period at the clausal level in H135

Figure 2 shows the distribution of the different functions of the period at the clausal level, where it is easily observed that, in the medical recipes, it is found before units of measure. In the surgical treatise, in turn, the period operates marginally for the separation of ingredients.

Finally, at phrasal level the period is used to circumscribe numerals (17, 18) (7 and 61 times in the surgical treatise and the collection of recipes, respectively):

- (17) and munge them well together vpon the fier and put therto iij. of wheat flowre and ij ounces of powder of lynesede and ij ounces powder of plemgrece and put therto white wyne and sathe alle together (f. 35v).
- (18) Taik an ounce of lapis calaminaris and an vnce of Totie Allexandrin brey theim. ix. tymes and euerie tyme quenche them in white wyne or rose water then grend them small with capons greace and aannoynit thye eie or put of the powder in rose water and drop into thyn eie with a sether (f. 96r).

4.2. The comma

The comma is the shortest pause (Tannenbaum 1930: 140; Petti 1977: 26; Quirk et al. 1985: 1615), introduced in English documents towards the sixteenth century replacing the functions of the virgule (Calle-Martín & Miranda-García 2007). In H135, however, these two symbols coexist, sharing particular functions. Thus, the comma is almost twice as many times as frequent in the surgical treatise as in the collection of recipes (404 over 232 instances, respectively). At the sentential level, it performs the following functions:

a) *After titles:*

- (19) For the Stone, Taike Allexander sede gromell sede colliander sed percelie sede saxifrage fyne tyme ana. put therin a race of ginger maide into fyne powder and munge them well together and drink therof withe malmesey or staile aile or bloodwarm (f. 97r).

b) *To mark off the beginning of a new statement:*

- (20) and let it stand vpon the fier to all be meltid then let it kele and put it in a glas to kepe, This water is callid water of corall of the noblenes of yt as also for it hathe a colour like read Corall (f. 69r).
- (21) For the scabe in the syde Taike viniger, reddes ynyons / rose leues or leues of a rose cake, boyle them well together lay them hote to thy bare syde after manner of a plaister do so dyverse tymes. (f. 86v).

c) *To precede sequential markers:*

- (22) Take the roots of lyllye and the leaves of violet and put them in water the space of one howre, then strayne them and cast the water away and put them in a mortar and cast therto a litle butter and yolkes of Egges (f. 54r).

- (23) Frie it in a pan, strein yt throughe a clothe and anoint the sore with a fedder, or take shepe tryddles and blend them well with creame of mylke, then strein yt and therwith with a fether annoint the burnid or scaldid place ij or iij in a daie./ (f. 78v).
- d) *To precede coordinate sentences:*¹⁶
- (24) Then take lynet wett in the white of an egge and laye yt into the hole, and reneve yt not to the second daye And if ther leave any of the scrophule in the hole, then strew theron pulvis affodilum and whet it is clene then heale it vp (f. 51v).
- (25) Frie it in a pan, strein yt throughe a clothe and anoint the sore with a fedder, or take shepe tryddles and blend them well with creame of mylke, then strein yt and therwith with a fether annoint the burnid or scaldid place ij or iij in a daie./ (f. 78v).
- e) *To precede adverbial clauses:*
- (26) put therto turbentyne alwaies stering yt well and kepe yt to thy vse, For it is precious and wouderfull goode to all manner of Roting of wounds (f. 57v).
- (27) Put this water into a glasse and kepe it for yt is a verie good water to washe therwith any sore and namelie a sore legg and will heale yt without any other salve, if the sore be not verie olde, Thow shalte woorke with it in this manner (f. 75v).
- f) *To precede relative clauses:*
- (28) soome vessell of glasse or earthe leded within of the whiche dounge will coome a watter withoutt savour or evell smell, which wilbe vere good to take of all maner of spotts or blemishe in the face (f. 115v).
- g) *To introduce lists and explanations about the previous statement:*
- (29) Thowe shalt knowe when dura matter is hurte by thes tokens, Akinge in the heade, readnes in visage, swellinge in the eine And rasinge blacknes of the townge (f. 34r).

