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Reading the Body: A Textual Analysis of

The Interpolated Middle English Version of the Anatomy of Guy de Chauliac

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Despite current endeavours to redeem the reputation of medicine in the Middle Ages, there is much assertion that medieval medicine was the moment of stasis between classic and renaissance medical progress. While scholars of medieval medicine know that this is not the case, it is difficult to convince sceptics who all too easily recite the many medieval texts that are compilations, commentaries, and translations of ancient works. However, by examining one particular compilation, there is evidence that some medieval medical compilations appear to be more sophisticated than mere scribal exercise.

The Middle English translation of Anatomy of Guy de Chauliac contained in Hunter MS 95 (which I will hereafter refer to as H.) has been anonymously and without attribution interpolated by sections of Middle English translations of The Surgery of Henri de Mondeville. This interpolated composite was transcribed from the manuscript and edited by Bjorn Wallner in 1996,² in which he provides ample notes and comparisons between the version of the Anatomy found in H. and the four other extant copies of the interpolation in Middle English.³ Wallner also compares the text to other versions of Chauliac and Modeville works in Latin, as well as German and Middle English translations, including the Middle English Wellcome MS 564,⁴ edited by Robert Mory (1979), *Die Chirurgie des Heinrich von Mondeville*, edited by Julius Pagel in 1892, and late fifteenth-century Peterhouse (Cambridge) MS 118, the *Praticke of Sirurgerie*. Apart from Wallner's edition, there has been no extensive study of this interpolated text.

¹ Jessica Legacy is funded by the Wolfson Foundation through their Graduate Scholarship, she is in the second year of her PhD.

² Wallner, B. *An Interpolated Middle English Version of the Anatomy of Guy de Chauliac* Parts I & II. (Lund. 1996).

³ Other extant copies are: New York Academy of Medicine MS. 13 (the 'Roger Marshall'); Oxford, Bodleian MS. Ashmole 1468; and London, British Library MSS. Sloane 2463 and Sloane 3486.

⁴ Richard Grothé also completed a translation of this manuscript into French for his doctoral dissertation, see: Grothé. *Le MS. Wellcome 564: deux traites de chirurgie en moyen-anglais*. (Montreal, 1982).

While it remains unclear what purpose this arrangement served (although Wallner suggests the compiler was a physician),⁵ the text provides interesting material for analysing the construction of a medieval medical compilatio. By examining the arrangement of the interpolations, the compiler is given an authority and the text becomes a new body of work. This article is divided into two sections. It begins with an introduction to the rhetoric of the medieval compilatio, and provides a brief explanation on the arrangement of a common medieval anatomical text. The second section offers an analysis of the Interpolated Anatomy, highlighting the stylistic shift between the two sections of the text as well as the active and passive imposition of the compiler. Finally, the article will conclude by re-examining the criteria of compilatio in order to determine the degree to which the Interpolated Anatomy is a medical compilation or a new body of work.

A Word on Translation

Medieval medical compilatio assembled classical works from Greek and Arabic thinkers. These texts passed from Greek to Latin by way of Arabic translators, before returning west and entering the university. In addition, around the fourteenth century, when Mondeville and Chauliac authored their treatises, Latin was the official language of higher learning, but texts were also beginning to be translated into vernacular English and French. Finally, new compilations, such as the Interpolated Anatomy in H. were translated, restructured, and supplemented with additional passages. While it is possible to trace most of the passages in the Interpolated Anatomy to either Mondeville or Chauliac, it is impossible to say definitely whether the content in this manuscript originated with the surgeons in question. Therefore, this analysis considers the treatise of the Interpolated Anatomy as a primarily autonomous work, and rather than refer to the sections as either the work of Chauliac and Mondeville, the respective passages will be regarded as the C and M texts. In fact, relieving the responsibility of Chauliac and Mondeville from the content allows the analysis to fully consider the agency of the compiler, and iterates that impact on the reader of this particular manuscript would come by way of the text read, rather than by osmosis from historical scientific giants.

⁵ Wallner *Interpolated* Part II. p.8.

Medieval medicine in the fourteenth century adhered to the teachings of classic forefathers. As a result, the number of compilations of medical treatises far outweighs original works. Yet, this does not mean that medicine in the Middle Ages was without its authors. Two important scholars who have contributed to the study of authorship in the Middle Ages emphasise the role of *compilatio* in medieval writing. In his book, *Medieval Theory of Authorship*, A.J. Minnis explains that ‘The Aristotelian theory of causality, as interpreted by many late-medieval scholars, made careful provision for the integrity of instrumental efficient causes’.⁶ The Aristotelian theory of causality was arranged by four causes: the material, formal, efficient, and final. The efficient cause was the primary source that instigated movement or change.⁷ Medieval works were created and justified in accordance to established theories and practices. In other words, medieval thinkers placed great value on classic writers, and imagined their current intellectualism as dwarfs resting on the shoulders of giants.⁸ As a result, much work on disciplines such as grammar, theology, philosophy, rhetoric, and medicine took the form of compilations of older works. For example, many of the medieval medical texts written in either Latin or Middle English are compilations of, among others, Hippocrates (4th century BCE), Galen (2nd century CE), and Avicenna (10th century CE). Malcolm Parkes reiterates theories established by Minnis, and further suggests in his book *Scribes, Scripts, and Readers* that the rediscovery of Aristotelian logic led thirteenth-century scholars to develop ‘a more precise method of dissecting and defining human knowledge’.⁹ These tools are inherited directly from the works of classical intellectuals. He goes on to say that ‘good working tools based on scientific principles’ created the *compilatio* genre and an industry of established friaries providing a product to meet the demand of university academics and scholars.¹⁰

