# PUNCTUATION PRACTICE IN EARLY MODERN ENGLISH SCIENTIFIC WRITING: THE CASE OF MS 3009 AT THE WELLCOME LIBRARY, LONDON

LA PUNTUACIÓN EN LOS TEXTOS INGLESES CIENTÍFICOS DEL PERIODO MODERNO TEMPRANO: EL CASO DEL MS 3009 DE LA BIBLIOTECA WELLCOME, LONDRES

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# **Abstract**

The study of punctuation has traditionally been overlooked by some scholars for being considered haphazard and unpredictable. In medieval manuscripts, every scribe was free to use their own repertory of symbols. However, the establishment of the printing press along with the proliferation of professional scriveners resulted in a process of standardization of the system in such a way that by the end of the 16th century a repertory of punctuation symbols was fully developed (Salmon 1999: 15; Calle-Martín 2019: 179-200). The present study seeks to examine the punctuation system of a 17th-century recipe book housed in the Wellcome Library in London, MS Wellcome 3009. This paper has therefore been conceived with a twofold objective: a) to assess the inventory of punctuation marks in the text; and b) to analyze the use and pragmatic functions of these symbols.

**Keywords:** punctuation, early modern English, scientific texts, recipe books, manuscripts.

#### Resumen

Tradicionalmente el estudio de la puntuación ha recibido escasa atención en la literatura a causa de su supuesta aleatoriedad e impredecibilidad. En la época medieval, cada

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escriba era libre de utilizar su propio repertorio de símbolos. Sin embargo, el establecimiento de la imprenta junto con la proliferación de escribas profesionales dio como resultado un proceso de estandarización del idioma de forma que a finales del siglo XVI el repertorio se desarrolló completamente (Salmon 1999: 15; Calle-Martín 2019: 179-200). En el presente artículo se analiza el sistema de puntuación de la colección de recetas médicas escritas en inglés moderno temprano recogidas en el manuscrito MS 3009 alojado en la biblioteca Wellcome en Londres. El estudio llevado a cabo persigue un doble objetivo: a) examinar el repertorio de signos de puntuación del texto; y b) analizar el uso y funciones pragmáticas de estos símbolos.

**Palabras clave:** puntuación, inglés moderno temprano, textos científicos, recetarios, manuscritos.

# 1. Introduction

Traditionally, punctuation has been disregarded in the literature due to its supposed arbitrariness and inconsistency in pre-modern English (Arakelian 1975: 614-615). Several factors have contributed to this neglect such as the lack of systematization and correspondence to modern punctuation and the overlapping functions of punctuation symbols (Lucas 1971: 19; Mitchell 1980: 412; Marqués-Aguado 2009: 55). In the seventies, however, studies of historical punctuation proliferated, and the idea of the existence of a consistent system of scribal punctuation developed, implying the use of a specific set of rules. Since then, two different viewpoints regarding the punctuation practice in medieval and Elizabethan English have been adopted. Some scholars defend the idea of a haphazard system (e.g., Petti 1977; Parkes 1978), whereas others consider the system to follow a set of standard patterns (e.g., Calle-Martín and Miranda-García 2008; Esteban-Segura 2009; Alonso-Almeida and Ortega-Barrera 2014).

The use and function of punctuation marks in English have changed in the course of the centuries. In Middle English, punctuation marks depended on the scribes' choice since "every scribe [was] ultimately free to imprint his own repertory of symbols" (Calle-Martín and Miranda-García 2012: 32). In this context, the second key issue has to do with the function of punctuation marks, which has been the source of inspiration of many scholarly discussions mainly attempting to decide whether it was grammatical or rhetorical. The first "provides syntactic sense and is used to mark structural relations among sentence constituents. Rhetorical punctuation, on the other hand, helps to signal necessary pauses in an oral exposition" (Esteban-Segura 2009: 95-96).

