

## ABSTRACT

Title of Thesis: LINGUISTIC ORPHAN: MEDICAL  
LITERACY IN MEDIEVAL ENGLAND AND  
THE ERASURE OF ANGLO-SAXON  
MEDICAL KNOWLEDGE

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This thesis seeks to answer the question of why medieval physicians “forgot” efficacious medical treatments developed by the Anglo-Saxons and how Anglo-Saxon medical texts fell into obscurity. This thesis is largely based on the 2015 study of Freya Harrison et al., which replicated a tenth-century Anglo-Saxon eyesalve and found that it produced antistaphylococcal activity similar to that of modern antibiotics. Following an examination of the historiography, primary texts, and historical context, this thesis concludes that Anglo-Saxon medical texts, regardless of what useful remedies they contained, were forgotten primarily due to reasons of language: the obsolescence of Old English following the Norman Conquest, and the dominance of Latin in the University-based medical schools in medieval Europe.

LINGUISTIC ORPHAN:  
MEDICAL LITERACY IN MEDIEVAL ENGLAND AND THE ERASURE OF  
ANGLO-SAXON MEDICAL KNOWLEDGE

by

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## Dedication

To my parents, without whose encouragement I would have never had the courage to make it where I am today, and who have been lifelong sources of support, guidance, laughter, and love.

To my housemates, who have encouraged me throughout my studies and allowed me to transform our coffee table into a medieval medical library.

To friends near and far, who have offered relentless support and endured my ranting and raving about Anglo-Saxons, Galen, and King Alfred.

To all the healthcare professionals around the world who combat human ignorance, elfshot, and flying venom through the leechdoms of vaccinations, antibiotics, and peer-reviewed medical research.

And finally, all to God, from whom all blessings (including science!) flow.

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## I. Introduction

In August 2015, a team of medical researchers from the University of Nottingham published a paper that revealed the results of an experimental treatment developed to combat *Staphylococcus aureus*, the bacteria responsible for a common eye infection which causes painful styes on the eyelid. The results of the experiment were promising – not only did the treatment work against *S. aureus*, but even proved effective against the methicillin-resistant strain of the bacteria, which is difficult to treat with traditional antibiotics.<sup>1</sup> The most exciting, if not shocking part of the experiment was that the recipe for the treatment was over one thousand years old. Recorded by Anglo-Saxon physicians in the tenth century, the recipe is a careful and bizarre preparation:

Work an eyesalve for a wen [stye], take cropleek and garlic, of both equal quantities, pound them well together, take wine and bullocks gall, of both equal quantities, mix with the leek, put this then into a brazen vessel, let it stand nine days in the brass vessel, wring out through a cloth and clear it well, put it into a horn, and about night time, apply it with a feather to the eye ; the best leechdom.<sup>2</sup>

The recipe for this salve can be found along with hundreds of other remedies for various ailments in a duo of books together known as Bald's *Leechbook*, a tenth-century leechbook or medical textbook of remedies derived from plant, food, and animal products. The test of this particular remedy or 'leechdom' was a part of the AncientBiotics Project, an ongoing medical research initiative aimed at identifying

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<sup>1</sup> Freya Harrison et al., "A 1,000-Year-Old Antimicrobial Remedy with Antistaphylococcal Activity," *Mbio* 6, no. 4 (2015): 01129. doi:10.1128/mBio.01129-15.

<sup>2</sup> Thomas Oswald Cockayne, *Leechdoms, Wortcunning, and Starcraft of Early England*, vol. 2, (London: Longman, Green, Longman, Roberts, and Green, 1865), 35.

antimicrobial remedies from history that may help doctors combat the increasing problem of antibiotic-resistant strains of bacteria. The aims of the AncientBiotics project are predominantly medical, and the success of Bald's eyesalve is an important scientific discovery on its own. However, the success of this experiment is in many ways the culmination of a complicated, decades-long debate regarding the efficacy of Anglo-Saxon medicine. Since the late twentieth century, a key controversy in the study of Anglo-Saxon medical texts has been whether or not Anglo-Saxon medicine enjoyed any rational basis. Although the successful application of Bald's eyesalve against *Staphylococcus aureus* is a single case study pulled from a comparatively enormous body of work, it is a massive victory for those who argue that Anglo-Saxon leeches<sup>3</sup> developed some of their remedies on a rational<sup>4</sup> basis of observational medicine. That being the case, following the 2015 AncientBiotics victory, a new question arises: If Anglo-Saxon medics were able to develop functional antibiotic remedies through a system of rational thought based on observation, why did their medical knowledge not last into later centuries? This paper seeks to answer this question by examining the history, context, and legacy of Bald's *Leechbook* up through the high to late middle ages.

The rejection of Anglo-Saxon medicine – specifically that found in Bald's *Leechbook* – from the mainstream course of medical thought is not a matter of debate, evidenced in part by the fact that few manuscripts of the texts survive. Unlike many

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<sup>3</sup> “Leech” is here derived from the Old English *laece*, meaning physician. The association with the animal leech, which was sometimes (though far more rarely than most modern readers assume) used in the medical practice of bloodletting, is a false cognate in this case.

<sup>4</sup> “Rational” in the cited works is defined in two different but intertwined ways. See the discussion of Charles Singer on pages 7-9 for a more complete discussion of this problem.

European medical texts which enjoy many copies scattered throughout the libraries and archives of Europe, there is only one copy of Bald's *Leechbook*. It resides in the British Library in London as MS Royal 12 D XVII. Although it is the only copy of its kind, MS Royal 12 D XVII enjoys a provenance dominated by a stint in the Old Royal Library at Westminster, and before that, the Benedictine Cathedral Priory at Winchester.<sup>5</sup> Therefore, it is a tautology to conclude that the MS was at some point or another deemed to be of intrinsic importance, whether by scribes or kings or associated scholars. However, the *Leechbook* as a working text seems all but forgotten, even in the centuries just following its creation. This process of forgetting, as described by Jan Assmann in his seminal *Cultural Memory and Early Civilization*, is usually referenced as the opposite of cultural remembrance, a complicated process of memory-construction which has informed a number of fascinating studies of historical memory by Assmann and others.<sup>6</sup> However, the case of Bald's *Leechbook* and its peers cannot be considered through the lens of remembrance, as they were quite clearly forgotten. The question becomes, then, how and why they were forgotten, especially considering recent scholarship which suggests they were unique and useful texts. To examine the intentional forgetting or neglect of these texts, this paper will overview the history, content, and contexts of the Anglo-Saxon leechbooks (with special attention paid to Bald's *Leechbook*), their presence (or lack thereof) in