One of the problems surrounding the study of *compilatio* is the issue of authorship. As compilations spread through the sciences, literary methods fell into rank. In order to

⁶ Minnis, A. J. *Medieval Theory of Authorship* (Aldershot. 1988.) p.82.

⁷ Falcon, A. ‘Aristotle on Causality.’ *Stanford Encyclopedia of Philosophy*. <<http://plato.stanford.edu/entries/aristotle-causality/>>. October 2012.

⁸ Hathaway, N. ‘‘Compilatio’’: From Plagiarism to Compiling’ *Viator* vol.20 (1989) pp.19-44. Hathaway suggests that this metaphor originated during the Middle Ages as a direct result of the evolution of *compilation*, see p.44.

⁹ Parkes, M. *Scribes, Scripts, and Readers: Studies in the Communication, Presentation, and Dissemination of Medieval Texts*. (Michigan. 1991.) p.50.

¹⁰ Parkes. *Scribes*. p.58, pp.68-9.

illustrate the hierarchy of the medieval text contributor Minnis points to the prologue in a commentary on Peter Lombard's *Libri sententiarum*, written by St. Bonaventure in around 1250-1252. In it, Bonaventure outlines the four agents who might create a book: the scriptor (who copies but does not make additions or changes), compiler (who compiles the works of others), commentator (who copies existing material, but adds his own for the purpose of clarification), and auctor (who writes original material with existing material used for support or confirmation of ideas).¹¹ Despite compartmentalising these roles, methods used to generate texts can overlap. Such is the case with H: much of the content can be found in the works of Chauliac and Mondeville; however, there are passages that instead appear as possible authorial contributions from the compiler. Furthermore, the Aristotelian final cause, 'the end, that for the sake of which a thing is done' cannot possibly be to create an anthology of classical texts.¹² An examination of the manuscript reveals greater focus on the content rather than its source. This suggests that the reader and perhaps compiler were more concerned with education, rather than standing on giants.

MS Hunter 95

The manuscript containing the Interpolated Middle English Version of the Anatomy of Guy de Chauliac dates from the fifteenth century.¹³ In addition to the Interpolated Anatomy, the manuscript is comprised of a Book of Operation, Treatise of Yuhanna Ibn Masawaih's Antidotary, and a Pharmacopodia. There are two detectible hands: Type A appears responsible for the entire main body of work, while Type B pens the marginalia. All of the text was written in Bastard Anglicana on parchment with consistently sized margins. Moreover, initials and ornamentation follow the same style throughout. Based on these details, it can be argued that the manuscript was 'copied in one go', which is to say it was singularly produced without interruptions.¹⁴

¹¹ Minnis. *Medieval Theory* p.94.

¹² Falcon. 'Aristotle'.

¹³ Aguado, T. 'Description HU 95.' *The Malaga Corpus of Late Middle English Scientific Prose*. <<http://hunter.uma.es/Main>>. September 2014.

¹⁴ Kwakkel, E. 'Late Medieval Text collections: A Codicological Typology Based on Single-Author Manuscripts.' in S. Partridge and E. Kwakkel (eds.) *Author, Reader, Book: Medieval Authorship in Theory and Practice*. (Toronto. 2012) p.62.

There are rubrics placed in the margins that coincide with key subjects in the text. Notably, these rubrics not only mark a subject but they also itemize the details or utilities highlighted in the text. For example in the manuscript folio 37 recto, alongside the right column, detailing the three manners of flesh, the marginalia reads:

Of flesh
3 manners of flesh
1
2
3
The flesh hath 3 utilities
1, (et cetera)
Glasgow MS. Harley 95, f.37^r.

This indexing reveals an inclination to mark the text for easy consultation. The marginalia does not indicate the writers from whom the text originated; rather, these markers catalogue the compilation by its content rather than its authority. If it is indeed the case that the Interpolated text was used, not as a collection of past authority, but rather an educational tool that prioritises the text rather than the author, then there is much to be ascertained by considering this text as an autonomous guide, rather than a selected anthology.