Early Modern English, however, marked a transitional period towards the development of grammatical punctuation (Salmon 1999: 40; Calle-Martín and Miranda-García 2008: 357; Calle-Martín 2019: 179-200), although there is still controversy with regard to its

ultimate function. Ong (1944), for instance, regards Elizabethan punctuation as being primarily rhetorical as he states:

From the evidence in texts which between 1582 and 1640 treat of punctuation, there is little doubt that there survived not only [...] the terminology of the earlier systems [...], but also a recognition of the primacy of breathing as a determinant of punctuation. (Ong 1944: 355)

Fries (1925) refutes this idea as he states that punctuation was essentially intended to assist the reader's eye in recognizing the structure of the text:

Although the practice of the times might easily not strictly conform to the theory of the grammarians [...] it seems unlikely that the practice could have been unconsciously based upon another principle differing so fundamentally from that expressed in contemporary grammars. (Fries 1925: 81)

There is a general consensus, however, that early Modern handwritten texts "gradually favored a grammatical over a rhetorical function" after the introduction of Caxton's printing press and the incorporation of new punctuation marks (Blake 1996: 207). The printing press along with the proliferation of professional scriveners and the increasing activity of Westminster's Royal Chancery resulted in a process of standardization of the system (Salmon 1999: 15) and, consequently, by the end of the 16th century the usage of these symbols was similar to contemporary practice. This is probably the case of most early English texts, although the function of these punctuation marks may also depend on the genre "since practice almost certainly varied according to subject-matter and style" (Lucas 1971: 1). In the particular case of legal texts, for instance, the transition from rhetorical to grammatical has been claimed not to be so straightforward "inasmuch as the channel and the addressee lead us to postulate a plausible reading-aloud, especially if it is taken into consideration that the majority of the population was then illiterate" (Calle-Martín and Miranda-García 2008: 358).

The study of historical punctuation has been mainly based on medieval material (Alonso-Almeida 2001; Calle-Martín and Miranda-García 2005; Obegi-Gallardo 2006; Esteban-Segura 2009; Marqués-Aguado 2009; Rodríguez-Álvarez 2009; de la Cruz-Cabanillas 2014, among others). The punctuation of early Modern English handwritten texts has also received some editorial attention, some of these works being concerned with schoolbooks (Rodríguez-Álvarez 2010), legal documents (Calle-Martín and Miranda-García 2008) or literary texts (Simpson 1911), but there are still a limited number of publications investigating the punctuation practice of scientific texts, with the exception of Alonso-Almeida and Ortega-Barrera (2014), who studied the punctuation symbols in the 16th-century medical recipes of John de Feckenham, and Calle-Martín and Esteban-Segura (2018), who analyzed scribal punctuation from a diachronic perspective. In the light of the gap in the literature, the present paper has

been conceived with the primary aim of analyzing the punctuation system of the recipe book contained in MS Wellcome 3009 (henceforth W3009). For this purpose, an inventory of punctuation marks of the text under scrutiny is provided, together with an analysis of their uses at the different textual levels (i.e. macro-textual, sentence and clause level) and the functions they perform.

# 2. The Manuscript

The manuscript under scrutiny is MS Wellcome 3009, housed at the Wellcome Library in London, containing a 17th-century recipe book entitled *Physicall and* chyrurgicall receipts. Cookery and preserves, attributed to Elizabeth Jacob, whose signature is visible in the fourth and fifth folios of the text. As such, she is the main contributor to the volume (ff. 35r-54r; 63v-88r), although later unknown hands expanded the manuscript from 1654 to 1685. A paleographic analysis reveals the presence of six different hands making use of the italic, secretary and hybrid scripts. The text is divided into two sections: the first deals with medical recipes (ff. 17r-90r) and the second with cookery recipes (ff. 179r-224r), a division easily noticeable due to the blank folios between the two sections (ff. 90v-178v) and the flip in the direction of the folios. The present work is only concerned with the first part of the volume, i.e., the medical recipes, which are "instructions on how to prepare medicines to cure an illness, how to maintain health or prevent a harmful condition" (Calle-Martín and Castaño-Gil 2013: 13). Ingredients and the order to be followed in their preparation are given together with the precise quantity and time needed, normally expressed as a command, as illustrated in (1).

(1) For a bruise which causeth to spitt Blood ./. Take a pottle of Clarrett wine and sett it over the fire in the which putt one handfull of the inner barke of Elder , with one handfull of the inner barke of Ash , boile them togeather until the wine is consumed to a quart , straine it and drink a quarter of pint att a time every morning and every night , (f. 30r)

The source of the text of the manuscript is unknown since in earlier times recipe books had an oral tradition, often shared among family members, neighbors and physicians. The compilation in volumes of these recipes permitted readers to test them, contrast them and see what was shared among them (Eamon 1994: 130-131). In Middle English manuscripts, the conventional arrangement of these recipes was *de capite ad pedem* (i.e. from head to foot) in order to facilitate their consultation. This order, however, is only witnessed in some early Modern English compositions. The recipes in W3009 do not follow an established order as shown in the index at the beginning of the volume. They follow an alphabetical order enabling the reader to find the ailment or the part of the body to be treated with

ease. In order to find a cure for a canker, the index brings the reader to folios 6, 28, 107 and 124, thus demonstrating the random distribution of recipes throughout the text.