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<sup>5</sup> "Detailed record for Royal 12 D XVII", Catalog of Illuminated Manuscripts, British Library, accessed August 21, 2018.  
<https://www.bl.uk/catalogues/illuminatedmanuscripts/record.asp?CollID=16&MSID=6548&NStart=120417>

<sup>6</sup> Jan Assmann, *Cultural Memory and Early Civilization: Writing, Remembrance, and Political Imagination* (Cambridge: Cambridge University Press, 2011), 9.



medical education in medieval Europe, and the factors that contributed to their ultimate disregard.<sup>7</sup>

This paper is organized into four main parts, the first being a selective overview of the historiography from 1865 to the present. The second part examines the major extant manuscripts in Anglo-Saxon medicine, their content, context, and origins. This section discusses various theories surrounding the efficacy of Anglo-Saxon medicine and the agency and knowledge of their authors. This section also discusses the dichotomous rationality and superstition of Anglo-Saxon medicine and the exceptionality of Bald's *Leechbook*, and concludes that the Anglo-Saxons adapted unique English versions of Latin texts and used them to develop new recipes based on observation and experience.

The third addresses the main research question of the paper, namely, if Bald's *Leechbook* provided functional and effective cures against common ailments, to what extent did it or did it not influence medical scholarship in subsequent centuries, and why did it fade to obscurity? To accomplish this, this section overviews the evolving locus of medical knowledge from the time of Bald's *Leechbook* moving forward. Beginning with the medical power of monasteries and the scholarly reforms of King Alfred the Great, this discussion follows the rise of medical schools in Europe, looking at some of the key universities, authors, and ideas that informed the "best practice" of the age. This section will also examine the work of three England-

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<sup>7</sup> The concept of "forgetting" is a rich vein of discussion among memory scholars. See Ann Rigney's 2018 "Remembrance as Remaking" for a good overview of different kinds of forgetting – the description of passive forgetting is particularly relevant to this paper. For a more detailed examination of some types of "forgetting", see Paul Connerton, "Seven Types of Forgetting", *Memory Studies* 1, no. 1 (2008), 59-71.

educated scholars: Bartolomeus Anglicus, Gilbertus Anglicus, and John of Gadesden, and will consider how they did or did not draw any influence from their Anglo-Saxon predecessors. This section will conclude that university-educated English doctors abandoned locally-produced texts such as Bald's *Leechbook* in favor of classical and Arabic sources of medical knowledge for two main reasons: first, because of the obsolescence of Old English in the post-Norman age and the dominance of Latin in all academic and medical contexts, and second, because of the turn away from recipe books and herbal texts in favor of commentaries on classical sources, largely fueled by Latin translations of Arabic medical scholarship.

The fourth section will conclude the paper by examining the implications of the linguistic exclusivity that rendered Bald's *Leechbook* and other texts ineligible for serious medical consideration, regardless of their potential practicality. It will discuss the consequences of linguistic exclusion that pervaded medical study in the middle ages, drawing especially on Monica Green's research into the transformation of gynecology in the middle ages following the rise of male-dominated Latin medical schools. The paper will conclude by using the case of Bald's *Leechbook* to encourage further study into ignored vernacular medical texts.

## II. Historiographical Review

Looking at Anglo-Saxon medicine from an academic perspective, the study of Anglo-Saxon medicine invariably begins with a man named Thomas Oswald Cockayne, and his trilogy of books, *Leechdoms, Wortcunning, and Starcraft of Early England* vols.

I-III. Born in 1807, Cockayne lived a strange and varied academic life, earning a master's degree at age twenty-eight and living the majority of his life teaching Greek, Latin, and mathematics at a boy's school in London.<sup>8</sup> Though he is best remembered for his work in translating Anglo-Saxon medical texts, this is in many ways a unexpected turn of fate. Before he took up Anglo-Saxon studies, Cockayne published an odd assortment of works on Jewish history and Irish history, as well as a biography of Marshal Turenne.<sup>9</sup> Around the 1860s, however, his intellectual interests took a distinct turn toward early England, and he began publishing a series of philological works and translations on early English texts. Amid this flurry of publications, the three-volume behemoth *Leechdoms, Wortcunning, and Starcraft of Early England* has endured as his best and perhaps only widely-known work. It was and remains today the primary (or only) modern English translation taken directly from the original manuscripts of four of the most important Anglo-Saxon medical texts extant today: Bald's *Leechbook*, *Leechbook III*, the *Lacnunga*, and the *Old English Herbarium*. Ever since the final volume's publication in 1866, every Anglo-Saxon

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<sup>8</sup> Anne Van Arsdall, *Medieval Herbal Remedies: The Old English Herbarium and Anglo-Saxon Medicine*, (New York: Routledge, 2002), 2. Van Arsdall has done a great deal of excellent research into Cockayne's life, death, and body of work, which appears in preface to her translation of *The Old English Herbarium*. It has done much examine Cockayne and his unique influence on the study of Anglo-Saxon medicine.

<sup>9</sup> *Ibid.*, 2-3.

scholar worth their salt must summarily refer to, agree with, or take issue not only with Cockayne's translation, but also with his commentary on Anglo-Saxon history and culture.

When examining Cockayne's conclusions on the context and merit of Anglo-Saxon medical texts, it is important to remember his unusual background. Cockayne was not a career Anglo-Saxon historian, and at the time he published *Leechcraft*, *Wortcunning*, and *Starcraft*, he had only been involved in Anglo-Saxon studies for a few years. He was by all means a capable scholar, writer, and philologist, but he was not a specialist as later generations conceive of the term. This is an especially important disclaimer to keep in mind considering his unilateral importance to the specialized field that emerges later in the historiography.

Cockayne had a very low regard for Anglo-Saxon scholarship. Particularly when it came to matters of medical practice, Cockayne's assessment of Anglo-Saxon culture was dismissive and scathing. In his preface to *Leechdoms*, he refers to the writing in Bald's Leechbook as "mere driveling", and later writes of the same text: "the book, in a literary sense, is learned; in a professional view not so, for it does not really advance mans [sic] knowledge of disease or cures [...] I dare not assert there is real substance in it."<sup>10</sup> Therefore, Cockayne's translation of the three Anglo-Saxon texts was more of a cultural and philological exercise than an earnest look into the medical value of the text. For the next century, his opinion remained the authoritative conclusion on Bald's Leechbook and Anglo-Saxon medicine as a whole.

