

# Shakespeare and the Words of Early Modern Physic: Between Academic and Popular Medicine. A Lexicographical Approach to the Plays

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## *Abstract*

The article aims at showing how Shakespeare relied on the medical vocabulary shared by his coeval society, which had, for centuries, been witnessing the continuous process of vernacularization of ancient and medieval scientific texts. After outlining the state of early modern medicine, the author presents and discusses the results of her search for relevant medical terms in nine plays by Shakespeare. In order to do this, a wide range of medical treatises has been analysed (either directly or through specific corpora such as *Medieval English Medical Texts*, MEMT 2005, and *Early Modern English Medical Texts*, EMEMT 2010), so as to verify the ancestry or the novelty of Shakespearean medical words. In addition to this, the author has also built a corpus of word types derived from seventeenth-century quack doctors' handbills, with the purpose of creating a word list of medical terms connected to popular rather than university medicine, comparable with the list drawn out of the Shakespearean plays. The results most stressed in the article concern Shakespeare's use of medical terminology already well known to his contemporary society (thus confuting the Oxfordian thesis about the impossibility for William Shakespeare the actor to master so many medical words) and the playwright's skill in transforming – rather than inventing – old popular terms. The article is accompanied by five tables that collect the results of the various lexicographical searches.

*Keywords:* Drama, Medicine, Popular Culture, Shakespeare.

Healing was, and in some parts of the world still is, a social drama, a public performance involving elaborate rituals.  
Peter Burke, *Popular Culture in Early Modern Europe*, 2006

Pray you, sir, was 't not the wise woman of Brentford?  
William Shakespeare, *The Merry Wives of Windsor*, 1602

## 1. *Introduction*

### 1.1 *Words, Words, Words*

Strangely enough, no panel devoted to medicine is included in *Shakespeare's Words. A Glossary and Language Companion* (Crystal and Crystal 2002), while

so many others are present in the volume (such as ‘Archaisms’, ‘Exclamations’, ‘Politeness’ and ‘Responses’ plus a further 42). Actually there is a glossary panel for ‘Plants’ (330-333), but this – as its title implies – deals with medicine only very indirectly, since the ‘Comment’ column seldom highlights a particular plant’s connection with medicine. The omission of a medicine panel, which might have listed all the relevant terms interspersed in Shakespeare’s works, could be justified by the authors’ choice not to distinguish between metaphorical and plain meanings of many medical words, but no explanation is given. My article does not claim to fill this gap,<sup>1</sup> but will try to identify which words used by Shakespeare in his plays were already known at the level of popular ‘physic’ and which, if any, he took from his coeval scientific treatises. The final purpose of my intervention is to estimate the role played in Shakespeare by popular and widespread medical knowledge (also derived from the herbal tradition of wise women)<sup>2</sup> *vs* the contribution of the regular practitioners and their documents (see Pelling 2003 for the distinction between ‘regular’ and ‘irregular’ practitioners).

### 1.2 *Methodological Premises (and Limits)*

Since the nineteenth century various scholars have studied the presence of physicians, apothecaries and surgeons not only on the Elizabethan and Jacobean stage at large, but particularly in Shakespeare’s plays, deftly highlighting the role played by these characters and by medicine, collecting quotations from the plays and emphasising the function of medical practitioners in the texts (see Stearns 1865; Chesney 1884; Silvette 1967). Recently scholars have analysed various Elizabethan and Stuart plays foregrounding ‘[t]he perilous and shifting conjunctions of nature, disease, the patient, the practitioner’s art, performance, and the representations of these conjunctions in early modern drama’ (Moss and Peterson 2004, xi),<sup>3</sup> and Pettigrew (2007), via an even more comprehensive cultural approach, has studied how Shakespeare uses medical discourse and displays medical practice. The close relationship between the playwright and Dr. John Hall, one of his sons-in-law, has also been stressed, in order to explain Shakespeare’s medical knowledge (Tierra 2008), while precisely this knowledge has been used by Oxfordians to deny ‘William of Stradford’ authorship of the plays (Davis 2000, 55). While grounding my research on previous critical results, in my article I would like to search the plays for medical terms hinting at the influence of popular medicine, at a time when scientific medicine was still lagging behind. And this by means of a computer-aided and corpus-based lexicographical analysis.

In order to ground my research on reliable data, after outlining the state of early modern medicine, I’ll make use of a corpus of seventeenth-century quacks’ handbills, which I have built up myself by transcribing one third of the two British Library collections containing them (*A Collection of 185 advertise-*

*ments; A Collection of 231 advertisements*). Of course, this corpus displays the language used in its historical context, i.e. later than Shakespeare's times, but I consider it useful because it contains a rich medical lexicon deriving mainly from popular use, rather than from university knowledge.<sup>4</sup> From this corpus a list of keywords will be extracted as resulting from the concordancer Ant-Conc 3.2.1 (Anthony 2009). Secondly – with the help of the MEMT corpus (which also includes some texts of the early sixteenth century, Taavitsainen, Pahta, and Mäkinen 2005) – another list of keywords relating to the field of medicine and remedy books will be built, and compared with the previous one, in order to verify the permanence of the older terms in seventeenth-century language. What proves to have a long duration and words of a high ranking will be searched, later, throughout Shakespeare's plays, so as to verify their durability and/or variation in the Shakespearean vocabulary.<sup>5</sup>

A subsequent phase will be devoted to checking, on the basis of some early modern medical texts, to what extent Shakespeare drew on contemporary terminology, or to what extent he still relied on the previous medical lexicon, which, in his times, had already become part of Elizabethan shared knowledge. This phase will also take advantage of the recently issued EMENT corpus (2010).

Finally, the labels of 'popular' and/or 'elite' medicine will also be discussed according to the results of the previous sections, in order to see whether, and how far, the language of 'physic' in Shakespearean plays was permeated with words coming from the social margins, or rather adhered to the lexicon approved by the Royal College of Physicians.

From the steps outlined above, it is evident that such a project would require more space than allotted for this contribution. Therefore, since a large amount of data is expected, on this occasion my lexicographical results will be verified in a limited number of plays, leaving further in-depth exploration to future research.

## 2. *Physicians, Surgeons, and Empirics in the Sixteenth Century*

### 2.1 *Henry VIII and Physic*

In 1421, nearly a century before Henry VIII founded the College of Physicians (1518), a petition was written by some members of the two universities of Oxford and Cambridge, who asked that

no man, of no maner estate, degree or condicion, practise in Fisik from this tyme forward bot he have long tyme y-used the scoles of fisik withynne som universitee, and be graduated in the same. ... Undur payne of long emprisonement, and paynge xl li ... to the Kyng; and that no woman use the practise of fisik under the same payne.