# 3. Methodology

The present research stems from a major project entitled *The Málaga Corpus of Early Modern English Scientific Prose*, which pursues the electronic editing and corpus compilation of early modern scientific handwritten texts in the vernacular. The rationale behind this project can be explained in terms of a twofold objective: a) the semi-diplomatic transcription and electronic editing of hitherto unedited scientific manuscripts housed at Glasgow University Library, the Wellcome Library in London and the University of Manchester Library, also displaying the digitized images and their corresponding transcriptions on the website; and b) the compilation of a normalized and POS-tagged corpus of early Modern English.<sup>2</sup>

In the particular case of W3009, the analysis has been carried out using the semidiplomatic transcription of the text and the software *AntConc* (Anthony 2014). Procedurally, the text has been transcribed using the digitized images provided by the Wellcome Library together with an in situ examination of the original. Next, *AntConc* has been used for the automatic retrieval of the instances, although the classification of some of the occurrences required manual disambiguation. W3009 contains a total of 6,907 instances, which have been examined according to their context so as to classify their uses and functions. The inventory of punctuation marks in the text includes the period (.); the comma (,); the virgule, rendered as a single slash (/), as a double slash (//) or as a perioslash (./.), (./); the colon (:); the semicolon (;); the hyphen (-); the apostrophe (') and the parenthesis (()).

# 4. The Punctuation System of W3009

The following analysis is carried out in order to enable us to ascertain the different uses and functions of the punctuation marks in W3009. The uses of each symbol are studied individually and examples from the manuscript are also provided.

#### 4.1. The Period

The period (52x) is the earliest and most common punctuation mark in early Modern English handwritten compositions, although it is not frequent in the text under scrutiny, especially if compared with other similar scientific texts. From the

15th century onwards, this symbol underwent a process of normalization to express a major type of pause indicating sentence boundaries, even though it still preserved some of its inter-clausal functions until the 17th century (Petti 1977: 25; Calle-Martín and Miranda-García 2008: 364). The function of the period is threefold, i.e. macro-textual, sentential and clausal, thus suggesting that it is used for both rhetorical and grammatical purposes.

#### 4.1.1. The Period at Macro-textual Level

The period is sometimes used to signal major divisions within the text. In the particular case of W3009, it is employed to mark off the end of a recipe as in (2). This use of the period allows us to endorse the idea that early modern scribes regarded this mark as indicating strong divisions within a text.

(2) Take 2 pound of Raisons 1 pound of figgs half a pound of Dates a quarter of an ounce of safron half a dozen bunches of merigold flowers , bunch of balin , bunch of mint half an ounce of mace a quarter of an ounce of Cloues bruised , sweet anniseeds Iunuper berryes *and* Cardinams of each an Ounce 1 bunch of notted marjorum , handfull of red sage , 3 rases of ginger.

For the Stone in the Kidneys (f. 88v)<sup>3</sup>

# 4.1.2. The Period at Sentence Level

The period is employed at sentence level with different functions:

- a) To indicate the beginning of a new sense-unit within a recipe, either to separate the ingredients and the indications of preparation or to introduce authorial comments. The authors occasionally use the first person to provide their personal experiences, as in (4) below:
  - (3) to make it more Effectuall and of greater virtue it will be good in Quince time to mix therwith the Iuice of Quinces in such quantity as that there may be for Euery pound of honey , A quarter of A pound of Iuice of Quinces , some before they put the honey and water together into the <a href="barrell">barrell</a> . boile them together vpon A Clear fire , or vpon coales without smoak , scum the honey and boile it to perfection which gather by casting an Egg into it (f. 52r)
  - (4) mix them together to what strength you find most gratefull to your <u>pallate . I</u> allways sweeten it at the time of the makeing , with the sirup of Elder , to what proportion you best like , this will make it A perfect Clarred wine in Colour , then bottle it and it will keep A yeare , or two , 2 or 3 mornings (f. 64r)
- b) To separate the type of recipe from the illness to be cured in the title of the recipe:
  - (5) An Excellent <u>plaister</u>. for wind paines or stiches (f. 70r)