¹⁶ Even though coordinate sentences consist of two or more statements, these are separated from individual statements so that the functions of the different punctuation symbols at this level can be quantified.

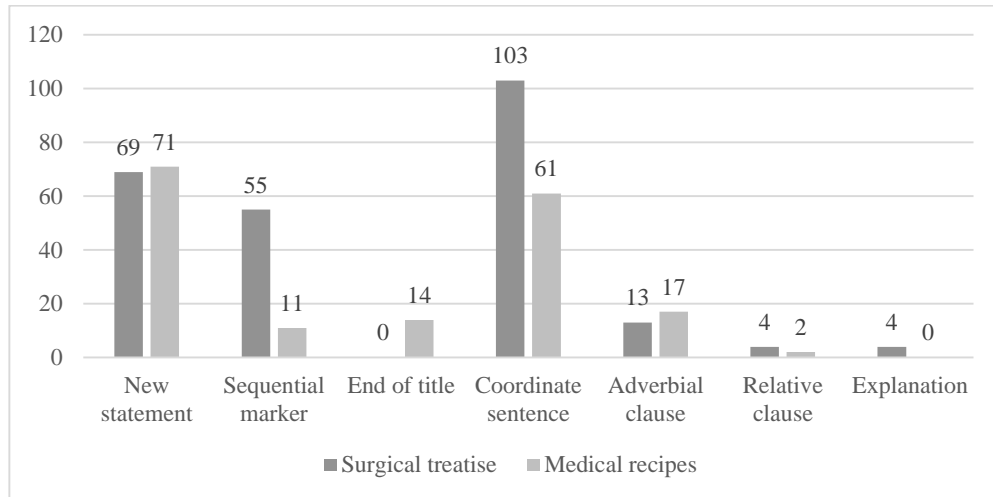


Figure 3. Functions of the comma at the sentential level in H135

As shown in Figure 3, the surgical treatise and the collection of recipes show different distributions of the comma depending on its function. Thus, in the surgical treatise, the comma occurs more widely for the introduction of sequential markers and coordinate sentences, as well as explanations. In the medical recipes, however, the comma predominates after titles. Finally, the use of the comma is similar in both text types for the introduction of new statements, adverbial and relative clauses.

The comma also works at the clausal level, where it is used to list different ingredients in a series (156 and 56 instances in the surgical treatise and the collection of recipes, respectively):

- (30) To maike Antioche royall. Take spyknell centorie, burnet, origane, herbe robert, scabions ribwoort, brome, wena, vervain, egremonie matfelon, bugle, wylde sage, mugwoort, puliolle mountain, brownwoort, betonie, malows playntain, pulial royall, pegle, fumiterre of munde, dayse, calaminte, prymrose, mellefoyle, herbe John, strawberre (f. 72r).
- (31) if yt be not small ynoughe delay it with barlon water or with pure water well sodden boyle your meat with cold herbes as lettice, Spinage, burrage, endyve, Giacorie and violet leaves great Rasinge, prownes and purselein (ff. 109r–109v).

4.3. The perioslash

The perioslash, also referred to as the punctus plus the virgule (Cruz-Cabanillas 2014: 149–150), has been elsewhere found to share the macro-textual functions of the period. It displays a specialised use insofar as it only features one grammatical function in the surgical treatise and the medical recipes, i.e. to signal the end of a section (33 and 67 instances, respectively).

(32) and then fasten thervpon a paire of pinsonnes and draw it out and after heale it as is said of other wounds./ A wounde with a Sworde happenithe to be many times in the thighe with hurting of the bone or not Thow shalt heale it in the same manner as is said before of woundinge of the arme (f. 67v).