(*Rotuli Parliamentorum*, IV, 158, quoted in Rawcliffe 1997, 120)

Only during the third year of Henry VIII's reign did Parliament issue a law which observed that

the science and cunning of Physick and Surgery (to the perfect knowledge whereof be requisite both great learning and ripe experience) is daily within this Realm exercised by a great multitude of ignorant persons, of whom the greater part have no manner of insight in the same, nor in any other kind of learning. Some also can no letters on the Book, so far forth that common Artificers, as Smiths, Weavers, and Women boldly and accustomedly take upon them great Cures, and things of great difficulty; in the which they partly use Sorcery and Witchcraft, partly apply such Medicines unto the disease, as be very noyous, and nothing meet ... (3 H. VIII. C11, in Merret 1660, 1-2)

Non-licensed people were consequently prohibited from practising medicine and surgery within the city of London and 'within seven miles of the same'. The licence had to be obtained from religious authorities who availed themselves of university physicians. Some years after that (in the tenth year of Henry's reign), the College of Physicians was created via a royal letter patent, giving Thomas Linacre and other royal physicians – all of them university graduates – the privilege to constitute a corporation in charge of testing would-be physicians. As a consequence only after obtaining the College's approbation was a physician allowed to practice in London (14. 15. H 8. C 5, in Merret 1660, 9-10). In spite of these restrictions, though, some time afterwards, in 1542, the king issued what goes under the label of 'Quacks' charter' (34, 35 H.8. C 8). This law, probably due to the small number of university doctors in the country and – as the document declares – because of the *Chirurgeons'* 'minding only their own luces', gave permission to practice to everyone 'as well men as women, whom God hath endued with the knowledge of the nature, kind and operation of certain herbs, roots and waters, and the using and ministering of them, to such as been pained with customable diseases'. These people were allowed to work 'within any part of the Realm of England, or within any other of the Kings Dominions', provided that their healing remedies were limited to 'outward sore[s]' (Merret 1660, 27-29). In other words, the College's power resulted hedged and limited and the role of empirics was recognized and tolerated by law.

## 2.2 *Women Healers*

It is evident from these historical notes that so far physicians and surgeons were considered as one single body. However, later a distinction was made according to which surgeons, not to mention apothecaries, were considered separate 'mysteries' (actually surgeons were grouped with the Barbers in a single company in 1540, while apothecaries had to wait longer in order to see their profession officially recognized in 1617). What appears very interesting in the above mentioned royal documents are the words they use for women: the earliest bill indirectly (but not excessively so!) accuses women of witchcraft and illiteracy,

while the latest acknowledges women's expertise in traditional herbal cunning, and does not touch the problem of literacy. All these aspects – the role of women in health care, together with limited female literacy when compared with men's – will continue to be at the basis of the social condemnation of women healers: suffice it to remember the Countess's words to Helena in AWW:

But think you, Helen,  
 If you should tender your supposed aid,  
 He would receive it? He and his physicians  
 Are of a mind; he, that they cannot help him,  
 They, that they cannot help: how shall they credit  
 A poor unlearned virgin, when the schools,  
 Embowell'd of their doctrine, have left off  
 The danger to itself? (1.3.233-40)

On a non-fictional level, the learned reproval of women healers is witnessed, as late as 1651, by the engraving on the frontispiece of James Primrose's *Popular Errours* showing a woman being prevented by an angel from getting near a sick man's bed.<sup>6</sup> Women, together with unlicensed practitioners, were considered 'empirics', then, and as such – in spite of Henry's 1542 statute – dangerous to the public health.

A specific historical process mustn't be overlooked, i.e. the dissolution of monasteries in the late 1530s, which 'released' throughout the country many friars, monks and nuns. Most of them – according to a century-long tradition – were well-trained in growing, collecting and using herbs both as simples and compounds not only for their communities' necessities but also to relieve the poor who crowded in for help (see Maple 1968, 66-67). Many empirics, then, were available around England, and administered remedies to the sick, especially administering external cures (thus leaving the cure of internal diseases to university physicians), so much so that Thomas Gale attacked the 'rude Emperikes' and those 'who, under the name of Chirurgians be nothing els but open murderers' (Gale 1563, ii<sup>v</sup>), they being favoured because 'without penaltie and correction of lawes frelye [they] take on them the practise of Chirurgerie' (Cii<sup>r</sup>).

Women, though, had always been the 'family doctors', those in charge of caring for the health of whole households (and more besides), as it clearly appears from the letter John Paston III sent to his wife, Margery, around 1487:

Mastress Margery, I recomand me to yow, and I prey yow in all hast possybyll to send me by the next swer messenger that ye can gete a large playster of *your flose vngwentorum* for the Kynges Attorney Jamys Hobart; for all hys dysease is but an ache in hys knee. He is the man that brought yow and me togedyrs, and I had lever then xl li. ye koud wyth *your playster* depart hym and hys peyne. But when ye send me the playster ye must *send me wryghtyng hough it shold be leyd to and takyn fro hys knee, and*

*hough longe it shold abyd on hys kne vnremevyd, and hough longe the playster wyll laste good, and whethyr he must lape eny more clothys a-bowte the playster to kepe it warme or nought. And God be wyth yow. Your John Paston (italics and emphasis mine)*<sup>7</sup>

John Paston asks his wife not only to send him a balm used by the family at home, but also to let him have all the necessary information for the dosage and the whole curing process, thus showing himself to be completely in the dark as for health-care procedures.

From the rich correspondence between the male and female members of the Paston family in the fifteenth century it is clear that those women could at least read, but for them and for many other women from social lower classes reading was not strictly necessary in order to possess the knowledge transferred from mothers to daughters, i.e. that mentioned in Henry VIII's 'Quacks' Charter'.<sup>8</sup> However, in Elizabethan London female practitioners themselves, far from collecting their own herbs, 'were just as likely to buy their medicines, or at least their ingredients, from apothecaries' (Pelling 1997, 76), i.e. the 'mythical' figure of the herb-woman seems to belong to the romance landscape of *Pericles*, for which Shakespeare built the word, and to the countryside, rather than to the reality of the city.<sup>9</sup>

### 2.3 *Medicine, English, and Print*

In the sixteenth century both lay and university-trained medical practitioners started to have access to more and more medical treatises written in English, a quantity which increased during the century and which continued the trend of vernacularization begun as early as the last quarter of the fourteenth century (see Taavitsainen 2004). Instead of studying Latin volumes, they could rely on a certain variety of English books, the spread and relatively easy availability of which was promoted by print. These books were both translations of the classical texts (Galenic medicine still held the floor till late in the seventeenth century), and books of remedies published for family use, when sickness was cared for by the household women, and also for a wider and wider readership: '[b]ooksellers and printers financed, created, and disseminated popular health manuals to a new body of readers' (Furdell 2002, 29).