Components of the Body

A survey of medical treatises reveals that, typically, the body is described systematically. First, medieval medical texts describe the simple members, consisting of eleven foundational anatomical components: gristle, bone, sinew, veins, arteries, panicles (membranes), ligaments, cords (nerves), skin, flesh, and fat. These components are the materials that combine to form the more complex parts of the body. For example, in the Interpolated Anatomy, the neck is said to ‘contain [...] the skin, the flesh, the muscles

and ligaments and bones'.¹⁵ Yet, in addition to forming the structure and 'fill[ing] in the concavities and the inward places',¹⁶ these simple members maintain the integrity of the compound members, assisting in the complex balance via their elemental characteristics. A section of M provides a clear example of this integrity, in which the text explains that one of the purposes of fat is 'that other dry members that are near it, such as the kidneys and other such, might be moistened through its unctuousity and humidity'.¹⁷ In addition to these simple members providing mediation, they also produce the elemental properties of complex members. Elsewhere, a portion of C text states that the liver is hot and moist because it is largely composed of flesh and blood, and is the origin of many arteries.¹⁸ These simple members are inherently imbued with elemental and humoral characteristics. They then combine to make up parts of the body, and inform these parts' utility or purpose. Texts like *The Interpolated Anatomy* first establish simple members, in the same manner we teach mathematics, emphasising the need for rudimentary equations before comprehending more advanced formulae.

According to Galenic theory, every part of the body is indispensable. Towards the end of the first chapter of *Anatomy* in H, the words of Galen are used to summarise 'that there is no part of any beast made in vain or idle, but that it must necessarily be so with proper complexion and composition that God has given members divine virtues which are present in both compound members and simple members of the elements'.¹⁹ This passage aptly illustrates the progression of the body, focusing on its microcosm, where divine virtues invigorate the complex members and their design, which are compounded by the simple members that are permeated with elemental properties. This progressing pattern outlining the body underlines the textual analysis of H. as follows.

¹⁵ Wallner. *Interpolated* Part I. p.35.

¹⁶ Wallner. *Interpolated* Part I. p.10.

¹⁷ Wallner. *Interpolated* Part I. p.9.

¹⁸ Wallner. *Interpolated* Part I. p.8.

¹⁹ þat þer is no partye of no beste made in veyne neither idelle, but þat it moste nedelinges be so wiþ conuentient complexioun & compocicioun, // in the whiche members god haþ ʒeven hem diuine vertues, þe whiche ben departed boþe in compound members and in sympel members of þe Elementes. Wallner. *Interpolated* Part I. p.7.

The surgeons attributed to these texts, Chauliac and Mondeville, have much in common. Both made substantial contributions to surgery in the fourteenth century, both were French, and both wrote comprehensive treatises on the practice of surgery. An interpolation of these two surgeons seems far from an arbitrary choice, and reveals that the compiler must have been familiar with these predecessors of medicine when organizing this manuscript. At the same time, there is no prologue or other content to inform the reader of the sources of this compilation. In this regard, the compiler is valuing the content over its source. Information about the history of the compiler and the objective of this text is lacking, and little can be deduced about its intent; however, an analysis of the text provides an intriguing insight into the genre of the medical compilatio and the effects created by this specific work.

In the first section of Anatomy in H., both C and M follow consistent stylistic patterns that are easy to differentiate. First, the C text introduces the topic, detailing the location of anatomical parts and of what simple members they are made. Passages from M then describe the function or utility of the member. Stylistic differences can be seen on a sentence level in terms of length and structure. In addition to subject matter and syntax, the texts attributed to C and M are differentiated according to rhetorical devices employed by each attributed surgeon. Finally, there are subtle philosophical and sociological influences that demarcate the writing of each respective text.

The treatise in H. begins with text from C, first introducing the authority of Galen and the importance for a physician and surgeon to understand anatomy: ‘And if it is profitable to a physician, it is much more necessary for a surgeon according to the teaching of Galen [...] that surgeons who do not know their anatomy often fail when cutting sinews and nerves.’²⁰ The sentences of the C translation are longer, with descriptive metaphors and multiple clauses. One of the often referenced passages appearing in C likens an uneducated surgeon to a blind man pruning a tree: ‘for in the same manner works a blind man in a tree and a surgeon in a man’s body when the surgeon does not know anatomy. But a blind man, if he carves a tree often errs, taking either more or less than he should of that tree, and so does a surgeon when he knows

²⁰ And 3if it be profitable to a fficien, it is moche more nescessaire to a surgene after þe doctrine of þe same Galiene... Surgenes þat knowe not her anothomisee, þei failen ofte-tymes in kittynge of synewes & cordes. Wallner. *Interpolated* Part I. p.3.

not his anatomy.²¹ The C text's extended metaphor accomplishes much. It is a warning to the pupils who read his text to be astute students of anatomy; together with Galen's introduction, this metaphor also establishes C as an authority and an enlightened and qualified teacher. Finally, the passage is rhetorically appealing: the failed carving of the tree emphasises the risk involved in taking responsibility for human life and health.

In contrast to the C style, M sections in part one are itemised and rigid. These sentences are generally short and, while they do include frequent interjections, they are far less descriptive and conversational than C passages. For example, in contrast to the illustrative metaphor in the first appearance of C, M passage adopts a catalogued style:

The utility or the profit of all the manners of fat is for three things.