- c) To introduce the sequential marker *then* so as to organize the subsequent steps in the preparation of a recipe:
  - (6) Take half a pinte of sack a quarter of a good large lemon or half a small one squeezd into the <u>sack . then</u> put the sack into 3 pints of milk , Iust boyling vp : let it stand for the Curd to harden and strain it and drink a draught when you please if you put in no lemon a quarter of a pinte of sack to a pinte of milk . (f. 89r)
- d) To introduce coordinate clauses (both copulative and disjunctive with the coordinators and and but). The function of this symbol would be grammatical since "coordination is systematically punctuated regardless of the semantic and syntactic relationship between the main and the coordinate clause, no matter whether they share the same subject or not" (Calle-Martín and Miranda-García 2008: 364).
  - (7) For The Stone or grauell Take the roots of thorne bake dry them <u>faire</u> . and make powder of them , and take therof 2 peny waight , and put therto 2 spoonfulls of water of raisons and drink it Euery day , and Euery night , and it will help by gods blessing (f. 81v)
- e) To introduce conditional sentences:
  - (8) A quarter of A pint Before supper and before you goe to  $\underline{bed}$  . if you like it , it is the better if you put some sirup of violets in it when you drink it / (f. 68v)

#### 4.1.3. The Period at Clause Level

Punctuation marks are also employed to mark off all kinds of relations within the clause such as to enumerate, to separate the clause constituents, etc. In the particular case of the period, it is also employed at phrase level in the text after abbreviations and to enumerate items in a sense-unit.

- a) To indicate abbreviations (after *Saint* and *Madam*):
  - (9) Milk Waters Madam . Roberts

Take Carduus , Goals rue , Meadow sweet each six handfulls , mint , wormwood , each 5 handfulls , rue 4 handsfull , Angellico 2 handfulls . Whey 3 Gallons infuse them 24 hours , then distill them / (f. 88v)

- b) To enumerate, mostly ingredients, within a recipe. In this case, the period is used indiscriminately together with the comma:
  - (10) Take 6 drames of Senna Alexandria , 2 drames of polipodia of the Oak , 2 drames of soldanella , 2 drames of sassafras wood . 2 drames of bay berys hulled , 1 ounce of Aniseeds , 2 drames of Ash-key's , let all these be bruised 3 seuerally and put it into A Bagg and put it into 3 or 4 pints of strong beare (f. 43v)

The comma  $(5,877\times)$  was introduced in England in the 16th century and it is often considered to have evolved from the virgule. It is the principal punctuation symbol in W3009 and it presents an array of purposes at different textual levels.

#### 4.2.1. The Comma at Sentence Level

The comma contributes to the organization of the text and marks the relationship between clauses with the following functions:

- a) To separate different sense-units:
  - (11) Take some fine Lint and some soft sope and mix it well together and Rowle it up and put into the hole of the contrary  $\underline{\text{Eare}}$ , it will draw Away the paine / (f. 37v)
- b) To separate the sections of a recipe. The comma serves here as the modern period, indicating a longer pause:
  - (12) Take Rue , Agremony , Wormwood , Celendine , Red sage , Baume , Mugwort , Dragon , Pimpernell , featherfew Burnett , Sorrell , Tormentle Scabius , Carduus , Benned , Bettony , Dittany , Marigold , of each halfe a pound Rosemary one pound Angelica leaves four ounces , three or four Enulacampane Rootes  $\underline{Slipt}$  ,  $\underline{Pick}$  all these and lett them dry on a boarde Twentie four houres (f. 20v)
- c) To make comments or clarifications and therefore presenting a rhetorical function.
  - (13) Take mirrh beaten to powder and bath the pit of the stomach with Aquæ vitæ, then strow the powder of mirrh vpon the stomach till the skin be Couer'd then wett A peece of London paper in Aquæ vitæ and lay it vpon the mirh, and A dry paper on the top of the wett, all the Aqua vitæ must be warm'd / (f. 53r)
- d) To introduce coordinate clauses (and, but, or, nor, either or neither):
  - (14) Take as much milk as you think  $\underline{\text{fitt}}$ , and boile it by it selfe, and take some cleare water and boile it by it selfe then mix the water and milk  $\underline{\text{together}}$ , and  $\underline{\text{drank}}$  / (f. 38r)
- e) To introduce imperative clauses (i.e., commands), mainly followed by the verbs *let*, *take*, *boil*, *put* and *have*, among others. These verbs are often preceded by the adverb *then* as an indicator of a new step in the preparation of the recipe:
  - (15) First chopping them , then take linseeds and finbreeke bruised , and Oatmeale , figgs cutt , boyle these in new milke till they are soft and thick , then take sheepes suitt picked from , the skinns , mix all togeather and them in the Liquer the hearbes was boiled in , the quantity of all must be according to the quantity you make  $(f,\,21v)$