If Sir Thomas Elyot found it necessary to preface the second edition of his *The Castel of Helthe* to justify the use of English in a book dealing with 'herbes and medicines' (1541, Aiii<sup>v</sup>), by protesting that 'if phisitions be angry, that I have wryten phisike in englyshe, let theym remembre, that the grekes wrate in greke, the Romanes in latyne, Auicena, and the other in Arabike, whiche were their owne propre maternal tonges' (Aiv<sup>v</sup>), later authors as well were compelled to defend their writing in their own language.<sup>10</sup> Students' fatigue is diminished and shortened by works in English, says Thomas Gale in his preface addressed to his 'Frindly [sic] readers', because otherwise 'my Brethren Chirurgians who althoughe they are desirous to attayne ther arte, yet both

because it is so long, and not set out in our usuall language, they are frustrat of ther desire' (1563, \*i). However, in spite of the process of vernacularization and of the continuous publishing of English medical books, some words were certainly still either unknown to most, or of difficult understanding. In *The Book of Compoundes* – a dialogue between Sicknes and Health, which is a part of William Bullein's *Bulleins bulwarke of defence* (1562) – Sicknes laments that 'Now you haue ended your Table, with the names of compoundes. There are certain wordes, very harde for me to understand as when you name *Apophlegmatismus*, ... I knowe not what they doe meane, by their proper names, I praiue you tell me the significacions' (1562, Iii<sup>v</sup>). Health, of course, soon afterwards starts explaining the tough terms to Sicknes (and to the reader).

But the 'words of medicine', especially those derived from Greek and Latin, certainly continued to be considered among the 'hard words', so that glossaries were printed in order to help readers – the common ones, therefore, and not specifically the students of the university schools of 'physic' – to understand new terms (which also served to unify medical terminology all over the country). In 1598 Jacob Mosan published his translation of Christoph Wirsung's *Arzney Buch* (1568), entitled *Praxis medicinae uniuersalis, or, A generall practise of physicke*, with the addition of a glossary of 574 lemmas concerning 'Apothecaries' "simples", mainly herbs' (Schäfer 1989, I, 44), a medical book 'very meete and profitable, not only for all phisitions, chirurgions, apothecaries, and midwiues, but for all other estates whatsoeuer' (Wirsung 1598, for the complete title). Some years later Robert Cawdrey issued *A Table Alphabetically, contayning and teaching the true writing, and understanding of hard usuall English wordes [...]* *With the interpretation thereof by plaine English words, gathered for the benefit & helpe of Ladies, Gentlewomen, or any other unskilfull person [...]* (1604), addressed specifically to a female readership, with a wider variety of lexical fields and including 2543 lemmas (Schäfer 1989, I, 51). The long title of Cawdrey's 'Table' is particularly revealing, since on the one hand it still groups women – even belonging to high social classes – with the unlearned, but – on the other – it shows the advancement of literacy among women, who – at least – are considered capable of reading the 'dictionary'.<sup>11</sup>

From all this, it is not difficult to perceive that Elizabethan and early Stuart society had all the instruments they needed to understand not only 'hard words' at large, but also medical ones. These works were easily readable by whoever wanted to learn (and could afford them), or wished to acquire an in-depth knowledge of a certain subject. Why couldn't Shakespeare, then, have been one of those readers, especially if we consider that the volumes mentioned (and many similar others) were all printed in London? After all, 'If medical books did not force themselves on the attention of the literate by their numbers, they probably existed in sufficient quantity by the end of the period [Tudor era] to be accessible to most of the readers who positively wanted them' (Slack 1979, 240).

### 3. Words in the Shakespearean Corpus: Which and Wherefrom?

#### 3.1 The Oxfordian Position

On the basis of what written so far, it appears that for Shakespeare his ‘little Latin and less Greek’ were quite sufficient to access his coeval medical literature: actually, he didn’t need any specific classical language to read medical treatises, they being now mainly printed in English. For example, when Frank Davis writes that ‘[i]t is quite remarkable that in three plays he [Shakespeare] refers to the *pia mater*’, adding that whoever wrote the plays must ‘either have studied anatomy or read medical literature. He certainly did not get this knowledge from folk-medicine, Galen or Hippocrates’ (Davis 2000, 52-53), he is not completely favouring his own Oxfordian standpoint. In fact, ‘pia mater’ is a collocation occurring 24 times in six texts of the MEMT corpus (see Table 1).<sup>12</sup>

Line	Text	Search Results	Source
2)	benne binoþ þe brains þer is	[ pia ] mater & dura mater, and þen l	(chauliac_anatomy_interpolated
3)	at kenneþ-to is dura mater &	[ pia ] mater, and þei ben two pannik	(chauliac_anatomy_interpolated
4)	þete in-to þe brains fro þe	[ pia ] mater, and þer comþe to hem vel	(chauliac_anatomy_interpolated
5)	en on þe dura mater þat þe	[ pia ] mater and þe braine be not greu	(chauliac_anatomy_interpolated
6)	of þe dura mater wypon þe	[ pia ] mater, and be cause of compres	(chauliac_anatomy_interpolated
7)	nei firste, dura mater and	[ pia ] mater, þen þe substance of þe	(chauliac_cyurgie.rtf [8] :
8)	e vnder the brayn comþe aþen	[ pia ] mater and dura and laste þe a	(chauliac_cyurgie.rtf [8] :
9)	þat comþh is dura mater and	[ pia ] mater. And þei beþþ two faise	(chauliac_cyurgie.rtf [8] :
10)	creasum by commissures. Of	[ pia ] mater narisþonge is þis in þe	(chauliac_cyurgie.rtf [8] :
11)	llyng of dura mater about	[ pia ] mater end of þristyng of þe br	(chauliac_cyurgie.rtf [8] :
12)	- The secounde spryngþ of	[ pia ] mater, and þe ynnar partis is c	(chauliac_cyurgie.rtf [8] :
13)	whiche is now isþrong of	[ pia ] mater. Galien assigneþ þe fourþ	(chauliac_cyurgie.rtf [8] :
14)	þat neiþere dura mater ne	[ pia ] mater, þer as þey ben y-hongyd	(lanfranc_chirurgia_magna_2.r
15)	re, & of hem ys engendryde	[ pia ] mater. Afterward þey descenden	(lanfranc_chirurgia_magna_2.r
16)	rel forme of vnderstondyng.	[ pia ] mater environþ ek þe hreyne.	(lanfranc_chirurgia_magna_2.r
17)	þis, whioþ þe™ is olepid	[ pia ] mater; and þis pannyole is þe	(chirurgie_de_1392.rtf [14] :
18)	ne bitwene þe scolle, & þe	[ pia ] mater, and þe neische. And þe	(chirurgie_de_1392.rtf [14] :
19)	d arteries han y-ma™a™ þe	[ pia ] mater, and nett here togidere	(chirurgie_de_1392.rtf [14] :
20)	ads þere þe llyve of a beast.	[ pia ] mater wipouten mans touchip þ	(chirurgie_de_1392.rtf [14] :
21)	, þat ben y-sþrongen of þe	[ pia ] mater; and þe is seid: Lincier	(chirurgie_de_1392.rtf [14] :
22)	culus as ys dura mater and	[ pia ] mater wyche ar þe skynne þat	(book_of_surgery.rtf [14] :
23)	skynnes ben icalled in Letyn	[ pia ] mater and dura mater. Of the	(thesaurus_paupercum.rtf [66]
24)	and his tong blaketh. But yi	[ pia ] mater is hurt that is the jnn	(thesaurus_paupercum.rtf [66]

Table 1: Occurrences of PIA MATER in MEMT (2005).