First is that the members that are wrapped in them might be strengthened by both absorption and retention.

The second, that other dry members near it, such as the kidneys and other such, may be moistened through its viscosity and humidity.

The third is that some members may be shielded from cold by it.²²

Both passages are educational and quite probably directed to a student audience, but the C text takes a thoughtful tone and considers established sources while M appears to be more taxonomic and conducive to memorisation and categorisation. The M style evokes the contemporary image of the medical student at the foot of a patient's bed, reciting properties upon the teacher's request. This example serves to contrast the philosophical

²¹ ffor *in þe same maner worcheþ a blynde man in a tree & a Surgene in a manes bodie when þat a Surgene knoweþ not // his anothomie, but a blynde man, 3if he hewe a tree, erreþ ofte-tymes, takynge eiþer more oþer lesse þen he shulde of þe same tree, and ri3te so doeþ a Surgen when þat he knoweþ not his anatomie.* Wallner. *Interpolated* Part I. pp.3-4.

²² þe vtilite oþer profite of alle þes maner fatnesse is for þre þinges. // þe first is þat þe members þat be lapped in hem mowe be stren[þed] bi hem boþe *in attraccioun* and *retencioun*. // þe secoude, þat oþere drie members þat be nye hem, as þe Reynes and oþer sucche, mowe ben moisted þur₃ her vnctuosite and her humidite. // þe þrid is þat summe members mowe be holden fro colde by hem. Wallner. *Interpolated*. Part I.pp.9-10.

against the mnemonic tone of the texts, the latter possibly more memorable, while the former more intriguing.

Semantic analysis illuminates additional rhetorical figures. In its earliest passages, the C text applies polysyndetonic²³ conjunctions for emphasis. Passages from C include multiple conjunction clauses such as ‘therefore it follows that it is needful to physicians and especially surgeons to know anatomy’;²⁴ ‘therefore (sparing length and trusting that other authors of medicine have treated anatomy fully)’;²⁵ ‘because there is no member found simply hotter and drier than the skin’;²⁶ ‘and they are called organica and instrumentalia because they are the instruments of the soul’ (my emphases).²⁷ These are truth-seeking markers. C passages explore the study of both anatomy and reason in the body. Connecting this first analysis to the aforementioned blind man and tree metaphor, the surgeon must exercise his or her vision of the body, and (therefore) reason deduces that a surgeon must study anatomy. These statements are near syllogistic, as though the C text anticipates the hypothetical ‘if’ prompted by a student audience, and provides the resulting ‘then’ clause. In addition, these transitional conjunctions connect the text much like the anatomy it describes is bound together. Text from C reads as a fluid progression tracing one topic of anatomy to the next, while M text sections off portions of anatomy and highlights important elements and purposes.

In contrast to C, the M text avoids transitional markers and instead constructs anatomical equations. As mentioned above, the sections from M have an enumerated style. They are mathematical in nature, following a pattern of X= 1, 2, 3, e.g. the utility of fat is for three things. This arrangement is found consistently across M portions of H. In the previous example the construction outlined the purpose of a simple member; however, this enumerated scheme also clearly frames design elements such as shape. For example, the M text explains:

²³ Repeating conjunctions for rhetorical effect, for example run *and* jump *and* laugh *and* play.

²⁴ And þerfore it foloweþ þat it is needful to ffisiens and namelye to Surgens, to knowen here anothomie. Wallner. *Interpolated* Part I. p.4.

²⁵ Þer-fore, sparinge lengþe and tristinge þat oþer autours of medicine treted fullye of þe anothomie. Wallner. *Interpolated* Part I. p.4.

²⁶ forwhi þer is no member founden simpellye hotter and drier þen þe skynne. Wallner. *Interpolated* Part I. p.6.

²⁷ And þei be cleped Organica & instrumentalia, fforwhie þei be þe instruments of þe soule. Wallner. *Interpolated* Part I. p.7.

Also there are three causes why [the nails] are somewhat bowed. The first is because they may take and hold the better.

The second cause is that a man may claw himself with them when he itches.

The third skill is that he may break or cut with his nails anything when it is necessary.²⁸

This listing style sorts the body, as though the M text is dissecting and separating uses and skills in order to make better sense of them. Marie-Christine Pouchelle makes a similar observation in her book *The Body and Surgery in the Middle Ages*. In her study, Pouchelle mines the writing of Henri de Mondeville for stylistic markers that might elucidate his personal deliberation of the body. She, too, notes Mondeville's arithmetic, and suggests that he is 'drawing up his accounts with Nature like a merchant reckoning up his transactions for the day'.²⁹ The M text appears to have a mercantile characteristic to teaching anatomy. Itemising the body even appears in the M text beyond merely listing: 'The utility of the creation of ligaments is for four skills. The first is that it may gather together diverse bones. Because it is necessary that many bones sustain one body and one member without another if it is necessary' (my emphasis).³⁰ The structure of this statement creates an economy, where many operate within one body, while members simultaneously conduct their business separately.³¹

These examples are taken from the first section of *Anatomy*, which is exclusively concerned with the simple members. In this portion, there are stylistic and topical differentiations between the two texts. Sections from C describe the location of the

²⁸ Also þer ben þre causes whi þat þei ben sumdel bowed[.] þe first cause is þat þei mowe take & holde þe better. Wallner. *Interpolated* Part I. p.17.