4.4. The virgule

The virgule is found in English texts from the fourteenth century onwards, spreading substantially throughout the fifteenth century. It was originally used for signalling short pauses although it could also serve for ending a whole sentence or clause (Hector 1958: 47; Esteban-Segura 2010: 100). The Renaissance virgule consists of “an oblique stroke of varying length, thickness and ornamentation” with its top and bottom extremes slightly curved rightwards and leftwards, respectively (Petti 1977: 26). Used for denoting short pauses, this punctuation symbol could be in fact a substitute for nearly any punctuation mark, showing different functions both at clause and phrasal level (Tannenbaum 1930: 143). In H135, it occurs 63 and 55 times in the surgical treatise and the collection of recipes, respectively. It shares some of the functions of the comma, albeit to a lesser extent. Thus, it has been employed at the sentential level with the following purposes:

a) *To signal the end of a recipe:*

(33) beat them well together mixe therwith wheat flour and honye vnto it be plaister like and if thow cannot get burtre leavs It will do well with the other thinge or with the grene bark of burtre / (f. 110v).

b) *To mark off the beginning of a new statement:*

(34) And when it is coulede powr furthe the water that thow fyndes therin and after kepe yt to thy vse/ This ointment is callyd popilion because yt hath his moste vertew of the burions of populer (f. 53v).

- (35) Take a handfull of beans / proche them on a tyle stone pyke of the hulles braie them in a mortar to fyne powder , Sethe that popuder in a pynte of rede wyne and synamond (f. 77v).
- c) *To precede sequential markers:*
- (36) Thes embrocacions we vse for diuersity of tymes and we dight the patient therwith vnto ther *comme* mater therfro, then lay vnto the wounde lynnet and nothing els vnto the wound be well dried / After that put therto vnguentum fustum vnto it be hole whiche is thus made (f. 36r).
- (37) And then poore yt into another pan or dishe wherin must be malmesey muscadell or other whyte wyne that is vere good. after take it owt of the wine, and melt it again / then power it again vpon the said wine doing so vij tymes (f. 118v).
- d) *To precede coordinate sentences:*
- (38) After streine yt and put therto honye to make yt delycate / And in the space of xv daies *with vsinge* of this drinke the child shalbe hole, And the Scrophule is soft in touching And the Glandule is harde./ (f. 51v).
- (39) Then heale it withe a plaister made of wheat flowr honie, and yolk of an egg / And this plaster will keep it open a good space and then will it heale / the woormes ar as bigg as good pynus and vere sharp (f. 100r).
- e) *To precede adverbial clauses:*
- (40) For phisick saithe that it is possible a man to lyve without a milt then better he maie live with part of a mylt / When the the mylt is in sew vp the wound saving a hole in the louer-moste parte of the wounde wher thow shall put in a tent (f. 62v).
- f) *To introduce lists and explanations about the previous statement::*
- (41) And is so callid as it semithe bicause (trithe is) it is alwaies full of dead fleshe which mormall maie be causid in two manners / Of a wound or bresure noughtelie healid and so drawing it to a festure and frome a fasturing to a mormall (f. 69r).