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<sup>10</sup> Thomas Oswald Cockayne, *Leechdoms, Wortcunning, and Starcraft of Early England*, vol. 2, (London: Longman, Green, Longman, Roberts, and Green, 1865), xx, xxiii.

Not quite one century after the publication of *Leechdoms, Wortcunning, and Starcraft*, another prominent voice entered the discussion on Bald's Leechbook. In 1952, J. H. G. Grattan and Charles Singer published *Anglo-Saxon Magic and Medicine*, which consisted of two main parts. The ostensibly primary part of the work was the duo's new translation of the *Lacnunga*, which ought to have been regarded as an important piece of literature in its own right as the first translation of the document since Cockayne. However, the accomplishment of a new translation has been overshadowed by Singer's preceding commentary, which is even more condescending to Anglo-Saxon knowledge than Cockayne's passive dismissals. Of the Anglo-Saxon leeches' knowledge, Singer wrote, "Surveying the mass of folly and credulity that makes up [Anglo-Saxon] leechdoms, it may be asked: 'Is there any rational element here? Is the material based on anything that we may reasonably describe as experience?' The answer to both questions must be 'Very little'."<sup>11</sup> Penned by Singer, this excerpt is incendiary in the historiography, and appears quoted so often that Grattan's involvement in the publication is usually neglected altogether.

In *Anglo-Saxon Magic*, Singer echoes Cockayne's disbelief in the rationality of Anglo-Saxon medicine and builds upon it, claiming the Anglo-Saxons were superstitious barbarians incapable of rational medicine. Two of his primary reasons for believing this are, firstly, the Anglo-Saxon emphasis on magic cures, and secondly, the lack of abstract medical theory. The first point on magic would be more

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<sup>11</sup> J. H. G. Grattan and Charles Singer, *Anglo-Saxon Magic and Medicine: Illustrated Specifically from the Semi-Pagan text 'Lacnunga'* (Oxford: Oxford University Press, 1952), 92. Interestingly, this is one of the only times that Singer uses the word "rational" with any reference to "experience". Despite this, Singer's view of "rational" is, as ever, tied inexorably to Greek theory.

understandable if Singer's commentary dealt exclusively with Grattan's subject, the *Lacnunga*, which is a leechbook notorious for its charms, spells, and magic cures. However, Singer extends his dismissal to all leechbooks in broad strokes that, sixty years on, have not aged well. The second reason for Singer's dismissal is more substantial and more interesting: the Anglo-Saxons' lack of medical theory.

Throughout his discussion of Anglo-Saxon medicine, Singer laments how early English writers failed to emulate Greek theory and metaphysics. He gives Bede something of a patronizing kudos for his attempt at framing the patterns of the universe, though to Singer's mind, his understanding of disease was laughably inaccurate. He gives Byrhtferth somewhat more credit for his "scheme of the world" which Singer finds, if not at all accurate, at least "coherent"<sup>12</sup>. He shows no such understanding for the English leech, who he claims "dwells in the barbarian world of magic and hardly emerges therefrom."<sup>13</sup> Magic aside, the Anglo-Saxons' lack of theory is the primary reason that Singer claims they were incapable of rational medicine; efficacy has nothing to do with it. Speaking of Anglo-Saxon leechdoms as a whole, Singer writes: "There are a certain number of remedies, as for example, the direct application of heat, which clearly relieve symptoms. Nevertheless, without some theory of disease no rational remedies can be applied."<sup>14</sup> To Singer's mind, medical rationality and medical theory – specifically classical Greek medical theory – are so closely related they are virtually synonymous. This an important opinion

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<sup>12</sup> Ibid., 93.

<sup>13</sup> Ibid., 94.

<sup>14</sup> Ibid., 92.

because this narrow definition of “rational” is widely used and rather different than the everyday use of the same word.

Modern audiences may understandably define “rational” as a thought process based in reason or logic, a definition which naturally accommodates modern conventions of medical testing, experimentation, diagnosis, and treatment. However, when discussing ancient or medieval medicine, which was often based on philosophy and abstraction rather than on observation, “rational” comes to mean primarily those modes of thinking attributed to classical (Greek, Roman, and later Arabic) schools of thought and theory, which did not always include empirical observation and testing. These two definitions of “rational” both appear throughout the historiography. From Cockayne up until Cameron, “rational” was used in reference to Greek medical theory. Cameron was the first prominent author to use “rational” in what we may call the everyday definition. To avoid confusion and better reflect the current trajectory of the field, the vocabulary used to discuss Anglo-Saxon and indeed medieval medicine at large ought to be clarified and updated. In deference to Cameron’s influence, this paper will use the word “rational” in its everyday definition. When referring to something that would have been “rational” to Cockayne, Talbot, Rubin, and others, it will be more accurate to use the term “theoretical”, or perhaps “Greek”, if applicable. Employing these definitions moving forward, it is still important to keep in mind how the term “rational” reads for the majority of the twentieth century when dealing with secondary sources. In *Anglo-Saxon Magic*, Singer’s “rationality” refers explicitly to Greek medical theory. Singer recognized that Bald’s *Leechbook* and several other important Anglo-Saxon leechbooks were translations or compilations drawn from

classical sources. However, since they failed to articulate Greek theory alongside Greek remedies, they are, to Singer's argument, irrational by definition.