þe secounde cause is þat a man mai clawe him wiþ hem when þat he iccheþ.

þe þrid skille is þat he maie breke oþer kitte wiþ his nailes enye maner þinge when þat it is ne//dfulle. Wallner. *Interpolated* Part I. p.17.

²⁹ Pouchelle, M. and Morris, R. (trans.) *The Body and Surgery in the Middle Ages*. (Cambridge. 1990) p.32.

³⁰ þe vtilite of þe creacioun of ligaments is for foure skilles[.] þe firste is þat it mowe geder to-gidere diuerse bones. Forwhy it is nescessaire þat manye bones susteine one bodie & one member wiþ-outen anoþer 3if þat it be nede. Wallner. *Interpolated* Part I. pp.13-14.

³¹ More of this theory can be found in Pouchelle's chapter 'The Body Politic' in *The Body and Surgery*. pp.109-24.

members using longer sentences with transitional conjunctions. Excerpts from M, in contrast, explain the utility of the members with an enumerated structure, which dissects the body by classifying members by their separate purposes. In the second section of Anatomy differing styles begin to converge and elaborate, and this progression mimics the development of the subject matter, from simple to sophisticated, complex members.

Textual Analysis: Section Two

From the onset of section two the texts begin to overlap stylistically. To begin, the C style of questioning and searching for reason appears to diminish in favour of explication. The first subject of section two is the brainpan, of which the C text explains ‘the position and being is in the highest place on the body, but it is not for a surgeon to consider whether that is set there for the eyes or why it is set so high’.³² Whereas initially C prompts retrospective questioning through conjunctions of reasoning, now the text suggests that some things are not a surgeon’s concern. It is as though comprehending the simple members is achievable, whereas certain complexities of the body are not required for surgeons to understand. This is not to say that C treats the brainpan with uncertainty; rather, here the text incorporates theories of the brainpan that predate this text. According to the C text, predecessors William of Saliceto, Lanfranc of Milan, and Henri de Mondeville saw the anatomy of the brainpan incorrectly.³³ However, regardless of this certainty of the construction of the brainpan, there are elements of design that are beyond the surgeon’s required understanding of anatomy.

The M text also undergoes changes in the second section, and it begins to acquire characteristics reminiscent of C style in the first. The first part of section two attributed to M states, ‘but because glorious god and nature makes nothing in vain, therefore I will show the utilities or the profits of every part of the head and then of all the body successively’ (my emphasis).³⁴ Here, M uses similar truth-seeking conjunctions that were

³² his pocicioun & his beinge is in þe hiest place of alle þe bodie, but it nedeþ not to a surgene to consider wheþer þat it be sette þer for þe y₃en oþer wherfore it is sette so hye. Wallner. *Interpolated* Part I. p.18.

³³ Willelmus de Saliceto and lamfrank and henricus de hermonda-villa also sawe euel her anothomie. Wallner. *Interpolated* Part I. p.20.

³⁴ but be cause þat glorious god and nature makeþ no þing in veyne, þerfore y wille schewe þe vtilites oþer þ profites of euerie partie of þe heued. Wallner. *Interpolated* Part I. p.21.

exemplified by C in the first section. In the first clause, the M text presupposes the role of the metaphysical in anatomical design. Upon clarifying that question with the first conjunction: because glorious God makes nothing in vain, the text unites the ability of the surgeon to understand with the capability of the divine to create, claiming nothing is made in vain and therefore the text must explain all the components of the body.

Whereas in the first section it seemed characteristic of C to connect the body to the macrocosm of the divine and nature, and for M to remain anchored in tangible and manageable sections of information, now that the focus has broadened from simple to compound members, the texts are converging into a new, more unified style.

Not only do the styles conflate in the second section of the text, but the subjects also begin to intersect. The first section outlined that the C text described the body, while the M text explained its utility. In the second section, these objectives overlap. For example, the C text explains that ‘the tongue is a fleshy particle that is soft and spongy, compounded of many sinews, ligaments, veins, and arteries, ordained chiefly for tasting and speaking, giving utility or profit to govern the food in a man’s mouth’.³⁵ Here, C departs from exclusively locating the member by also describing some of its purpose. Notably, the ‘utility’ is associated with an external object (food) rather than the body itself. In this regard, the C text retains its outward attention, in a spirit similar to the truth-seeking passages in section one. Yet, although C slightly extends to the purpose of bodily members, the texts remain generally consistent in their respective topics: C locates, and M categorises.