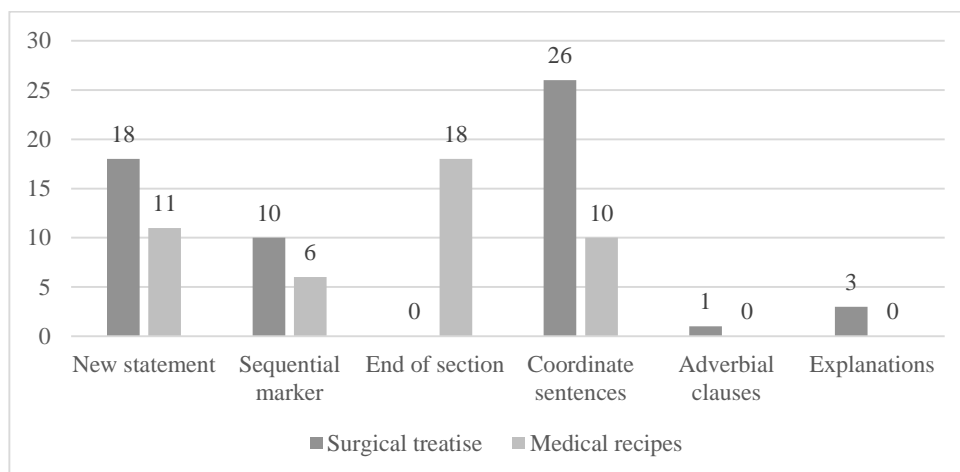


Figure 4. Functions of the virgule at the sentential level in H135

The data in Figure 4 show that the virgule is much more frequently used in the surgical treatise for the introduction of new statements, sequential markers and coordinate sentences. In the medical recipes, in turn, the virgule is used 18 times to mark the end of a recipe.

At the clausal level, the virgule is employed to list the ingredients in both text types (5 and 14 times in the surgical treatise and the collection of recipes, respectively):

- (42) Take powder of drie rootes langdebeffe iiij vnces / of powder of the roote of Clate v ounces / of powder of the roote of Celodyne (id est celidony) j ounce / powder of ginger j ounce / of quicksilver ij ounces / waxe iiij ounces in somer and ij in winter of Rosyn as much as sufficithe (f. 50v).
- (43) For a Vehement fever or ague take feir whey clarified and barley well stepid and huskid / buglos / Sicurie / Endive and licores (f. 76v).

4.5. The colon

The colon's function is to inform that "what follows the colon is an explication of what precedes it or a fulfilment of the expectation raised" (Quirk et al. 1985: 1620).¹⁷ According to Calle-Martín and Miranda-García (2007: 372–373), there is no consensus in the literature as to the use of the Elizabethan colon: while Tannenbaum argues that the colon was used for commas, question marks,

¹⁷ It may also be used for the introduction of a whole quoted sentence.

exclamation marks and periods (1930: 142); Petti states that it was used in combination with the virgule to mark off the end of a paragraph, only acquiring its modern use at the end of the period (1977: 27).

The colon occurs marginally in both text types, where it only operates at the sentential level. In the surgical treatise, on the one hand, it occurs just once, before an adverbial clause (44). In the medical recipes, on the other, the colon is used 9 times to mark off the end of a recipe (45) and 7 times to precede coordinate sentences (46).

- (44) yt cannot be perceyvyd by touchinge with thy finger: When the breaking is openly perceyved then cut the fleshe aboue croswise and do as is abouesaid of the straitte wounde, and yf thowe be dowtfull whether it be broken or not cut not the fleshe by the span of v or vj dayes (f. 36v).
- (45) which haue bene gryetlye venemid bothe in the face bodye and also on the head. probat. Againste the harte burne Drink a sponefull of vinager for that is a very good Remedie and well proved (f. 104r).
- (46) 2 or 3 dropps of the Iuce of lemonndes or Cytrons: And let there be of all thes waters so proportioned together. half a glasfull or soome what moore into the which you shall put a peece of Sugerr (f. 116r).

4.6. The semicolon

The semi-colon entered the punctuation system at the end of the fifteenth century with “a function between the other two marks”, when just a comma is not sufficient and the colon slows up the utterance more than necessary (Parkes 1992: 49, 1978; see also Calle-Martín & Miranda-García 2007: 371).¹⁸ In addition, the semicolon is a coordinating mark of punctuation, i.e. asyndetic coordination.

The semicolon appears once in the surgical treatise to link coordinate clauses (47). In the medical treatise, in turn, it is used once for the introduction of a new statement (48) and twice to precede coordinate clauses (49).

- (47) And the hand that is owt of iointe, with thy other hand and draw it a litle and lightlie yt shall go into the ioint again; and an other syde put a spelt, v or vi daies together and after annoint it with a litle dewte (f. 60v).

¹⁸ Quirk et al. state that the semicolon is the “coordinating mark of punctuation, corresponding most nearly in value to the linguistic coordinating conjunction ‘and’ (1985: 1622).