‘Pia mater’, therefore, was an expression widely used and known, so much so that Thomas Gale, printing his works on surgery in 1563, did not even feel it necessary to explain its meaning when introducing the subject of ‘Hydrocephalon’, a ‘tumour’ a type of which ‘is betwixt pia mater and the braine’ (1563, 27<sup>v</sup>). Furthermore, neither the medieval sources nor Gale can be considered ‘anti-Galenic’: all of them are well inside the traditional humoral and Galenic medicine. Of course, these sources cannot be interpreted as folkloric, or derived

from popular culture; nevertheless words used in Middle English works can be thought of as part of the country's shared linguistic treasure in Elizabethan times. The last mentioned text in Table 1 (*Thesaurus pauperum*) in particular is written to help the poor unable to resort to physicians, and therefore addressed to and written for lower social classes in need of cures, as the *incipit* reveals: '[b]rother I pray the for charite that thou write to me a fewe medecynes that I myght help pore folk that falleth into sekenes and beth vnkonnyng to helpe hem sylfen and of vnpower to huyre hem leches' (f. 29<sup>r</sup>, in MEMT, 2005).

The basic question, though, remains: did 'William of Stradford' have access to medical treatises? We cannot know, but the richness of the medical lexicon in Shakespeare's plays is not a totally convincing reason to be given in support of the Earl of Oxford regarding the issue of authorship.

### 3.2 *The Process by Steps and the Corpus Results*

3.2.1 - Regarding the intention stated in 1.2, I built up a wordlist from the corpus of the two BL collections of handbills, so that a seventeenth-century popular medical lexicon was available. I selected keywords relating to body parts, illnesses, medicines and physiological processes, thus creating a whole (List A) made up of terms certainly connected to medicine (very presumably derived from popular culture, given the writers of the handbills) and comparable with other subsequent lists.<sup>13</sup> Afterwards, the whole Shakespearean corpus of plays (excluding *Edward III*, but including *TNK* and both versions of *Lr.*, *Q* and *F*, since I used the OUP floppy disk edition of the *Complete Plays*) was processed with the help of the AntConc 3.2.1 concordancer. Then another list (List B) was extracted from the concordance results, including the same word types as obtained from the previous one if present also in Shakespeare, with the addition of all other terms which might relate to the body and its possible diseases, such as appeared in Shakespeare's plays but not in the handbills.

A further step consisted in looking up the words of List B in the MEMT corpus, in order to verify which items were already present in vernacular medical texts of the late Middle Ages (up to c. the 1520s) and could be considered 'survivors' from the past, and which on the contrary were clearly new coinages (of course spelling variations due to the passage from Middle English to Modern English were not taken into account, for example EYE was assimilated to EY/EY3E). Of the five sections offered by MEMT ('Surgical texts', 'Specialized texts', 'Remedies and Materia medica', 'Verse' and 'Appendix'), 'Remedies and Materia medica' was chosen for a first confrontation with List B, because of the more popular origin of the texts included in this section when compared to the others; later the check was also carried out throughout the other four sections.

Such tools as lexicographical studies of early modern English, general ones (see Schäfer 1989) and those especially relating to medicine (Norri 1992; McConchie 1997) and, of course, the *OED*, were also implemented in the research.

3.2.2 - The first impressive result from the Shakespearean concordances is the high amount of words the playwright used just once in his plays (out of 25261 word types – with 1056068 word tokens – 9273 are counted as occurring only once).<sup>14</sup> An immediate surmise might be that very specific medical nouns and adjectives appear exactly within this group, while it is evident that very widely used (and old) terms are to be found at the top of the frequency table (see Table 2).

Tokens	Type	Rank
1267	hand*	1.
1240	heart *	2.
1130	eye*	3.
700	head*	4.
696	blood	5.
497	tongue*	6.
458	mother*	7.
456	arm*	8.
429	spirit*	9.
398	ear*	10.

Table 2: Frequency ranking in the Shakespearean corpus (from List B).<sup>15</sup>

The data in Table 2, though, are soon questionable since many, if not all, of the words listed have both literal and metaphoric meanings, thus apparently invalidating the whole process. At this point a very careful verification of occurrences in their individual co-texts would have been necessary, so as to be able to say, e.g., that HEART\* occurs – let's say – only 300 times out of 1240 with its exact meaning as a body part. Another example: the word SCRUPLE, indicating a unit of weight in the medical world (20 grains), is very often used in its moral meaning in the corpus (where it occurs 23 times, while SCRUPLES – always to be understood morally – occurs 5 times).<sup>16</sup> This kind of operation, I admit, scared me and so I decided to focus only on certain plays which, due to their plots, contain situations where medicine and medical language appear relevant, also considering a fairly homogeneous distribution over time. With all the limits and drawbacks of this decision, I worked on *1H4*, *2H4*, *Wiv.*, *Rom.*, *Tro.*, *Tim.*, *Oth.*, *JC* and *Per.*<sup>17</sup>

3.2.3 - A new list (List C) was derived from the latter procedure, resulting after looking up the same words as included in List B, but in the nine-play corpus only. The results are partly visible in Table 3, which shows that no remarkable change occurs in the top ranking positions (the concordancer processed 249387 word tokens). It is interesting, though, to notice that

some very specific words, on the basis of the plays selected, occupy higher positions than in List B. For example, *Rom.* being in the selection, NURSE, with its 168 occurrences corresponding to 0.067% of all tokens in List C, acquires relevance when compared with List B in which the word does occur 227 times, but with a lower percentage equal to 0.021% (in both cases SSDD and speech headings are included).

Tokens	Type	Rank
307	hand*	1.
303	heart*	2.
233	eye*	3.
168	nurse*	4.
165	head*	5.
157	blood	6.
118	matter*	7.
103	spirit*	8.
101	ear*	9.
94	arm*	10.

Table 3: Frequency ranking in *1, 2H4, Wiv., Rom., Tro., Tim., Oth., JC, Per.* (from List C).