As the categorised members become more sophisticated, M style also changes and resembles the writing of C. In the second section the M utility passages employ metaphors in order to illustrate the purpose of complex anatomy. For example, the M text explains that the brainpan is hard in order to protect the brain and membranes from injury and disease much like a ‘helm or a shield’.³⁶ This is not a singular case of metaphor in the M text. In order to explain the eyelashes, the text includes another metaphor: ‘The utility of the eyelashes are for two skills. The first is that they might address the visible spirits to the pupil of the eye as a tunnel drives partridges to a

³⁵ De tunge is a fleischie partikel and a softe & a spongius, compound of manye sinewes, ligamentes, veines, and arteries, ordeined principallie be cause of tastinge and of spekinge, 3euyng vtilite oþer profite for to gouerne þe mete in a manes mouþe. Wallner *Interpolated* Part I. p.32.

³⁶ þe vtilite whi þat it was harde is be cause þat it schulde defende þe braines and þe pannikels fro diseses þat fallen oþer cummen fro wiþ-oute, & be, as it were, ane helme oþer a schelde for to defende hem. Wallner. *Interpolated* Part I. p.23.

prison'.³⁷ Once again, the metaphor uses a technological, and even sociological signifier to illustrate anatomical design. This passage is addressing senses, which are intrinsic to intellect and understanding and, according to medieval thinkers, separate humans from beasts. It is intriguing, then, that the metaphor alludes to power, where the body controls the senses.

It should be noted here that the senses interact very closely with external spirits. In her book *Inward Wits*, Ruth Harvey summarises the medieval theories that connect human intellect and the senses.³⁸ In general, the soul exists physically inside the body, elevating the human mind above all other living things. The soul and the body exist symbiotically, where the body animates the will of the soul, and the soul enables the body to live. Because the soul is partly intellectual in nature, it experiences the world through the senses, and the body takes in spirits that engage those senses. One example of this arrangement derives from Avicenna, quoted in Harvey's book:

Spirit takes its origin from a divine emanation, without grudge or stint, when its state (*dispositio*) is perfectly completed. In the same way, each member, although it is made up of the same substance of the humours, yet has its own complexion by reason of the individual proportion of the quantities of the humours and the form of their mingling; similarly each spirit, whether it be animal, vital, or natural, although all their substance is from the subtle parts of the humours, yet has its own complexion by reason of the proportion of the quantities of the subtlety of the humours, and of the form of the mingling.³⁹

³⁷ þe vtilite off þe her of þe y₃e liddis is for two skilles. Þe first is þat þei mowe dresen þe visibel spiritis to þe pupilla of þe y₃en as a tonel driueþ perdriches to a prisoun. Wallner *Interpolated* Part I. p.32

³⁸ Harvey, R. *The Inward Wits*. (California. 1975)

³⁹ Harvey. *Wits*. p.25.

As a result of this interaction between the spirit and the senses, surgeons in the Middle Ages referred to visible or audible spirits that are drawn into the body by anatomical members.

The aforementioned sense metaphor is not an isolated passage. The text moves on to the ear and its ability to capture audible spirits. The M text explains that the shape and flexibility of the ear is designed to grasp sounds that ‘lurk under the shadow of them’.⁴⁰ Whereas previously the agency is placed upon the body to drive the spirits inward, here the spirits are also active and the body must reach out to them. These metaphors give corporeality to the spirits so they may be taken in, and power to the body so it might locate and control them. As the subjects become more complex, as the simple members combine to form working organs and utilities move from balancing the humours to facilitating sensory experiences, so too must the writing develop in order to accurately represent the complexity of the anatomy depicted.

The Other Presence

So far this article has focused on the stylistic differences and evolution of the two texts labelled here C and M; however, a third voice is present and most influential. By interpolating this text, the compiler has created a new one: a compound textual body made up of foundational members. The compiler’s interpolations and in some cases additions allow further points of inquiry into the function of the text. While more research is needed to better understand the circumstances surrounding the compiler and this composition, three features will perhaps highlight the consideration needed when editing this text. First, the interpolated text creates at least one instance of paralipsis,⁴¹ where the C passage directly negates Mondeville’s theory, while in Mondeville’s correlating passage (perhaps unintentionally) a section is omitted that might have provided ample defence. Second, the text contains a large passage that, according to Wallner,⁴² is unattributed to either Mondeville or Chauliac and is quite possibly the work of the compiler. Finally, there are two short additions to phrases that appear to be absent

⁴⁰ þe vtilite of þe creacioun of þe ere and whi þat þe eres schewen reised vppe wiþ-uten þe heued is be cause þat þe sownynges þat ben riȝt fluxibel miȝte hide hem oþere lurke vnder þe schadowe of hem. Wallner. *Interpolated* Part I. p.33.

⁴¹ To raise an issue without allowing an opponent the opportunity to defend his or herself.

⁴² Wallner. *Interpolated*. Part II p.27.

from other copies of Mondeville's and Chauliac's work, opening the possibility that these small additions are authored by the compiler.