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#### 4.2.2. The Comma at Clause Level

The comma also serves to introduce indications after a list of ingredients in a recipe and to enumerate them.

- a) To indicate the measures in the preparation:
  - (16) Take annyseeds , fenell , lintseed , and the powder of piony , of Each halfe an ounce , and boile them in A quart of whit wine , then drink A good draught therof , and it will make you goe to stoole orderly / (f. 77v)
- b) To enumerate the ingredients within a recipe. The comma is mainly used in W3009 to join paratactic elements within sections:
  - (17) Take lignum vitta , red saunders , sweet fenell seeds , Iuory , yellow Iaunders , of Each 3 ounces , sasafras , caraway seeds , and Coliander seeds of Each 2 ounces , China , Saraperella of Each halfe A pound , cutt the China and take all the rest of the Things , Except the seeds , and bruise them (f. 54r)

## 4.3. The Virgule

The virgule  $(629 \times)$  is represented as a single slash (/), as a double slash (//) or as a perioslash<sup>4</sup> (./.), (./). This punctuation mark is said to be the equivalent of the Present-Day English full stop, and it displays different functions at the macrotextual and sentential levels: to mark off the end of the title of a recipe (18); to indicate the end of a section or recipe (19); to separate different sense-units (20); to make explanatory comments (21); and to introduce efficacy phrases at the end of a recipe (e.g., probatum est) (22).

Calle-Martín and Miranda-García (2005: 37) point out the difference between the uses of the ordinary virgule and the perioslash, stating that the former is mainly used with linking purposes as a conjunctive mark whilst the latter has a disjunctive nature and therefore performs a splitting function within a text. Alonso-Almeida and Ortega-Barrera (2014: 165), however, in their analysis of *Booke of soueraigne medicines*, MS G.U.L Hunter 93, find that both symbols are basically disjunctive. This is also the case of W3009 insofar as these punctuation marks serve in most cases to separate independent sense-units, thus representing a grammatical function. A conjunctive function is also attested in some instances, as in (21), in which the virgule is employed by the scribe to introduce an explanatory comment with regard to the preparation of the recipe.

(18) Mister Iohnsons cure for the Ricketts ./.

Take of the juyce of Scury grass four pennyworth to every two spoonfulls of it add one spoonfull of Ieane treacle, begin in February March Aprill and May takeing it nine daies in each moneth the spoonfulls in the morning fasting, and as much in the evening after a sleepe, (f. 17r)

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(19) To gett spotts or pimples out of the Face

Take Camphire made into powder, mix it with whit wine vinegar, and the Iuice of Lemmons, shake them altogether, and wett A linnen cloth in it, and dip the cloth vpon the spots 2 or 3 nights, and mornings, and they will  $\underline{\text{yanish}} / (f. 63v)$ 

- (20) Take Dittony Vervayne *and* Isoppe of each much alike stamp straine it and drink its ale in <u>Travill / when</u> a wooman is past all hope in traville take the weight of a serup woy quike silver and give it her to drinke (f. 55r)
- (21) put to them 3 pints of the best white wine , stire them altogether , and soe lett them stand all night , and then distill them in A Limbeck with A Temperate fire / Let it drop on suger candy / (f. 65r)
- (22) straine it through till it be cleere , then drink a beere glass in the Morning , and at three a Clocke in the Afternoone and at night if the Dropsey be deepe upon the party , then drinke no other drinke ./. Probatum est ./. (f. 30r)

#### 4.4. The Colon

The colon (68×) stems from the *punctus* and it performs different functions in the text at macro-textual, sentential and clause levels. In W3009, the colon is mainly used to mark an explanation or to introduce specific information, i.e. personal names, quantity of ingredients, etc.