- (48) you may maik powder therof and drink that powder when ye go to bed with water aile or wyne; also It is good to drink the water or ale wherin akorns are well sodden./ (f. 111r).
- (49) Done thus put it into an ould cupp for thy vse; and whan thow haist nede of yt taik a litle of it in a Saucer and warme it on the Coales and taik a fether and annoint the patient therwith and bynd a Clothe about the sore (f. 103v).

4.7. The parenthesis

The parenthesis is a punctuation mark that can be used with different purposes: to introduce exclamations, interjections, vocatives, asides or quotations (Tannenbaum 1930: 144–145); reflecting “the needs of those who were accustomed to silent reading” (Parkes 1992: 49, 1978); and to introduce parenthetical material, to emphasize, or simply to indicate the reader (Petti 1977: 27).

In H135, the parenthesis has been used in the surgical treatise and the collection of recipes to introduce an explanation to the reader (one and eight times, respectively).

- (50) Malum mortuum is callyd in frenche and also in englishe a Mormall which is as muche as to saie a dead sore, And is so callid as it semithe bicause (truthe is) it is alwaies full of dead fleshe which mormall maie be causid in two manners /
- (51) Therefore I devised this remedie I did taik a burtre or eldertre stick (for of all ther things or woode which I provid that is the best) as bigg as my thombe almoste thre inches longe, the core being thursten furthe (f. 89r).

5. Discussion and conclusions

The present paper has studied the different uses of punctuation in two early Modern English scientific treatises, i.e. a surgical treatise and a collection of medical recipes, housed in Glasgow University Library, MS Hunter 135 (ff. 34r–121v). The reason for such an analysis lies in the fact that, embodying two text types under the genre of medical writing, they show different distributions when it comes to the use of punctuation.

From a quantitative point of view, punctuation is more widely witnessed in the collection of medical recipes (670 instances) than in the surgical treatise (623 instances). More specifically, in the surgical treatise, the comma is the most frequently used punctuation mark (404), followed by the period (120), the virgule (63), the perioslash (33), the semicolon (1) and the parenthesis (1);

whereas in the collection of medical recipes the most frequent symbol is the period (286), followed by the comma (232), the perioslash (67), the virgule (59), the colon (16), the parenthesis (8) and the semicolon (2). Moreover, apart from the tokens of each punctuation mark, we can observe that the surgical treatise represents a more modernized text type, showing fewer instances of the perioslash (33 vs 67 in the collection of medical recipes).¹⁹

On qualitative grounds, the different uses of the punctuation marks in H135 have been identified at three different levels: 1) sentential, both macro- and micro-textual; clausal, for the separation of ingredients or the introduction of unit of measure; and phrasal, for the circumscription of numerals, a typical function of punctuation in the Middle English period and eventually transferred to early Modern English.