Apart from these remarks, a basic issue arises from the concordance data, relating to the lexical richness of the selected plays: the number of word types in List C (nine plays) is 14787. This means that these plays use a wide variety of terms, in particular some medical ones which occur in the selection more than elsewhere: for example, ACHE\* occurs 11 times out of a total of 13 in the whole corpus, and other words are present only in the selected plays (e.g. BLAINS, BONE-ACHE, BURNING FEVER, COLOQUINTIDA, EPILEPSY, FALLING SICKNESS, GUTS-GRIPING etc.; see Table 4).

List C	List B	Word type
11	13	ache*
1	2	antidotes
3	4	apoplexy
10	13	apothecary (6 SSDD)
3	6	aqua-vitae
1	1	balsam
3	4	bladder
1	1	blains
2	2	blister*
2	2	bone-ache

2	3	bots
1	1	burning fever
9	25	cholera
2	3	colic
1	1	coloquintida
7	11	conceptions
3	6	contagion
5	5	curer
1	2	deafness
5	16	dram*
1	2	dropsies
4	9	drugs
101	177	ear*
1	1	epilepsy
5	17	eyelids
3	8	eyesight
2	2	falling sickness
1	2	fennel
1	2	forefinger
3	5	Galen
3	8	gout
2	2	gouty
3	4	green-sickness
2	4	gum
11	16	guts
2	2	guts-gripping (**)
1	1	herb-woman
1	2	honeysuckle
1	1	Hibbocrates
60	136	humour*
1	1	impostume
3	6	incontinent (moral?)
2	4	incurable
3	7	infectious
7	7	infirmity*
1	1	unflammation
1	1	itches
1	2	jaundice
1	1	kidney

1	2	leech
2	4	leprosy
1	3	let blood
4	5	letharg*
1	1	lime-links
9	27	liver*
1	2	mandragora
3	4	mandrake*
3	7	marrow*
2	3	medicinable
10	27	medicine*
1	1	midriff
168	229	nurse*
7	13	palate*
3	5	palsy* (**)
2	2	phthisic (**)
12	31	physician*
2	3	pill*
52	116	plague*
1	1	poppy
2	2	pothecary
1	1	poultice
10	24	pox
1	1	pregnancy
2	5	prescribe
2	6	prescription*
2	5	purblind
1	2	quicksilver
1	1	recipe
2	4	rheumatic
2	3	rupture* (**)
2	4	scab
2	2	sciatica*
14	30	scurvy (adj)
1	1	shanks
62	166	sick
2	6	simples
10	32	spleen*
3	5	sterile

2	5	sulphur
8	16	surgeon
1	2	syrups
1	3	tetter
8	15	thigh*
10	15	thumb
1	2	ulcer
1	3	ulcerous
3	4	urinal*
5	16	vapour*
16	43	vessel*
2	5	vomit*
4	11	web
1	1	wheezing-lungs
1	1	yellowness

Table 4: Frequency comparison of medical terms (from Lists C and B).<sup>18</sup>

### 3.3 *Shakespeare and Sixteenth-Century Medical Treatises*

3.3.1 - Few of the affections listed in the 'Quacks' Charter', the cure of which non-professionals were allowed to carry out, remain in Shakespeare (there is no trace of the names STRANGURY, MORFEW, SCALDING, BURNING, and THE STONE), whereas APOSTEMATION is substituted by the more recent IMPOSTHUME (occurring twice in the whole corpus). Only PLASTER and 'a pin and the web in the eye' survive: the former once each in *Cor.*, *Jn.*, *MND* and *Tmp.*, the latter once in *Lr.* Q (Sc. 11, 105-106), in *Lr.* F (III.iv.109-110), and in *WT* (I.ii.293). However, all these were external diseases. As for internal ones, the repertory from both List B and List C is much richer (illnesses, cures and healers in the selected plays are listed in Table 5).

Rank	Tokens	Word type
1.	168	nurse*
2.	68	wind*
3.	52	plague*
4.	48	doctor*
5.	32	pain*
6.	23	disease*
7.	14	sickness (alone)
8.	12	physician*

9.	11	ache*
10.	10	apothecary
11.	10	pox
12.	8	surgeon
13.	7	infirmity*
14.	6	cure
15.	6	plant*
16.	5	ague*
17.	5	canker*
18.	5	curer
19.	5	vapour*
20.	5	wart
21.	4	herbs
22.	4	infection
23.	4	letharg*
24.	4	miscarry
25.	3	apoplexy
26.	3	aqua-vitae
27.	3	corruption
28.	3	distemper
29.	3	contagion
30.	3	frenzy
31.	3	Galen
32.	3	gout
33.	3	green-sickness
34.	3	incontinent
35.	3	infectious (+-ly 1)
36.	3	mandrake*
37.	3	midwi*
38.	3	pestilence
39.	3	swoon
40.	2	blister*
41.	2	blot
42.	2	boils
43.	2	bone-ache
44.	2	bots
45.	2	colic

46.	2	contagious
47.	2	effects
48.	2	falling sickness
49.	2	leprosy
50.	2	gouty
51.	2	guts-gripping
52.	2	incurable
53.	2	malady
54.	2	medicinable
55.	2	palsy*
56.	2	pothecary
57.	2	phthisic
58.	2	prescription
59.	2	purblind
60.	2	rheum
61.	2	rheumatic
62.	2	scab
63.	2	sciatica*
64.	2	simples
65.	2	vomit
66.	1	antidotes
67.	1	balsam
68.	1	blains
69.	1	brainsick
70.	1	burning fever
71.	1	catch cold
72.	1	cordial
73.	1	deafness
74.	1	dropsies
75.	1	epilepsy
76.	1	fennel
77.	1	gravel
78.	1	herb-woman
79.	1	Hibbocrates
80.	1	impostume
81.	1	impotent
82.	1	inflammation
83.	1	itches
84.	1	jaundice

85.	1	leech
86.	1	let blood
87.	1	lime-kilns
88.	1	mandragora
89.	1	pepper
90.	1	poppy
91.	1	poultice
92.	1	putrefied
93.	1	qualm
94.	1	quicksilver
95.	1	recipe
96.	1	rheumy
97.	1	ruptures
98.	1	syrups
99.	1	tetter
100.	1	ulcer
101.	1	ulcerous
102.	1	wheezing-lungs

Table 5: Names of illnesses, cures and healers in the nine-play corpus.