## 4.4.1. The Colon at Macro-textual Level

The colon is used to separate the different sections and subsections of the text on certain occasions, indicating the end of the title of the recipe and the beginning of the recipe itself. This grammatical function is exemplified in (23), in which the colon serves to introduce a new recipe.

(23) To make Snaile Drink madam Tyr:

Take Snailes and scoure them in 3 waters with A good Quantity of sage and hauing scour'd and pick them uery Clean , Take 30 of the Snailes , and put them into A Quart of new milk  $(f.\,47r)$ 

#### 4.4.2. The Colon at Sentence Level

The colon also performs grammatical functions at sentence level, either to mark the separation of sense-units, as in (24), to introduce conditional sentences (25) or to connect coordinate sentences, as in (26), although in this case, it also implies a pause therein.

- a) To separate sections of a recipe. In (24), for instance, the colon indicates the transition between two stages of the recipe, from "ingredients" to "preparation":
  - (24) Take A quart of whit wine , and Infuse in it 2 or 3 spoonfulls of the Iuice of sallendine , and A little  $\underline{saffron:let}$  them be Infused in A bottle 2 days together , shake the bottle , and drink neare A Quarter of A pint in the morning fasting ,  $\underline{Tho}$  :it vomitts proceed , in A weeks time it cures / (f. 84v)

- b) To introduce conditional sentences:
  - (25) Take Oyle of spicke and Rubb the teeth thirewith and in too howers etc. : if your teeth ar yellowe take sage stamp it a little thirewith (f. 62r)
- c) To link coordinate sentences:
  - (26) A Quarter of an ounce of <u>sennae</u>: <u>and</u> the Iuice of 4 lemmons then blanch halfe A pound of bitter Almonds, beate them uery well (f. 67r)

#### 4.4.3. The Colon at Clause Level

The colon is sometimes used to associate clause constituents or to enumerate the steps in the preparation of a recipe or the items in the list of ingredients.

- a) To introduce proper names after abbreviations (in most cases preceded by *Saint*, *Doctor* or *Mistress*):
  - (27) Bees wax , two ounces Red sanders , one ounce of true Naturall Balsam , one ounce of Oyle of <u>Saint: Iohns</u> wort a drame of Cocheneale , halfe a pint of Sack (f. 18r)
- b) To indicate quantity. This use may resemble that of the point in the medieval period with numerals (Alonso-Almeida and Ortega-Barrera 2014: 162):
  - (28) seeth all these in faire water and straine it drinke  $\underline{6}$ :  $\underline{oz}$ : thire of fasting In the morning and soe continue four hours after from meate or drinke / (f. 59v)
- c) To enumerate sections with ordinal numbers:
  - (29) Take the powder of bays leaues and put vpon hott coales , and sitt ouer it -2nd: Take A Quantity of Saffron , and as much Cummin , beate them to powder and drink them in warme wine -3nd: Take A draught of womans milke from the breast warme (f. 80v)
- d) To enumerate the ingredients of a recipe and therefore overlapping with the period and the comma:
  - (30) Take of <u>sagapenum : Apopanox : ammoniacum</u> of Each 3 drames dissolued in vinegar , and boiled to the Consumption of the vinegar (f. 76v)

#### 4.5. The Semicolon

The semicolon (13x) was introduced in England at the end of the 15th century (Parkes 1992: 49). This symbol emerged to signal a finer discrimination between the comma and the colon and, in this vein, it "progressively became the standard mark of punctuation to represent an intermediate pause between the period and the comma" (Calle-Martín and Miranda-García 2008: 371). The semicolon presents a sporadic use in W3009 and it is employed for different purposes at

sentence level: to connect coordinate sentences (with the conjunctions and, or and nor, in particular) (31); to introduce sequential markers headed by the adverb then (32); to separate different sections of a recipe (33); and to enumerate or to mark off the end of a list (34). This punctuation mark is therefore primarily used as a device contributing to the organization of the text.