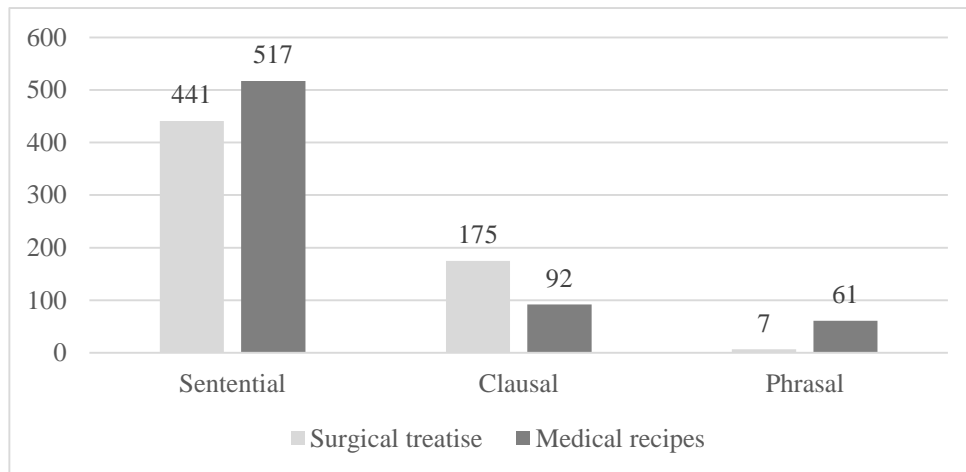


Figure 5. Functions of the virgule at the sentential level in H135

Figure 5 above shows the distribution of punctuation at the different levels in the surgical treatise and the collection of medical recipes. As can be observed, at the sentential level, punctuation is more frequent in the collection of medical recipes but, if we classify the uses at this level into micro-linguistic and macro-linguistic, a different conclusion could be drawn. Thus, at the macro-linguistic level, on the one hand, punctuation is employed after titles and sections, and it is widely attested in the collection of medical recipes (180 instances), especially if compared with the

¹⁹ It must be noted that, of these 33 instances of the perioslash in the surgical treatise, 29 occur in those fragments dedicated to inform the reader about treatments to heal the body after a surgical operation, a fact that suggests that these were transmitted from the Old English period and, therefore, show traces of these (already) obsolete punctuation devices.

surgical treatise (36 instances). Interestingly enough, this distribution is due to the high frequency of the perioslash in these environments in the recipes (67 out of 180 instances), as the majority of recipes were orally transmitted from Old English, hence the higher proportion of obsolete punctuation devices in early Modern English. At the micro-linguistic level, on the other hand, we can observe that punctuation is less frequent in the collection of medical recipes (337 instances) than in the surgical treatise (405 instances), an understandable fact insofar as the surgical treatise is a more elaborated text type containing more complex and subordinate sentences than the collection of recipes.

At the clausal level, two different uses of punctuation have been detected: the separation of ingredients and the introduction of units of measure. In the former, even though the surgical treatise contains less ingredients, the number of marks in these environments is overwhelmingly higher if we compare it with the recipes (175 over 70 instances, respectively). In the latter, we find that this function is exclusively witnessed in the collection of medical recipes (22 instances). These results do nothing but demonstrate the different stages of modernization of these text types in terms of punctuation. Thus, on the one hand, we can observe how the lists of ingredients are better arranged in the surgical treatise by means of punctuation and, on the other, traces of obsolete practices, such as the use of punctuation to introduce units of measure, are still present in the collection of medical recipes.

At the phrasal level, punctuation has been found to operate for the circumscription of numerals in the surgical treatise (7 instances) and the collection of medical recipes (61 instances). This distribution also evinces that the punctuation system in the surgical treatise is more advanced in the process of modernization than the collection of recipes.

To sum up, the present paper has demonstrated that these two text types present a different practice of punctuation even though they belong to the same genre. Consequently, it is observed that the medical recipes are better structured at the macro-linguistic level and the surgical treatise at the micro-linguistic level and, in addition, obsolete punctuation symbols are found in the recipes whereas there is no trace of them in the surgical treatise, or they just occur marginally.

REFERENCES

- Alonso-Almeida, Francisco. 2002. Punctuation practice in a Late Medieval English medical remedybook. *Folia Linguistica Historica* 22.1. 207–232. DOI: [10.1515/flih.2001.22.1-2.207](https://doi.org/10.1515/flih.2001.22.1-2.207)
- Alonso-Almeida, Francisco & Ivalla Ortega Barrera. 2014. Sixteenth century punctuation in the *Booke of Soueraigne Medicines*. *Onomázein* 30. 146–168. DOI: [10.7764/onomazein.30.9](https://doi.org/10.7764/onomazein.30.9)