Nine years after Singer, C. H. Talbot approached the subject of Anglo-Saxon medicine with a more measured voice. In his 1967 book, *Medicine in Medieval England*, he argued several important points. He pushed back against Singer's unilateral denial that the Anglo-Saxon leechbooks had a basis in Greek theory. He pointed out that some of the most important Anglo-Saxon works were translations or derivatives of Greek sources, including the *Old English Herbarium*, which is a direct translation of the Latin herbal of Pseudo-Apuleius.<sup>15</sup> More importantly, he observed that many scholars who denounce the theoretical basis of Bald's *Leechbook* elevate a later Anglo-Saxon text, the *Peri Didaxeon*, as the first example of Greek theoretical medicine in England, not realizing that Bald's *Leechbook* actually shares a source text with *Didaxeon*.<sup>16</sup> Talbot argued that Greek medical thought affected Anglo-Saxon practices far earlier than most scholars assume, and that the same leechbooks that Cockayne and Singer saw as devoid of theory were in fact direct copies of Greek medicine. Talbot did not go so far as to say that Anglo-Saxon medicine was an observation-based science, nor did he seek to investigate the efficacy of particular recipes in the leechbooks. However, his work represents a keystone moment in the field. Although later generations of scholars have challenged some of his conclusions on which exact texts influenced which exact translations and when, the comprehensive nature of his book and willingness to consider Anglo-Saxon medicine

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<sup>15</sup> Anne Van Arsdall, *Medieval Herbal Remedies: The Old English Herbarium and Anglo-Saxon Medicine*, (New York: Routledge, 2002, 68-69.

<sup>16</sup> C.H. Talbot, *Medicine in Medieval England*, (London: Oldbourne Book Co Ltd., 1967),



from a new perspective inspired interest in the field. In the decades following Talbot's classic work, a new wave of scholars rose to further question the conclusions of Cockayne and Singer.

In 1974 Stanley Rubin joined the conversation with his book *Medieval English Medicine*. Curiously, though Talbot does appear in Rubin's bibliography, the seminal *Medicine in Medieval England* does not. Even so, Rubin's work is written in agreement with much of what Talbot penned seven years earlier. Rubin argues, like Talbot, that the Anglo-Saxons had access to Greek medical texts far earlier than many older histories contend. Also like Talbot, Rubin goes on to argue that the Anglo-Saxons' preservation of Greek theory in medical texts such as Bald's *Leechbook* indicates that they were more advanced than scholars like Cockayne may have believed.<sup>17</sup> However, Rubin does accuse Anglo-Saxon thought of keeping English medical thought in a "debased position", and attributes the Greek documents available in England not to an intellectual connection with Europe, but rather to the corrupted remnants of the Roman Empire left over after the barbarians' move west.<sup>18</sup> Perhaps the most valuable part of Rubin's book appears at the very end, where he examines the work of three English medical writers from the thirteenth and fourteenth centuries: Bartolomeus Anglicus, Gilbertus Anglicus, and John of Gaddesden. After a quick but informative overview of these authors, Rubin argues that the thirteenth century marked a watershed moment where English medicine began to "reflect an increasing degree of rational treatment, some slight, though definite evidence of

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<sup>17</sup> Stanley Rubin, *Medieval English Medicine*, (New York: Harper & Row Publishers Inc., 1974), 12-13.

<sup>18</sup> *Ibid.*, 196, 12.

clinical observation and the adoption of some discrimination in prescribed treatment”.<sup>19</sup> This section of Rubin’s book and his three English authors will be addressed and re-examined in the third part of this paper.

Running in parallel to the work of Talbot and Rubin, Linda E. Voigts has made significant contributions to scholars’ understanding not only of Anglo-Saxon herbal medicine, but the practical logistics that surrounded its function. Though Voigts has dealt with a variety of Anglo-Saxon texts in her publications, her favored text has been the *Old English Herbarium*, the Old English translation of the Herbal of Pseudo-Apuleius. In one of her first and most influential publications, “Anglo-Saxon Plant Remedies and the Anglo-Saxons”, Voigts studies the kinds of plants depicted in the *Herbarium* and analyzes whether the plants would have been available to English physicians by cultivation, trade, or other means. The article is in direct response to some opinions expressed by Charles Singer, who believed that the herbal manuals represented no practical medical function to the Anglo-Saxons. Singer assumed that the Anglo-Saxon authors indiscriminately copied recipes full of Mediterranean plants that they could not have possibly acquired in England.<sup>20</sup> In “Anglo Saxon Plant Remedies”, Voigts demonstrates not only how Anglo-Saxon texts were not mere copies of classical herbals, but were carefully curated and edited to fit the local region’s concerns including its flora.<sup>21</sup> Furthermore, she demonstrated that England enjoyed a botanical trade active enough to support the importation of medical plants

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<sup>19</sup> Ibid., 196.

<sup>20</sup> Linda E. Voigts, “Anglo-Saxon Plant Remedies and the Anglo-Saxons,” *Isis* 70, no. 2 (June 1979), 253,

<sup>21</sup> Ibid., 259-261.

from the Mediterranean and beyond, particularly within the ecclesiastical community.<sup>22</sup>

Voigts also speculates that England may have had a warmer climate in the middle ages, which would have made it easier to cultivate certain medicinal plants which some scholars assume could not have possibly grown in England.<sup>23</sup> By investigating not only the text of the *Herbarium*, but the documentation of Anglo-Saxon England's botanical trade and the horticultural world in which Anglo-Saxon leeches lived, she has joined the ranks of scholars who are slowly but certainly chipping away at the conclusions of Cockayne, Singer, and others.<sup>24</sup>

Following the momentum of Talbot, Rubin, and Voigts, perhaps the most influential voice to come into the field of Anglo-Saxon medicine has been that of M. L. Cameron. Although his initial publications garnered lukewarm reception from Voigts and others, Cameron's work on both the source material and the efficacy of Anglo-Saxon medical recipes has established him as a luminary in the field.<sup>25</sup> His work has inspired multiple scientific inquiries into the recipes of Bald's *Leechbook*, one of which has been the work of Dr. Harrison and the AncientBiotics team. Cameron wrote several articles on Anglo-Saxon medical texts in the early 1980s, but none captured as much attention as his 1983 article, "Anglo-Saxon Medicine and

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<sup>22</sup> Ibid., 261-263.

<sup>23</sup> Ibid., 253-255.

<sup>24</sup> A notable addition to these "others" would be Wilfrid E. Bonser, who was a pupil of Charles Singer. His *The medical background of Anglo-Saxon England; a study in history, psychology, and folklore* echoes many of the same ideas shared by Charles Singers in *Anglo-Saxon Magic*.

<sup>25</sup> Linda E. Voigts, review of *Anglo-Saxon Medicine* by M. L. Cameron, *Isis* Vol. 86, No. 2 (June 1995), 314-415. See also: John M. Riddle, review of *Anglo-Saxon Medicine* by M. L. Cameron, *Speculum* Vol. 72, No. 1 (Jan., 1997), 121-122.