3.3.2 - After searching for the words of Table 5 in the MEMT wordlist and sorting out those not present in late Middle Ages medical texts, I proceeded to verify through EMEMT the possible occurrence of the terms left over. The latter are in bold in the same table (30 in total). All these, apart from INCONTINENT (n. 34), BRAINSICK (n. 69), HERB-WOMAN (n. 78), LIME-KILNS (n. 87), QUALM (n. 93), RHEUMY (n. 96), and WHEEZING-LUNGS (n. 102) are attested in the sixteenth-century medical treatises included in EMEMT. All 30 items, though, were also looked up in the *OED* and their use (excluding HERB-WOMAN and LIME-KILNS)<sup>19</sup> was proved either in texts of the same period as the plays, or even from earlier times. Most words, in the end, appeared to have been known in the Elizabethan era, even if some of them – such as INCONTINENT, for example, and LIME-KILNS – are used metaphorically in Shakespearean plays, i.e. with no medical meaning. It is interesting, however, to briefly analyse some of the 30 words, because of their ‘lexical’ history.

A) BONE-ACHE (n. 43)

The word, which the *OED* signals as present in John Skelton’s *Magnyfycence* (1520?), appears twice in *Tro.*, both times hinting at syphilis: Thersites, in 2.3.17-18, invokes ‘the vengeance on the whole camp or rather, the Neapolitan bone-ache’, and – towards the end of the play in the Quarto version – inserts an ‘incurable bone-ache’ in his colourful list of maledictions, where ‘incur-

able' clearly refers to the desperate situation of people suffering from syphilis, the subsequent bone-ache caused by which could not be eliminated by any contemporary cure. While used as early as the beginning of the sixteenth century, the much more frequently employed 'French pox' actually spread in the seventeenth century, and Shakespeare, therefore, still seems to follow the link between syphilis and Naples, according to what Jones writes in his *Dial for All Agues* (1566, 57; in EMENT CDRom):

... he [George Agricola] affirmeth that the parts of the world hath varied in forme and kindes of the plague: for the Egyptians were plagued with the Lepry, ... the Neapolitanes, or rather the besegers of Naples, with the pockes (spred sence to far abrode, through al the parts of Europe, no kyngdome that I haue bene in free, the more pity).

B) BURNING FEVER (n. 70)

The word occurs in *2H4*, 4.1.54-56, when the Archbishop of York laments the common situation of illness by saying: 'we are all diseased, / And with our surfeiting and wanton hours / Have brought ourselves into a burning fever'. The usual collocation found in MEMT is 'brennyng ague' (with various spellings), while in the second half of the sixteenth century there are many instances of alternation between this older and the newer collocation 'burning fever', till the definitive adoption of the latter (see EMENT). Thomas Gale, for example, uses the more modern form in his *Antidotarie* (included in Gale 1563), but the *OED* ignores this fact and dates the first use of the collocate to 1661 (defn. 1.b).

C) CORRUPTION<sup>20</sup> (n. 27)

The item is present in *1H4*, *2H4* and *JC*, but it is in the first play that it apparently acquires a medical, if metaphoric, meaning very similar to CONTAGION. Worcester, speaking of Hotspur and trying to excuse his behaviour, says: 'We did train him on, / And, his corruption being ta'en from us, / We as the spring of all shall pay for all' (*1H4*, 5.2.21-23). The word is clearly used in a moral sense; however, the phrase 'to take corruption from' seems to equate CORRUPTION to the *OED* 2.a. definition: 'infection, infected condition; also *fig.* contagion, taint'.

D) CURER (n. 18)

The *OED* attests the word in *St. Augustines Man* by T. Rogers ('[t]hou purger of wickednes and curer of wounds', 1581), but in a purely medical meaning it is used by Thomas Gale in his translation of Galen's *Methodus medendi* in 1586 (EMENT). Shakespeare shows a knowledge of both usages: Thersites promises 'I'll be a curer of madmen' (*Tro.*, 5.1.47), while Shallow qualifies the evidently still neuter word with 'He is a curer of souls, and you a curer of bodies' (*Wiw.*, 2.3.36), a distinction repeated by Host later in the play when he tries to define 'Gallia and Gaul, French and Welsh, soul-curer and body-curer' (3.1.89-90).

## E) FALLING SICKNESS (n. 48)

The correspondence of EPILEPSY to FALLING SICKNESS (FS) is evident (and in this meaning Shakespeare uses the term in *JC*), but what appears interesting is the progressive substitution of 'sickness' to 'evil' during the sixteenth century. EMEMT shows the transformation of the item: as early as 1528 FS is used in Mediolano, *Regimen sanitatis salerni*, but the later *Boke of Children* by Phayer (1546) alternates between FALLING EVIL and FS, an uncertainty shared by Braunschweig's *Homish Apothecarye* (1561), which talks of 'the falling euell or sykenesse'. Apart from other occurrences, Brasbridge definitively uses FS in his *Poore mans Jewel* (1578). But the old usage still persists as late as Batman's *Batman Vppon Bartholome* (1582), where there is the following definition: 'palsie or Epilepsia, that is the Falling Euyll' (all quotations are from EMEMT).

## F) GREEN-SICKNESS (n. 33)

The first occurrence of the word in the *OED* refers to *Mamillia* by Robert Greene (1583), while my search in EMEMT showed that the word – meaning 'chlorosis', an anæmic disease usually associated with female adolescents – appears earlier, being used by William Bullein in his *Bulleins Bulwarke* (1562), and later, in 1578, by Brasbridge's *Poore Mans Jewel*. (This would, therefore, introduce an antedating). In my limited corpus of Shakespearean plays it occurs three times: in *Per.*, Sc. 19.22, and *Rom.*, 3.5.156, attributed to female characters, whereas in *2H4*, 4.2.90 Sir John finds it necessary to redefine the word as 'male green-sickness' when applied to young men with a sober life in his famous 'sack' speech.

## G) GUTS-GRIPING (n. 51)

The phrase appears in *Tro.*, 5.1.17, in the already mentioned list of maledictions uttered by Thersites, and it also occurs in the Quarto version of the play. It does not seem to have any antecedent (and actually the *OED* cites this play as the first occurrence), but a search in EMEMT testifies to the previous existence of similar expressions. Brasbridge (*Poore Mans Jewel*, 1578) uses 'griping paines of the belly', and Hester, in his *Key of Philosophie* (1596), speaks about the 'griping torment of the belly', and of 'gripings or wind in the guts'. From these examples Shakespeare, as often happens, shows his great skill in forging words, not only when he 'invented' some of them, but mainly when he drew from the existing vocabulary and coined more impressive compounds.