- (31) roast itt on the ember in a browne paper very sofft then apply to the Mavill ye same spred opon a linen <u>cloath</u>; <u>or</u> thus set for sleep a quart of Clarrett wine 24 howers (f. 55r)
- (32) To Dissolue Ising-Glass

Take the Ising-glass and beat it with A hammer , as Thin as you  $\underline{can}$ ; then put it on the fire , in A little water , till it be hott , and it will Dissolue it / (f. 87v)

- (33) you must put in by little , and little , it will beate the Better , and be the <u>whiter ; you</u> must vse this Ointment with A feather , Iust as they beginn to dry , and soe continue it till they be all shelled of  $(f.\ 85r)$
- (34) it is admirable Against the collick, Palsey, Consumption, dropsey, Runing Euell; Kings Euill, and wormes, if you vse it for the Euill, leaue out the sirup of violets; it must be drank A fortnight at least, more if Occasion be / (f. 85v)

# 4.6. The Hyphen

The hyphen (198×) can be rendered in three forms: curly, straight or double (Alonso-Almeida and Ortega-Barrera 2014: 163). In the present text, the curly dash is not attested, and the straight and the double hyphen have different purposes. The former is used as a line filler, whilst the second is used to indicate compound nouns and adjectives as in the following example.

(35) Take dry Cummin , and beate it to powder , mix it with oyle Oliue , and boares greace try them togather , then straine , and put it in boxes , and Anoint the patient Against A <u>Char-cole</u> fire , vnder the feet , and in the hands , after lay them to bed , and Couer them warme , / (f. 83 v)

# 4.7. The Apostrophe

The apostrophe (60x) as a marker of the genitive was not yet regularized in the early modern period. In W3009, it is used for the following purposes: to show the genitive case of nouns (36); to put two words together in contractions (37); and to indicate plural or third person inflections (38).

- (36) Take A gallon of new milk , wild Time Saxifrage , pelitory of the wall , of Each A handfull , of parsley 2 handfulls , <a href="Philipendula's">Philipendula's</a> roots , marsh mallow roots of Each A handfull and 2 or 3 radice roots slic'd and bruised (f. 46r)
- (37) if <u>it's</u> for the pain in the back, or any strein in the back you must put in it Archangle flowers and Isinglass, you may drink it 3 or 4 Times A day (f. 39v)

(38) it hath many more vertues which are rare, that for Brevity sake I doe no write, it being A most rare, and reall medicine, and well known by all the world, it <u>Agree's</u> to all Ages, Aboue 7 yeares, and to all constitutions, and may be given at, or in any season (f.79r)

# 4.8. The Parenthesis

The parenthesis  $(10\times)$  "mark[s] words, phrases, or clauses which interrupt the direct grammatical construction" (Simpson 1911: 88). In W3009, it is used at sentence level with three different functions: to provide extra information about recipes in appositive sentences (39); to specify the quantity of an ingredient (40); and to provide an explanatory comment of a term (41).

- (39) Then take the hoo fatts , and sett them vpon A cole fire , and melt them both together , then strew vpon them the powders (  $\underline{\text{mingled before together}}$ ) and stire them together , and let them be cold (f. 66r)
- (40) Take gallingall , Cloues , quibibis , ginger , Cardimonium , mace , nutmeggs , and melilot of Each A drame (<u>that halfe A quarter of an ounce</u>) the Iuice of sallendine , halfe A pint (f. 65r)
- (41) The leaues or roots of Hercules all heale (which is A larger leafe them clowns all heale) stamp'd with honey and brought to the form of an vinquentum (f. 41v)

#### 4.9. Quantitative Results

Figure 1 shows the distribution of punctuation marks in W3009. The quantitative data offer the raw frequencies for each symbol in the text with an outstanding preference for the comma. This mark is found in 5,877 instances as it is an umbrella sign employed for manifold purposes. Its main use is to separate senseunits, marking off the end of a section in a recipe and the beginning of a new section, to enumerate ingredients within a recipe, etc. The comma is therefore used for both short and long pauses, similar to the Present-Day English use of the full stop.

The virgule is the most widespread punctuation mark after the comma (629 occurrences). Its use resembles that of the comma and the period as it performs similar functions throughout the text, although it is also employed to introduce efficacy phrases in the form of tag phrases (e.g., probatum est). The hyphen is the third most common punctuation mark. The text, being a remedy book, contains many compound nouns, i.e., ingredients of the recipes rendered by a hyphen, which explains the high frequency of this symbol in the text under study. The colon (68 occurrences), the apostrophe (60 occurrences) and the period (52 occurrences) are somewhat frequent in the text, whereas the parenthesis and the semicolon are rarely found.