Magic”. Cameron is a biologist by trade, and before he came to the fore as an authority on Anglo-Saxon medical history, he was a professor of biology at Dalhousie University. In “Anglo-Saxon Medicine and Magic” and the expanded 1993 study of the same topic, *Anglo-Saxon Medicine*, Cameron’s expertise on plants and herbal chemistry give him a great advantage in examining not only the origins but efficacy of the medical recipes. By examining Bald’s *Leechbook* with the insights of both a scientist and a historian as well as a strong dose of common sense, Cameron argues that Bald’s *Leechbook* represents the unique and ingenious work of an Anglo-Saxon master physician.

One of the recipes Cameron examines most thoroughly in both his 1983 article and his 1993 book is the eyesalve concocted to treat styas of the eyelid. Though Cameron does not perform any experiments himself to investigate, he argues that the ingredients all hold promising antibiotic or antimicrobial properties: onion and garlic, the latter in particular, have been known for centuries to possess antimicrobial properties, and the gall of a bull, though hardly a common substance in modern pharmacies, has detergent properties that would make it effective against various kinds of bacteria.<sup>26</sup> According to Cameron the chief value of the wine in the recipe would be to create copper salts: the tartarates in the wine, along with acids from the onion and garlic, would react with the copper in the brass vessel to create copper salts, which are themselves cytotoxic, meaning they destroy the cells of human flesh as well as those of bacteria.<sup>27</sup> After nine days of fermentation, this potent

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<sup>26</sup> M. L. Cameron, “Anglo-Saxon medicine and magic” in *Anglo-Saxon England* 17, 191-215, (New York: Cambridge University Press, 1988), 202.

<sup>27</sup> Ibid.

concoction of antibiotic plants and cytotoxic copper salts would certainly be strong enough to fight *S. aureus* effectively. In his discussion of the science, Cameron's observations on copper salts is especially important. The use of brass vessels in a medicinal recipe is not unique to Bald's Leechbook and has in the past been interpreted as a magical element in ancient superstitious medicine.<sup>28</sup> Cameron's theory on copper salts thus does not only indicate a possible rational basis for Bald's eyesalve, but also for other recipes that use copper salts.

Cameron did not test Bald's eyesalve, but uses his scientific knowledge to demystify it and other recipes and illustrate how many of their "magical" components have scientific bases which may indicate that Anglo-Saxon leeches were using rational, observational medicine to develop recipes based on salutary ingredients. He writes:

If we rephrase our question more specifically: 'Did ancient and medieval physicians use ingredients and methods which were likely to have had beneficial effects on the patients whose ailments they treated?', then I think the answer is 'Yes, and their prescriptions were about as good as anything prescribed before the mid-twentieth century'.<sup>29</sup>

A claim this bold should make any scholar skeptical. However, the implicit question was irresistible: did any of Bald's recipes actually work?

In 2005, a team of researchers headed by biologist Barbara Brennessel with the consulting help of Anglo-Saxon literary scholar, Michael D. C. Drout, decided to put Cameron's scientific theorizing to the test. They set up an experiment to replicate

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<sup>28</sup> Ibid., 203-204. See the research of Godfrid Storms in *Anglo-Saxon Magic* (The Hague, 1948).

<sup>29</sup> M. L. Cameron, *Anglo Saxon Medicine*, (Cambridge: Cambridge University Press, 1993), 117.

Bald's eyesalve and test its efficacy against *S. aureus*. Before they'd even begun, they experienced linguistic problems. The Anglo-Saxon words for "onion", "garlic", and "leek" are all incredibly similar— so similar, in fact, that they could not reach a clear consensus on which plants were indicated by the recipe. The original words, *croplaec* and *garleac*, were respectively translated by Cockayne to be onion and garlic, but ambiguity abounds and multiple authorities provide multiple translations wherein both *croplaec* and *garleac* could mean garlic, leek, or various other members of the *Allium* family.<sup>30</sup> Ultimately, the researchers determined that *garleac* almost certainly referred to garlic, but were unable to conclusively identify *croplaec* as leek or onion. Therefore, their solution was to test fifteen different variants of the recipe to see which ingredients were necessary to produce an applicable remedy and if the use of onion or leek provided more positive results. It should be of note that out of fifteen, only two of these recipes contained all five ingredients listed in the original recipe (onion/leek, garlic, wine, oxgall, and brass). The only difference between the two five-ingredient tests was the use of leek in one and onion in the other.<sup>31</sup>

Unfortunately, the researchers' efforts were in vain. Not only did they fail to produce any beneficial results from the fifteen tests on Bald's eyesalve, but they tested six other recipes from Bald's Leechbook at least two times each. All tests failed, and the researchers concluded (in obvious disappointment, it must be said) that despite

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<sup>30</sup> Barbara Brennessel, Michael D. C. Drout, & Robyn Gravel, "A reassessment of the efficacy of Anglo-Saxon Medicine" in *Anglo-Saxon England* 34, no. 1 (2005): 183-195, 183.

<sup>31</sup> *Ibid.*, 191.

Cameron's confidence, Anglo-Saxon medicine would never have proven effective against disease.<sup>32</sup>

The 2015 AncientBiotics test of Bald's eyesalve shared the same goal of the 2005 experiments, but followed stricter guidelines of preparation, documentation, and qualification. This was a key weakness in the 2005 study, as observed by the authors of the 2015 report: "[Brennessel et al.] found [the salve] ineffective against *S. aureus* in disk diffusion assays; however, these authors do not specify the methods of preparation and do not give quantitative results or details of replication, so we do not know exactly how their tests were conducted."<sup>33</sup> Much like the 2005 team, the AncientBiotics researchers conducted experiments on multiple versions of the recipe. They prepared four different batches of the recipe: one batch with the ambiguous *Allium* plant "*cropleac*" translated as onion, the second batch with the same translated as leek. A third batch tested the recipe in several forms, each form with one of the ingredients removed. The fourth batch tested the recipe before and after the 9-day waiting period.<sup>34</sup> Their experiments yielded impressive results: both preparations (onion and leek) of the salve proved to be effective against *S. aureus*, and were not merely bacteriostatic, but bactericidal, meaning that they killed the bacteria, rather than merely preventing it from reproducing.<sup>35</sup> Moreover, the tests found that the salve retained its potency for thirty days when stored at 4°C (39°F).<sup>36</sup> Perhaps the most

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<sup>32</sup> Ibid., 194-195

<sup>33</sup> Harrison et al., "A 1,000-Year-Old Antimicrobial Remedy", 4.