## H) HERB-WOMAN (n. 78)

This is a case of a real Shakespearean coinage (even if not present in McQuain and Malless 1998), occurring only once. It is to be found in *Per.*, Sc. 19.86-87, when Lysimachus answers Marina's question 'Who is my principal?' with 'Why, your herb-woman; / She that sets seeds of shame, roots of iniquity'. The passage, even if transferring the word's meaning from the medical to the

moral discourse, clearly employs linguistic elements traditionally connected to the herbal tradition of wise women.

i) INFECTIOUS (n. 35)

Shakespeare makes use of this adjective three times: there is an ‘infectious house’ in *Oth.*, 4.1.21, an ‘infectious pestilence’ in *Rom.*, 5.2.10, and ‘potent and infectious fevers’ in *Tim.*, 4.1.22. The *OED*, for the meaning 2.a (‘of diseases’), quotes *Rom.*, but at 1.a (‘having the quality or power of communicating disease by infection’) forgets to refer – while listing some previous medical works – to Queen Elizabeth I’s ‘Orders by Her Majestie’ issued in 1578, i.e. not a specialistic volume, but laws to be enforced all over the kingdom, and therefore to be known everywhere: this document quotes ‘infectious persons’, in whose presence a certain medicine, made of ‘Angelica, Gentian or Valerian’, is counseled (EMEMT).

j) SIMPLES (n. 64)

The word occurs twice: once in *Rom.*, 5.1.40, in Romeo’s description of the apothecary ‘In tattered weeds, with overwhelming brows, / Culling of simples’, and once in *Wiv.*, 1.4.59, when Dr. Caius says that, ‘for the varld’, he does not want to leave behind ‘some simples in my closet’. The word was widely used and known to mean herbs as components of medicines, especially when used individually, i.e. it belonged to the common and shared lexicon of apothecaries, physicians and surgeons, but also of those women who actually grew and picked the herbs of which their medicaments were made.

#### 4. *Conclusions: Much Ado About Nothing?*

At the end of my endeavour perhaps it is difficult to say whether the results are worth the time spent obtaining them. But one thing emerges with certainty: even if it is true that Shakespeare enriched the English language with so many new words, this principle does not seem to be applicable to medical discourse, since the words he uses were well-known in the Elizabethan era, deriving either from the spread of medical knowledge through the vernacularization of classical texts or from the continuous writing in English by contemporary medical practitioners and surgeons.

The medical texts seen either directly or through the historical corpora I availed myself of cannot be said to be addressed exclusively to the university ‘schools of physic’. Actually they belong rather to the series of medical publications which became popular especially during the second half of the sixteenth century, many of them being written not by members of the College of Physicians, but by surgeons (e.g. Thomas Gale and Thomas Vicary), and by unlicensed practitioners, or by those interested – like Sir Thomas Elyot in the 1540s – in the field of medicine. John Jones was a physician, but from

the complete title of his *A Dial for All Agues; Conteyninge the names in Greeke, Latten, and Englyshe, with the diuersities of them, Symple and compounde, proper and accident, definitions, deuisions, causes, and signes, comenly hetherto knowen: Uery profitable for al men ...* (1566) it is evident that his readership was not necessarily limited to medical practitioners. Paul Slack writes that ‘only a third of the textbooks, regimens and collections of remedies with identifiable authors came from the pens of established physicians’ (1979, 252). William Bullein was also a physician, but his work being in dialogic form, the author’s will to develop medical awareness and to pass his knowledge to a large readership is unmistakable.<sup>21</sup> A similar intention is readable in the title of Mosan’s translation of Wirsung’s *Arznei Buch* (Wirsung 1598). By the end of the sixteenth century, therefore, medicine was using a widely anglicized vocabulary, made available to all educated people.<sup>22</sup> When publishing his *Antidotarie*, Thomas Gale still apologized to his ‘louynge Reader’ because ‘I put the receptes and compositions in the Latyne tongue’, adding as an excuse that

the Latyne names are uniuersallye used, & that there are an infinite number of simples which want Englyshe names, & those for the more part that may be Englyshed, are not uniuersally knowen through England by that same name: because of the diuersitie that is used in callinge of simples, accordynge to the cuntry. (Gale 1563, Aaa.iii<sup>v</sup>-Aaa.iii<sup>iv</sup>)

However, while stressing the necessity for a common scientific vocabulary in English, he advised his readers to ‘conferre with the Apothecarie ... or elles use the helpe of a Dictionarie’ in case of necessity (Gale 1563: Aaa.iii<sup>v</sup>). Even when translated, some words were possibly still considered ‘hard’: for example, in the *Table Alphabetical Cawdrey* (1604) listed ‘epilepsies’, explaining it as ‘the falling sicknes’, and ‘lethargie’ as ‘a drowsie and forgetfull disease’. These words, both present in *Oth.*, are not ‘translated’ in the play, but certainly Shakespeare trusted his spectators and relied on widely shared medical understanding (both lexical items appear in the texts collected in MEMT, i.e. they were used in the later Middle Ages).<sup>23</sup>

What can be affirmed – once again – is that Shakespeare mainly used a medical vocabulary with which his audience was acquainted, actually adding very little to it. This terminology cannot be said to come exclusively either from the social margins or from university-trained physicians, since early modern medicine had not yet reached such a high scientific level as to separate these two social spheres neatly. Galen and ‘Hibbocrates’ (*Wiv.*, 3.1.61) were still the authorities and even if Paracelsus is mentioned by Lafew (*AWW*, 2.3.11), chemical medicine itself was not widely practised. All remedies were still based on the humoral tradition and on popular herbal recipes. Regular and irregular medical practice had not yet undergone any real scientific process, in spite of the new empiricist movement. In the field of medicine, therefore,

Shakespeare used the words his country had used for ages, sometimes creating new effective compounds, sometimes recalling some nearly forgotten terms of the past, but very rarely inventing.

The results of my research also contradict the basic assumptions of the Oxfordian position concerning Shakespeare's medical knowledge, i.e. that 'The vast majority of medical works were published in Latin or in Greek' and that England suffered from 'the relative scarcity of available books on medicine' (Davis 2000, 45). Even if it is true that on the Continent medicine was starting its great scientific progress more quickly than in England, it is not true to maintain that early modern England lacked vernacular medical literature, given the long process of vernacularization started far back during the Middle Ages.

What was the role of popular medicine (and of popular culture) in all this? How far can the majority of the volumes quoted here refer to (or take part in) popular culture? None is an almanac, none a handbill; on the contrary they all seem to belong to the elite kind of printed material.<sup>24</sup> Only that – given the relatively high number of reprints (see Slack 1979, 239) – one is entitled to suppose that their diffusion and success was large, thus reaching a wide and multifaceted readership, although limited to the literate and fairly well-off. On the other hand, as mentioned above, the matter of medicine did not change much during the whole sixteenth century, so as to justify the inclusion of many of these texts in a then 'popularized' medical library. One cannot forget, furthermore, that Shakespeare wrote first of all for London spectators, many of whom had, for decades, been accustomed to recurrent plague visitations and to difficult and unhealthy living conditions (i.e. they could recognize and name many a disease and a lot of frightening symptoms), and – at the same time – were 'exposed' to the popular medical literature inserted in almanacs and calendars, something that – though mixed with astrological stuff and folklore – could do nothing but rely on the same scholastic vocabulary as the university physicians. As Nagy affirms, 'popular practice was at the centre of health care, not its fringe' (1988, 79), simply because '[t]here were not two distinct medical cultures' (Slack 1979, 273); or because even if people recognized the differences between the 'learned physician trained in the universities and the empiric or mountebank', they were not troubled by them: 'in practice those distinctions were often ignored' (Wear 1992, 17).