The brainpan is the first subject in the second section of the Interpolated Anatomy. It follows the same pattern as the first section: the C text introduces the member and describes its components and position, and then the M text describes the function of the member. Yet here, C also explains that the brainpan 'is ordained of seven bones so that, if there falls disease on one, it should not pass to another'.⁴³ This is another example where C includes the purpose or utility of design. Yet more significantly, this passage goes on to say that Mondeville, along with William of Saliceto and Lanfranc of Milan are incorrect in their count of the number of bones comprising the brainpan.⁴⁴ We cannot ascertain the extent to which the compiler's version of Mondeville's Surgery was complete. Perhaps the compiler had access to the text was limited to the utility sections. However, according to the E. Nicaise edited version of *The Surgery*, Mondeville writes:

Various authors have counted the number of cranial bones in different ways. However, if we understand what they are counting, we find that they are all in agreement. Really, one says four bones, counting only the main ones... I add two others, the petrous to make six... The truth is that there are four bones that form the dome of the cranium.⁴⁵

In other words, the earlier Mondeville text pre-empts Chauliac by stating that the boundaries of the brainpan depend on the interpretation of the surgeon. Mondeville even draws alternative margins, suggesting there are either four or six bones. According to Chauliac's count of seven bones, Mondeville's text is still incorrect; however if the Interpolated Anatomy included this excerpt from Mondeville's Surgery, the reader might be prompted to review Chauliac's explanation. This compilation forms a discourse between two surgeons, in which only one is capable of engaging with the work of the

⁴³ it is ordained of seuene bones, so þat, ȝif þer felle disese in one, it schulde not passe to a-noþer. Wallner. *Interpolated* Part I. p.19

⁴⁴ Wallner. *Interpolated* Part I. p.20

⁴⁵ Henri de Mondeville. *The Surgery of Henri de Mondeville: A French Translation by E. Nicaise, Translated into English with Annotations, Comments and Appendices*. Rosenman, L. (trans.) (Xlibris Publishings. 1998). p.131.

other, and neither is able to respond to the moderator. Since neither Mondeville nor Chauillac are attributed to their writing in this text, it would be presumptuous to ascertain that the compiler favoured Chauillac over Mondeville and therefore arranged the passages thusly. What this passage does reveal, however, is that compilers did not always see to it that the younger generation of intellectuals appeared to be dwarfed by their predecessors.

Occasionally the compiler inserts puzzling segments unattributed to either Chauillac or Mondeville. One passage on phlebotomy is arbitrarily inserted between the C and M passages discussing the bones in the hand. Wallner explains that this passage is not present in comparable manuscripts of Anatomy or Surgery and, as far as he can tell, 'the compiler is responsible' for this segment.⁴⁶ This portion of the text uses long, listing sentences. It itemises the points for bloodletting by body section, such as the head, the arms, the legs, etc. and then lists the specific location for each point, interspersing technical names, such as the 'cephalice' or 'sciatic'.⁴⁷ Although this component is structurally out of place in this anatomical guide, it runs continuously within the same columns as the rest of the text. This passage is not on a separate folio in the manuscript and is written in the same Type A hand. The passage also appears to be the work of a knowledgeable person of medicine.

The more interesting part of this arbitrary insertion is its introductory sentence: 'for as much as it is profitable to every surgeon to know which veins men are most commonly let of blood, even though it is not part of the anatomy, yet I will write of which veins men most commonly let blood'.⁴⁸ The mystery passage inserts an additional narrating 'I', who interrupts and underscores an inadequacy in the text so far, to which he or she provides an amendment. Notably, the new voice does not comment on anatomy specifically, but rather its loci for treatment. This assertion does not criticise the medical material itself, but rather seeks to improve the comprehensiveness of the text. Furthermore, this section is inserted in a strange place. As mentioned before, the manuscript appears to be constructed as a single unit rather than assembled from pre-existing items. The subject of bloodletting is introduced by a passage from M toward the end of the treatise. Although this section would have been better suited structurally

⁴⁶ Wallner. *Interpolated*. Part II p.27.

⁴⁷ Cephalic and sciatic veins, Wallner. *Interpolated* Part I. p.44.

⁴⁸ ffor as moche as it is profitabel to euerye surgen to knowen of whiche veines men ben moste comunelie leten blode off, all 3if þat it be not partye of þe anothomie, 3it wille y write of whiche veynes men ben moste comunelie leten blode'. Wallner. *Interpolated* Part I. p.44.

toward the end, it is inserted rather arbitrarily. The sudden shift in subject matter, its odd placement, and the asserted voice, perhaps brings forth the difference in priorities between a theoretician—the surgeon that advocates for advanced understanding, and the practitioner—the surgeon who needs to remember where to place the leech. Perhaps also, the compiler intentionally placed this passage in a curious location in order to draw attention to the fact that it is not part of the compilatio, but rather exists by uninhibited authorial agency.