<sup>34</sup> The meticulous planning and data gathering on all four batches of the 2015 study is far more complete than that of the 2005 study. Even if it had ultimately replicated the results of the 2005 study, it would still present a far better exemplar of laboratory testing.

<sup>35</sup> Harrison et al., 2.

<sup>36</sup> Ibid.

fascinating finding of the experiments was that the salve only reached its full potency if all ingredients were present and the recipe was followed very carefully; if wine or garlic was exempted from the recipe, the salve lost its bactericidal effects entirely.<sup>37</sup>

The implications of their findings were not lost on Harrison or the other researchers. In their discussion of their findings, they claim that scientifically speaking, Bald's eyesalve must have been designed very specifically to treat an eye sty. They write:

When we describe Bald's eyesalve as being "designed" to treat eye infection, we do not use the term lightly [...] our finding that the combination of ingredients used is crucial for bactericidal activity supports the hypothesis that this "ancientbiotic" was systematically constructed based on empirical knowledge. The fact that Anglo-Saxon recipes do not state detailed amounts of each component requires the practitioners to have had some knowledge about how much of each ingredient to use. It is also notable that numerous "alternative" recipes are often given for a condition—indicating that a trained physician could adapt treatments when necessary. If medieval physicians really did use observation and experience to design effective antimicrobial medicines, then this predates the generally accepted date for the adoption of a rational scientific method [...] by several hundred years.<sup>38</sup>

This study has presented historians with empirical data that suggests that Anglo-Saxon medics used observation and applied experience to develop remedies such as Bald's eyesalve. While these findings cannot be used to assert that all medieval remedies hold as much promise – anyone with basic first aid knowledge can recognize catastrophically bad advice in the remedies of the Anglo-Saxons, the Greeks, and essentially every medical tradition before the mid-twentieth century – it cannot and should not be ignored. In the three short years since the publication of the AncientBiotics report, very little has been done to incorporate this scientific research

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<sup>37</sup> Ibid., 2-3.

<sup>38</sup> Ibid., 5.



into the greater historical understanding of Bald's *Leechbook* and Anglo-Saxon medicine as a whole. However, the monumental nature of the Harrison et al. report ought to compel historians to ask and address new questions about the history of Anglo-Saxon medicine and the leechbooks.

For the sake of brevity this review of the historiography has been necessarily selective, focusing on some of the most notable works that capture the evolving zeitgeist of Anglo-Saxon medical studies, particularly those relevant to the major interpretations of Bald's *Leechbook*. However, this paper relies on the research of several more influential scholars. Anne Van Arsdall has published unparalleled research into Thomas Oswald Cockayne, and has given his opus new life with her landmark 2002 translation of the *Old English Herbarium*. Edited and prefaced in the spirit of Talbot and Cameron, Van Arsdall's translation has been highly informative and corrective for the field. Later sections of this paper lean heavily on the meticulous research of Vern Bullough into the structure and history of European medical universities. Finally, Audrey Meaney's work has been vital to this paper. Her research into the source exemplars of Bald's *Leechbook* and other Anglo-Saxon medical fragments heavily influenced Cameron's writing, and has reshaped scholars' understanding of how old the Anglo-Saxon medical manuscript tradition really is. The research of these scholars and others continues to come to the fore in new and unexpected ways, propelling the field to the exciting place where it stands today.

Taking Cameron's extensive research as the new consensus, bolstered by the success of the 2015 AncientBiotics trial of Bald's eyesalve, the questions that plague the study of Anglo-Saxon medicine have changed. If we can assume that Anglo-

Saxon medicine – and it is truly Anglo-Saxon medicine in the most honest sense if, as Cameron argues, some of these efficacious recipes are unique hybrids of Greek and Anglo-Saxon thought – was functional and helpful to the medieval patient, the obvious question becomes: what happened? In an age dominated by the desperate and futile use of charms and magic to cure illnesses for which there were no real answers, if there were any functional remedies, even for small, everyday complaints like eye styes, how did they not survive into subsequent centuries? As observed by Egyptologist and historian of ancient medicine W. R. Dawson, in 1929: “When a drug really possesses the virtues attributed to it, and is an effective remedy for disease, its survival into modern times is quite natural.”<sup>39</sup> Or so we would like to believe. Owing to the scientific method itself, modern spectators of history like to believe that that which works, survives. However, as evidenced by the fact that Bald’s eyesalve, effective against *Staphylococcus aureus* and its methicillin-resistant strain, slept largely unappreciated in its binding for over one thousand years, this is not always the case. The natural next step is to investigate the reasons why.

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<sup>39</sup> W. R. Dawson, *Magician and Leech: a study in the beginnings of medicine with special reference to Ancient Egypt*, (London: Methuen & Co, 1929), 137.

### III. The Old English Manuscripts

Before analyzing the world and the institutions that pushed Bald's *Leechbook* and other texts like it into obscurity, it is important to understand the texts themselves. At this point, it will be helpful to review these documents' origins, contents, and contexts. Working in very rough chronological order, there are four major Old English texts to consider.<sup>40</sup> Though there are other extant Anglo-Saxon texts and fragments (some of which will be mentioned), for the purposes of brevity and argument, this paper will focus on the four most historically significant texts: Bald's *Leechbook*, the *Lacnunga*, the *Old English Herbarium*, and the simply named *Leechbook III*.

#### *Leechbook III*

MS Royal 12 D XVIII, which has become more or less synonymous with Bald's *Leechbook*, consists of not one but three books. Though all three date to around the same period in the tenth century, they form two separate works that must be considered independent of the other. The first two of these books together constitute Bald's *Leechbook*, which ends in a colophon describing the work and who ordered it made. The following third book, presumed to be copied down with the first two because of its similar subject material, is a separate work known simply as *Leechbook III*. Of all the Anglo-Saxon leechbooks, *Leechbook III* appears to have been influenced the least by Mediterranean scholarship, and thus of all the Old English

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<sup>40</sup> Bald's *Leechbook*, *Lacnunga*, and *Leechbook III* all date to around the same era. In the case of the two *Leechbooks*, it is generally agreed that both are likely copies from older manuscripts, but without surviving exemplars it is impossible to know exactly how old the contents are.

manuscripts is the purest available representation of Anglo-Saxon medicine as it was prior to the assimilation of classical continental medicine.