<sup>1</sup> After this article was already finished, I read the book by S. Iyengar (2011) which systematically covers the issue of the rich presence of medical language in Shakespeare. The volume lists entries in alphabetical order, offering for each term the historical meaning (in section A), the identification of occurrences in Shakespeare (in section B), and brief citations of early modern medical treatises employing the word, and of modern studies on the subject (in section C). The wide scope of this volume does not seem to supersede, though, the more

limited purpose of the present paper, especially since the latter uses various and different sources. This article is an expanded and revised version of a paper discussed at the Ninth World Shakespeare Congress (Prague, 17-22 July 2011).

<sup>2</sup>Given the scope of this paper, vernacular herbal literature will not be taken into account. Suffice it to say that it dates back to the Middle Ages, with Old English manuscripts and such later texts as the translation into Middle English of Macer's *De viribus herbarum* (before the fifteenth century) and Henry Daniel's *Rosemary* (mid-fourteenth century). See MEMT 2005. The sixteenth-century production reached its apex with John Gerard's *Herball* (1597). For plants and herbs in Shakespeare, see Kail 1986, 123-140; Tierra 2008. Neither will I touch on 'books of secrets' (but see Eamon 1996).

<sup>3</sup>In the same book, see in particular Traister 2004.

<sup>4</sup>I have discussed the relevance of these handbills for popular culture in Mullini 2011 (see also Mullini 2009).

<sup>5</sup>The plays themselves will be searched by using the AntConc 3.2.1. concordancer.

<sup>6</sup>The 'Explication of the Frontispiece' reads: 'Loe here a woman comes in *charitie* / To see the *sicke*, and brings her *remedie*. / ... But lowe an *Angell* gently puts her backe, / Lest such *erroneous* course the *sicke* do wrack, / Leads the *Physitian*, and guides his hand, ...' (Primerose 1651, ll. 1-2, 19-21).

<sup>7</sup>This version is drawn from <<http://quod.lib.umich.edu/cgi/t/text/text-idx?c=cme;idno=Paston;rgn=div2;view=text;cc=cme;node=Paston%3A10.74>>, accessed 9 Jan 2011; a modern spelling edition is in Davis, ed., 1983, 257.

<sup>8</sup>For the relevance of wise women in health care in provincial parishes, see Cook 1986, 32-33, and Laroche 2009 for the relationship between women and herbal knowledge. A general survey of Medieval and early Renaissance medicine is to be found in Siraisi 1990.

<sup>9</sup>For a concise view of the role and status of medicine in early modern times, see Mikkeli and Marttila 2010.

<sup>10</sup>See Wear 1992, 20-24 for Elyot's defence against the College of Physicians of London.

<sup>11</sup>On the levels of literacy in England see Barry 1995; Reay 1998, 36-70; Fox 2000.

<sup>12</sup>All these texts date between the end of the fourteenth century and the first quarter of the fifteenth (see MEMT 2005, 'Catalogue of MEMT Texts').

<sup>13</sup>For brevity this list and the others are not included here.

<sup>14</sup>A caveat must be kept in mind: given the source of my Shakespearean corpus – the OUP electronic edition – editorial words (and the SSDI) were also counted in the totals. Certainly the editors' intervention does not affect the data referring to the occurrence of 'hard' lexical terms. Due to the former reason, though, I have not tried to calculate percentages, leaving this phase to a possible further study, for the necessity of editing the individual files without any spurious material.

<sup>15</sup>Here and elsewhere in the tables, an asterisk signals that plural forms have also been counted.

<sup>16</sup>It is interesting to note that Shakespeare has Falstaff make a joke of the transfer of meaning from the material to the ethical sphere when, answering the Lord Chief Justice, who is there to admonish him, he says: 'I am as poor as Job, my lord, but not so patient. Your lordship may minister the potion of imprisonment to me in respect of poverty; but how I should be your patient to follow your prescriptions, the wise may make some dram of a scruple, or indeed a scruple itself' (*2H4*, 1.2.128-132).

<sup>17</sup>At least a note is needed to justify my choice, besides that which has already been stated. My first reason for the choice derives from the plots of the individual plays, even if this criterion might have suggested quite different plays, given the omnipresent use of medical language in the canon. But there were other valid motives, mainly deriving from either the plots themselves or the frequency of certain word-types: *1H4*, *2H4*, and *Wiv*. feature a 'great' body such as Falstaff's, with all its possible parts and diseases, *Rom*. has a herb collector such as Friar Laurence and an apothecary among its characters, *Tim*. deals with moral and bodily

corruption; *Tro.*, *Oth.*, *Per.* and *JC* present interesting word-types because of their either high or low frequency (for the relevance of high- and low-frequency lexical items see Halliday 1989, 65). Furthermore, I wanted to have samples of comedies, tragedies, history and problem plays, and romances represented in my corpus. Of course my 'collection' consists in less than a quarter of the Shakespearean canon, so that my whole paper has to be read as a methodological attempt at the issue raised, and should later be extended to a more representative set.

<sup>18</sup> (\*\*) These terms occur twice in *Tro.*: both in the Folio and Quarto version.

<sup>19</sup> Iyengar 2011, 192 explains the term as follows: 'This obscure and figurative description in Thersites' long catalog of the 'diseases of the South' could allude to the painful chalk deposits found in the hands in chronic gout, or, more likely, to the excruciating burning itch of palmar psoriasis'.

<sup>20</sup> CORRUPTION is included in this section because its meaning in the play (*IHA*) seems to anticipate a general, although at least partly metaphorical, medical sense of the term.

<sup>21</sup> See Taavitsainen 1999 for an analysis of dialogic medical treatises.

<sup>22</sup> This fact is also stressed by Iyengar 2011, 7.

<sup>23</sup> In MEMT 'epilepsy' occurs 21 times with different spellings; there is also the adjective 'epilentic' (in *De spermate*, dating back to the late fifteenth century): it is a first coinage of 'epileptic', a form of which Shakespeare is considered to be the 'inventor' in *Lr. F.* 2.2.81 / *Lr. Q.* Sc. 7.79 (McQuaine and Malless 1998, 59). However, to further limit the halo of inventiveness surrounding this adjective, it is notable to see that Thomas Vicary, surgeon to all Tudor sovereigns, uses a very similar form: writing of how human brain may suffer from the influences of the Moon, he says 'And this [the brain] is moved in men that be lunaticke or mad, and also in men that be *epulenticke* or hauing the falling sicknesse' (1587, 17; my italics).

<sup>24</sup> For women's almanacs see Weber 2003.

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