- Anthony, Laurence. 2014. *AntConc (Version 3.4.4)* [Computer Software]. Tokyo, Japan: Waseda University. Available from <https://www.laurenceanthony.net/>.
- Arakelian, Paul G. 1975. Punctuation in a Late Middle English manuscript. *Neuphilologische Mitteilungen* 76. 614–624.
- Biber, Douglas. 1988. *Variation across speech and writing*. Cambridge: Cambridge University Press.
- Calle-Martín, Javier & Antonio Miranda-García. 2005a. Aspects of scribal punctuation in the Old English *Apollonius of Tyre*. *Folia Linguistica Historica* 26.1–2. 95–113. DOI: [10.1515/flin.26.1-2.95](https://doi.org/10.1515/flin.26.1-2.95)
- Calle-Martín, Javier & Antonio Miranda-García. 2005b. Editing Middle English punctuation. The case of MS Egerton 2622 (ff. 136–152). *International Journal of English Studies* 5.2. 27–44.
- Calle-Martín, Javier & Antonio Miranda-García. 2007. The punctuation system of Elizabethan legal documents: The Case of G.U.L. MS Hunter 3 (S.1.3). *Review of English Studies* 59. 356–378. DOI: [10.1093/res/hgm088](https://doi.org/10.1093/res/hgm088)
- Calle-Martín, Javier. 2004. Punctuation practice in a 15th-century arithmetical treatise (MS Bodley 790). *Neuphilologische Mitteilungen* 105.4. 407–422.
- Calle-Martín, Javier. Forthcoming. ‘His maiestie chargeth, that no person shall engrose any maner of corne’. The standardization of punctuation in Early Modern English legal proclamations. In Claudia Claridge & Merja Kytö (eds.), *Punctuation in context – Past and present perspectives*. Frankfurt am Main: Peter Lang.
- Claridge, Claudia. 2012. Styles, registers, genres and text types”. In Alexander Bergs & Laurel J. Brinton (eds.), *English Historical Linguistics. An International Handbook*, Berlin and Boston, MA: Mouton de Gruyter. 237–254.
- Coe, Richard M. & Aviva Freedman. 1998. Genre theory: Australian and North American approaches. In Mary Lynch Kennedy (ed.), *Theorizing composition*, Westport, CT: Greenwood Publishing Company. 136–147.
- Cruz-Cabanillas, Isabel de la. 2014. Punctuation practice in manuscript Sainte Geneviève 3390. *Nordic Journal of English Studies* 13.3. 139–159.
- Dawson, Giles E. & Laetitia Kennedy-Skipton. 1968. *Elizabethan handwriting 1500–1650. A guide to the reading of documents and manuscripts*. London: Faber & Faber.
- Eggs, Suzanne. 1994. *An introduction to systemic functional linguistics*. London: Pinter Publishers.
- Esteban-Segura, María Laura. 2010. Punctuation practice in G.U. L. MS Hunter 509. In Javier E. Díaz Vera & Rosario Caballero (eds.), *Textual healing: Studies in medieval English medical, scientific and technical texts*, Bern: Peter Lang. 93–107.
- Hector, Leonard Charles. 1958. *The handwriting of English documents*. London: Edward Arnold.
- Hyland, Ken. 2002. Genre: Language, context, and literacy. *Annual Review of Applied Linguistics* 22. 113–135. DOI: [10.1017/S0267190502000065](https://doi.org/10.1017/S0267190502000065)
- Kohnen, Thomas. 2001a. On defining text types within historical linguistics: The case of petitions/statutes. *European Journal of English Studies* 5.2. 197–203. DOI: [10.1076/ejes.5.2.197.7308](https://doi.org/10.1076/ejes.5.2.197.7308)
- Kohnen, Thomas. 2001b. Text types as catalysts for language change: The example of the adverbial first participle construction. In Hans-Jürgen Diller & Manfred Görlach (eds.), *Towards a history of English as a history of genres*, Heidelberg: Winter. 111–126.