Like Bald's *Leechbook* and most other medical compendiums of the period, *Leechbook III* is a collection of medical remedies for all manner of ills, arranged anatomically by the part of the body afflicted, starting with the head and working down to the feet – a common organizational scheme in medieval medical manuals. Composed on precious parchment, this organization would have taken a considerable amount of planning and preparation to achieve.<sup>41</sup> *Leechbook III*'s lack of Mediterranean influence is evidenced by the overwhelming recommendation of native English plants, with very few plants or herbs that would require importation from other regions.<sup>42</sup> Additionally, the author only refers to plants by their Old English names, and rarely if ever mentions Latin or Greek synonyms. This contrasts with later texts more heavily influenced by Latin sources, such as the Old English Herbarium.<sup>43</sup> In translating directly from the Latin, the author of the *Old English Herbarium* lists Anglicized Latin names for plants before adding in their Old English synonyms. "Berbena" (Verbena) is clarified as the plant known as *ærcðrotu*, or ashtroat, and likewise "Confirma" (Comfrey) is listed alongside its vernacular name, *galluc*.<sup>44</sup> In *Leechbook III*, and even in Bald's *Leechbook*, these same Anglo-Saxon names appear without any accompanying Latin, indicating that the herbs were known and used long before Latin medical tradition reached England from the continent.<sup>45</sup>

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<sup>41</sup> See the discussion of Bald's *Leechbook* below for more details on leechbook composition.

<sup>42</sup> Cameron, *Anglo-Saxon Medicine*, 36.

<sup>43</sup> Ibid.

<sup>44</sup> Cockayne, *Leechdoms, Wortcunning, and Starcraft*, vol. I, 28-29, 26-27.

<sup>45</sup> Ibid., vol. II, 96-97, 344-345, 358-359.

This lack of dependence on Latin names extends further into the recipes themselves, very few of which can be directly linked to Latin sources, giving historians a fascinating look into Anglo-Saxon medicine as it had evolved prior to the heavy Mediterranean influence of later centuries.<sup>46</sup>

As pointed out by M. L. Cameron, *Leechbook III* does contain some recipes that are extraordinarily similar to those found in Latin sources, particularly the *De medicamentis* of Gaulish author Marcellus de Bordeaux.<sup>47</sup> A few key examples are the recommendation of red cloth to bind herbs to the head to relieve a headache, as well as the medico-magical use of the eyes of a crab worn on the neck to alleviate swollen or bleared eyes.<sup>48</sup> An important distinction in the analogs between these two sources is that while they are indeed very similar, they are not identical, and *Leechbook III* is by no means a direct translation of Marcellus. Considering Marcellus' heavy use of charms and spells and his relative geographical and cultural proximity to England upon writing *De medicamentis*, it is entirely possible that Marcellus and the author of *Leechbook III* drew upon the same corpus of source material, or at least a shared medical tradition that predated either of their respective works.<sup>49</sup> The concept of a broader European tradition, be it contemporary or ancestral to the Anglo-Saxon leechbooks, is an idea discussed at some length by Anne Van Arsdall, who argues that “the late classical and early medieval world was one of flux, with peoples and boundaries in constant change; texts were copied in whole and in

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<sup>46</sup> Cameron, *Anglo-Saxon Medicine*, 36.

<sup>47</sup> Ibid. Marcellus wrote in the late 4<sup>th</sup> or early 5<sup>th</sup> century, and is known for his *De medicamentis*. The Latin of this text is available in the Niedermann, *Marcelli De medicamentis*, (Leipzig: In Aedibus B.G. Teubneri, 1916).

<sup>48</sup> Ibid., see also Cockayne vol. II, 204.

<sup>49</sup> Cameron, *Anglo-Saxon Medicine*, 37.

part, and their transmission and dissemination present huge challenges to scholars who wish to try to trace any give work to its sources.”<sup>50</sup> Though Van Arsdall wrote this in reference to the *Old English Herbarium* specifically, it is a relevant warning to keep in mind when discussing the often ambiguous sources of *Leechbook III* and its peers. In discussing this phenomenon, Cameron points out that not only do *Leechbook III* and Marcellus share common recommendations with the omnipresent work of Pliny the Elder, but that many of these shared recommendations have a magical component. Amulets, charms, spells, and other superstitious remedies appear throughout *Leechbook III*, and often find analogs in Marcellus or elsewhere.

While charms and spells do persist in *Leechbook III*, the text also contains many rational and common sense elements, and it is important to put its magical elements in perspective so that its rational elements may be fully appreciated. When looking at *Leechbook III* or any medieval medical text, be it Anglo-Saxon, Latin, or otherwise, readers must remember that in the tenth century (and indeed for many centuries before and after) magic, religion, and medicine did not exist independently of one other. In the minds of learned monks and uneducated laymen alike, the three were inexorably connected in a way that seemed as natural to them as their separation now appears to us. If in a single day a leech wrote a Greek inscription to ward off evil runes<sup>51</sup> and sang mass twelve times to heal an elfshot horse,<sup>52</sup> and used a very carefully prepared salve to cure a sty on an eyelid, he would have been doing his job.

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<sup>50</sup> Anne Van Arsdall, *Medieval Herbal Remedies: The Old English Herbarium and Anglo-Saxon Medicine*, (New York: Routledge, 2002, 69.

<sup>51</sup> Cockayne vol. II, 139.

<sup>52</sup> *Ibid.*, 157.

No matter how different an effect these three treatments may have had on their subjects and no matter that the horse may have remained “elfshot”<sup>53</sup> while the man with the sty recovered, for better or worse, all of these remedies belonged to a single profession that used a broad arsenal of science and superstition to defend humans in soul, mind, and body. The Anglo-Saxon leeches wielded magic and religious charms because it was what they had access to in a time where disease and contagion could not have been fully understood. Sometimes, their rational treatments and their magical prescriptions overlapped in such a way that a treatment which may now be explained with biology appeared to a medieval patient to have succeeded through magic.<sup>54</sup> It is irresponsible to expect Anglo-Saxon leeches or indeed any medieval physician to stray from their holistic understanding of the natural and supernatural. While it may be tempting to scoff at the absurdity of magical cures, historians must try to step into a leech’s shoes and show charity for what they could and could not know.