In the next section on veins, which is closer to the subject of bloodletting, the compiler makes another insertion. Between an M utility passage about the arms and a C description of the main arteries located within them, there is a brief comment unattributed to either surgeon: ‘for as much as if a man reads a thing once, he has delight therein, and if he read it ten times, he has more delight, and also feeling and better understanding, therefore I will rehearse the position and the setting of the veins of the arm after the anatomy of another author’.⁴⁹ Wallner notes that the passage following this statement is attributed to Mondeville; however, it departs from the familiar ‘utility’ subject matter that has been so far borrowed from Mondeville’s work.⁵⁰ This raises the question whether the compiler sought to specifically include this distinctive passage. Furthermore, the ‘I’ in the above quote cannot be attributed to Mondeville because he is the other author; therefore, it is quite likely the compiler is the author of this brief insertion. The style of these additions hints to a philosophical and practical mind—a knowledgeable physician or student of medicine who has taken a great interest in the pleasure of learning and the practice of phlebotomy.

Two final additions must be discussed. They are subtle, and yet perhaps the most intriguing details of the compilation. The first is located in the C passage regarding the ribcage, which the text states ‘of which each man may see in the sepulchres of dead men’ (my emphasis).⁵¹ A comparison of this section in other copies of the Anatomy reveals that the last part of this statement is unique to this interpolated text. It does not exist in Margaret Ogden’s 1971 edition, a Latin edition from 1498,⁵² a French version

⁴⁹ ffor as miche as 3if a man redeþ a þinge ones, he haþ delite þer-inne, and 3if he rede it tenne tymes, he haþ more delite, and þer-wiþ felinge and better vnderstondinge, þerfore y wille rehercen þe pocicioun and þe settinge of þe veines of þe arme after þe anothomie of anoþer autour. Wallner. *Interpolated* Part I. p.46.

⁵⁰ Wallner. *Interpolated*. Part II p.27.

⁵¹ Of þe whiche eche man may seene þe schappe in þe sepulkers of dede men. Wallner. *Interpolated* Part I. p.49.

⁵² University of Edinburgh MS *H.18.7

from 1641,⁵³ and E. Niacene's 1890 French translation of Paris, Bibliothèque Nationale, MS. Anglais 25.⁵⁴ Each of these versions concludes the aforementioned statement with 'whose shape each man may see'.⁵⁵ The sepulchre is absent from these texts. This explication is puzzling for two reasons. First, dead bodies are only mentioned at the onset of the text when instructing anatomists how they might learn their craft. Certainly all anatomy can be seen in dead men, yet only the ribcage addresses this. Second, the dead man is not located on a dissecting table, which would be consistent with the instructional nature of the text, but instead he is entombed. Interestingly, one need not look inside the sepulchre in order to view a ribcage, as skeletons are seen adorning the exterior of medieval tombs. By directing the gaze "each man may see" to a space reserved for the dead, the text depicts the approximation of anatomical dissection, mortality and the gravity of proper medical treatment.

Finally, the compiler appears unable to refrain from imprinting his or her style onto a small fragment of text from M. In describing the positioning of the liver in relation to the stomach, the text explains 'the utility why that [the liver] is of such form or shape is because that it should be applied or lie the better to the stomach, as the hand lies to an apple when the apple is in the hand' (my emphasis).⁵⁶ Once again, the final detail of this sentence is absent from other editions. Nicaise's text reads 'that shape accommodates the stomach like a hand grasping an apple',⁵⁷ and the Wellcome MS 564, also lacks the final part of this phrase.⁵⁸ Again, perhaps the compiler possessed a slightly different version of the text, or instead, it is possible that this chiasmus—this mirrored simile—is superfluous poetry growing from this medical treatise like hair from the head, situating the body within nature, and perhaps returning it briefly to the tree of knowledge in Eden.

This text reveals not only the anatomy of the body, but also the composition of choice, style, practicality versus theory, and creativity. A close examination of H reveals that,

⁵³ University of Edinburgh MS. E.B. .617 Gui

⁵⁴ University of Edinburgh MS. *G.1.46

⁵⁵ Whos schappe eche man may see: Ogden, M. *The Cyrurgie of Guy de Chauliac*, vol. 1. (London. 1971) p.54.

⁵⁶ þe vtilite whi þat it is off sucche fourme oþer schap is be cause þat schulde ben applied oþer lyen þe better to þe stomake, as þe honde lieþ to ane appelle when þe appelle is in þe honde. Wallner. *Interpolated* Part I. p.68.

⁵⁷ Henri de Mondeville. *Surgery*. p.164.

⁵⁸ 'The cause is whi it is þus schapen is for it schulde applien to þe stomach ri3t as an hand doiþ to an appil for to comferten hir digestioun.' Mory, R. *A Medieval English Anatomy* Diss. (Ann Arbor. 1977) p.149.

although a compilation, the choices of the compiler and hints of authorial agency renders the text a new body of work and a customized teaching tool. By overlaying this text onto the burgeoning medieval discipline of anatomy, current scholars can read the medieval body under new microscope. There remains much to be interpolated.

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