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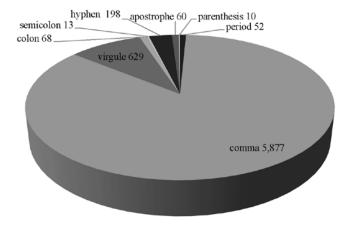


Figure 1. Distribution of punctuation marks in W3009 (raw)

Table 1 reproduces the punctuation practice in W3009 in order to show visually how the punctuation marks function. The data are provided in normalized frequencies (per 1,000 words). The hyphen, the apostrophe and the parenthesis have been omitted since their functions differ from the rest of the symbols of the repertory. The slash also includes the occurrences of the perioslash.

	,		:	;	/	Total	
To mark off the end of a section/recipe	9.46	0.08	0.16	0.02	9.97	19.69	
To separate sense-units	36.75	0.44	0.44	-	0.21	37.84	
To introduce a sequential marker	6.78	0.07	-	0.05	-	6.9	
To introduce coordinate sentences	18.14	0.13	0.03	0.1	-	18.4	
To introduce explanatory comments	-	-	-	-	0.05	0.05	
To introduce efficacy phrases	-	-	-	-	0.05	0.05	
To indicate abbreviations	-	0.02	0.25	-	-	0.27	
To enumerate	18.14	0.11	0.25	0.05	-	18.55	

Table 1. Functions of punctuation marks in W3009 (n.f.)

As can be observed, the distribution of symbols is mainly grammatical so as to separate sense-units in the text (37.84 instances). Punctuation marks are also

employed at macro-textual level to mark off the end of a recipe and at micro-textual level to signal the end of a section within the recipe (19.69 instances). The results also indicate that symbols are more frequently used to introduce coordinate sentences and the sequential marker *then* at sentence level (18.4 and 6.9 instances, respectively). The 17th century is regarded as the turning point in the adoption of the comma to express coordination whilst the period expressed this function in the 16th century (Calle-Martín and Esteban-Segura 2018: 76). At clausal level, punctuation is mostly used to enumerate (18.55 instances). In the majority of cases, it is employed to enumerate ingredients within a recipe, demonstrating the modernization of the textual arrangement by means of punctuation. The use of symbols to introduce abbreviations, explanatory comments and efficacy phrases is also attested in W3009 with only sporadic distribution.

## 5. Conclusions

The present paper has studied the use and functions of the punctuation marks in the medical recipes contained in MS Wellcome 3009 (ff. 17r-90r), a 17th-century recipe book. The repertory of symbols found in the text includes the period, the comma, the virgule, the colon, the semicolon, the hyphen, the apostrophe and the parenthesis.

The use of punctuation marks contributes to the textual organization of the recipes showing a somewhat consistent use of these symbols in the text, even though giving room to a certain level of overlapping. Punctuation marks are mainly employed by the scribes to signal micro-textual relations within the text and hence their function is primarily grammatical, i.e., they are used to express syntactic relations. Notwithstanding this, some rhetorical functions are also witnessed as, for instance, the use of the comma to introduce explanatory comments, helping the oral performance of the text. Some symbols are therefore employed with both grammatical and rhetorical functions in such a way that they complement each other enabling an insightful understanding of the recipes.

The use of punctuation marks in the text under scrutiny has also been examined in quantitative terms, demonstrating that not all of them are used with the same frequency. The comma is systematically favored showing the highest frequency with 5,877 instances. This symbol is followed by the virgule and the hyphen, which amount up to 629 and 198 occurrences, respectively. Finally, the use of the colon, the apostrophe and the period is more constrained, whereas the parenthesis and the semicolon are rarely found in the text.

- 1. The standardization of the language did not affect solely punctuation, but this process also changed English at different linguistic levels. Two main events in the history of English forged the language and led to the beginning of this new stage in its development: the Great Vowel Shift, which changed utterly the way in which vowels were pronounced whilst it also gave rise to new ones, and the above-mentioned establishment of Caxton's printing press, which entailed the modernization of spelling.
- 2. The corpus can be accessed at http://modernmss.uma.es.
- 3. W3009 contains a double foliation system, i.e. it is paginated at the upper corner of the folios (foliation A) and in the lower margin of each recto (foliation B). In the present work, foliation B, located at the lower right-hand corner, has been followed because of its consistency.
- 4. The perioslash consists of the combination of the virgule with a period, as named by Arakelian (1975: 619).

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