- Lehto, Anu. 2015. *The genre of Early Modern English statutes: Complexity in historical legal language*. Unpublished PhD thesis.
- Lucas, Peter J. 1971. Sense-units and the use of punctuation-markers in John Capgrave's *Chronicle*. *Archivum Linguisticum* (N.S.) 2. 1–24.
- Mitchell, Bruce. 1980. The dangers of disguise: Old English texts in modern punctuation. *Review of English Studies* 31.124. 385–413. DOI: [10.1093/res/XXXI.124.385](https://doi.org/10.1093/res/XXXI.124.385)
- Moessner, Lilo. 2001. Genre, text type, style, register: A terminological maze? *European Journal of English Studies* 5.2. 131–138. DOI: [10.1076/ejes.5.2.131.7312](https://doi.org/10.1076/ejes.5.2.131.7312)
- Pahta, Päivi. 2001. Creating a new genre: Contextual dimensions in the production and transmission of early scientific writing. *European Journal of English Studies* 5.2: 205–220. DOI: [10.1076/ejes.5.2.205.7303](https://doi.org/10.1076/ejes.5.2.205.7303)
- Parkes, Malcom B. 1978. Punctuation, or pause and effect. In James J. Murphy (ed.), *Medieval eloquence. Studies in the theory and practice of medieval rhetoric*, Los Angeles, CA & London: University of California Press. 127–142.
- Parkes, Malcom B. 1992. *Pause and effect. An introduction to the history of punctuation in the West*. Hants: Scolar Press.
- Petti, Anthony Gaetano. 1977. *English literary hands from Chaucer to Dryden*. London: Edward Arnold Publishers Ltd.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech & Jan Svartvik. 1985. *A comprehensive grammar of the English language*. London & New York, NY: Longman.
- Rodríguez-Álvarez, Alicia. 1999. The role of punctuation in 15th-century vernacular deeds. *Folia Linguistica Historica* 19.1-2. 25–51. DOI: [10.1515/flih.1998.19.1-2.27](https://doi.org/10.1515/flih.1998.19.1-2.27)
- Salmon, Vivian. 1988. English punctuation theory 1500–1800. *Anglia* 106. 285–314. DOI: [10.1515/angl.1988.1988.106.285](https://doi.org/10.1515/angl.1988.1988.106.285)
- Salmon, Vivian. 1999. Orthography and punctuation. In Roger Lass (ed.), *The Cambridge history of the English language. Vol. 3: 1476–1776*, Cambridge: Cambridge University Press. 13–55. DOI: [10.1017/CHOL9780521264761.003](https://doi.org/10.1017/CHOL9780521264761.003)
- Swales, John M. 2004. *Research genres: Explorations and applications*. Cambridge: Cambridge University Press. DOI: [10.1017/CBO9781139524827](https://doi.org/10.1017/CBO9781139524827)
- Taavitsainen, Irma. 2001. Changing conventions of writing: The dynamics of genres, text types, and text traditions. *European Journal of English Studies* 5.2. 139–150. DOI: [10.1076/ejes.5.2.139.7309](https://doi.org/10.1076/ejes.5.2.139.7309)
- Taavitsainen, Irma. 2004. Genres of secular instruction: A linguistic history of useful entertainment. *Miscelánea: A Journal of English and American Studies* 29. 75–94.
- Taavitsainen, Irma. 2011. Dissemination and appropriation of medical knowledge: Humoral theory in Early Modern English medical writing and lay texts. In Irma Taavitsainen & Päivi Pahta (eds.), *Medical writing in Early Modern English*, Cambridge: Cambridge University Press. 94–114. DOI: [10.1017/CBO9780511921193.007](https://doi.org/10.1017/CBO9780511921193.007)
- Taavitsainen, Irma & Susan Fitzmaurice. 2007. Historical pragmatics: What it is and how to do it. In Susan Fitzmaurice & Irma Taavitsainen (eds.), *Methods in historical pragmatics*, Berlin & New York, NY: Mouton de Gruyter. 11–36.
- Tannenbaum, Samuel A. 1930. *The handwriting of the Renaissance*. New York, NY: Columbia University Press.
- Voigts, Linda E. 1995. A doctor and his books: The manuscripts of Roger Marchall (d. 1477). In Richard Beadle & A. J. Piper (eds.), *New science out of old books: Studies in manuscripts and early printed books in honour of A. I. Doyle*, Aldershot: Scolar Press. 249–314.

Young, John & P. Henderson Aitken. 1908. *A catalogue of the manuscripts in the library of the Hunterian Museum in the University of Glasgow*. Glasgow: James Maclehose & Sons.