Cameron has pointed out that many of the magical remedies found in *Leechbook III* – and Marcellus, for that matter – are recommended for ailments which still resist treatment today. Eye troubles and migraines can be stubborn ailments for a twenty-first century person with decent healthcare, to say nothing of the everyday layman in ninth or tenth century England. Therefore, while the use of crab eye

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<sup>53</sup> Cameron describes the concept of “elfshot” along with other odd phrases such as “flying venom” and “loathly one that roams through the land” as medieval terms for communicable disease. Although they may not have understood germ theory or the routes of contagion, Anglo-Saxons at very least seemed to understand the existence of what we know were viral or bacterial infections. *Anglo-Saxon Medicine*, 10.

<sup>54</sup> For an excellent example, see Cameron’s discussion of a cure for bleeding in the ear by stimulating a patient’s fight-or-flight response in “Anglo-Saxon medicine and magic” in *Anglo-Saxon England 17*, 213-214.

amulets or red cloth may strike modern readers as unforgivably ridiculous, a measure of charity is due to a populace desperate for medical care even in the face of largely incurable conditions. As Cameron put it, “Medieval people lived in a medically dangerous and helpless world.”<sup>55</sup> This being the case, their use of the magical against the intractable is to be expected. In the case of *Leechbook III*, alongside this desperate absurdity is a surprising measure of reasonable treatments and tools that can tell us about some of the more rational elements of Anglo-Saxon medicine.

Though surgery is not a large component of any Anglo-Saxon medical literature, *Leechbook III* does recommend that when closing up a wound, physicians ought to use silk sutures, which would disintegrate as the wound healed. This seems not only a very practical concern, but also one that implies Anglo-Saxon medics not only had access to Chinese silk, and that its use in surgery had become a medical standard even as far away as England.<sup>56</sup> Similarly, some elements which may seem magical are upon closer inspection common-sense measures. For instance, after describing the ingredients of a salve to cure carbuncle, the author of *Leechbook III* describes how it ought to be heated multiple times: “boil it, when it boileth sing three Pater nosters over it, remove it again, then sing nine Pater nosters and boil it thrice, and so frequently; remove it, and after that cure with it.”<sup>57</sup> Because Christian prayers and phrases are often used as magical aids in medical remedies, the repeated singing of a Pater noster may appear at first glance to be a magical element.<sup>58</sup> However, its

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<sup>55</sup> Van Arsdall, 40.

<sup>56</sup> Cockayne vol II, 359. See Cameron’s commentary in *Anglo-Saxon Medicine*, 39. The use of silk is similarly recommended in Bald’s *Leechbook*.

<sup>57</sup> Ibid.

<sup>58</sup> In the *Leechbook III* alone, the singing or use of charms is most often prescribed to treat illnesses of supernatural origin. Prayers, masses, and other Christian charms, invariably in



repeated use is not arbitrary, and is paired with the alternative boiling and cooling of the salve. The Pater noster is a prayer that, in an early medieval Christian region, any practicing Christian medic would know by heart. In an age before handheld timekeeping devices, the repeated singing of the Pater noster here is used to measure boiling time to avoid burning or over or under thickening the salve.<sup>59</sup>

*Leechbook III* recommends a large helping of magical remedies, many of which are intended to treat ailments that would have been incurable or very poorly understood in the medieval era. On the other hand, it also contains very practical and effective advice, all contained in a document that developed largely separate from mainstream Mediterranean influence. Unfortunately, not all Anglo-Saxon medicine shared *Leechbook III*'s relative sensibility.

### *Lacnunga*

Dating to around the same period as *Leechbook III* in the latter part of the tenth century, the *Lacnunga* shares neither the organization nor the rationality of its contemporary. Currently extant in only one manuscript, Harley MS 585, the *Lacnunga* is a unique example of a so-called “commonplace book” of Anglo-Saxon medicine. It begins with the same head-to-toe organization of *Leechbook III*, an indication that the author may have been intending to pen a traditional medical textbook. However, *Lacnunga* strays sharply from the traditional anatomical plan

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Latin, were used to fend off dementedness, “elfshot”, “the devil”, “flying venom”, “against the elfin race and nocturnal (goblin) visitors), and various other problems. Many of these conditions were likely assigned to patients with mental afflictions and/or conditions for which there was no known diagnosis. In the text itself, some of these charms are attributed to Gaelic sources.

<sup>59</sup> Cameron made a similar observation in *Anglo-Saxon Medicine*, 39.

only twenty recipes in, and never returns to any semblance of order.<sup>60</sup> It was composed by two distinct scribes, the second of whom takes over in the middle of a page and includes large sections of untranslated Latin left in from the sources he was using to compose the recipe.<sup>61</sup> Another hallmark of the *Lacnunga* is the sloppiness of its transcription. One particularly striking example is found in an entry on f. 170r, where the scribe has copied a recipe that is, ostensibly, meant to give relief to someone with irritated bowels, but interrupts the remedy partway through to relate a remedy for watering eyes.<sup>62</sup> In their translation, Grattan and Singer attributed this mistake to the subtraction of content from the remedy for irritated bowels. Cameron has since argued that it is far more likely that whatever exemplar the scribe was using at the time had the remedy for irritated bowels on the end of one page that continued onto the next, but that in the margins above the second page, an annotator had scribbled in the remedy for watering eyes.<sup>63</sup> Working without regard for the sense of what he was transcribing, the scribe of *Lacnunga* copied down the entire page in order, from the marginalia to the bottom of the page, not realizing he'd interrupted one recipe with another. Even in the tenth century, it seems, tedium begat inattention. This instance is a fair representation of the overall organization – or lack thereof – of the book. The content of *Lacnunga* is similarly underwhelming, though it has helped historians better understand the superstitions and magical-medical charms used by the Anglo-Saxons, the Irish, and the Teutonic peoples.

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<sup>60</sup> Cameron, *Anglo-Saxon Medicine*, 46.

<sup>61</sup> Harley MS 585 f. 179r, Digitised Manuscripts, British Library, Accessed September 25, 2018. [http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Harley\\_MS\\_585](http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Harley_MS_585)

<sup>62</sup> Singer and Grattan, *Anglo-Saxon Magic and Medicine*, 166-167. The recipe for watering eyes is also found in the *Herbarium*.

<sup>63</sup> Cameron, *Anglo-Saxon Medicine*, 46.

In the commentary preceding the 1952 translation of *Lacnunga* in *Anglo-Saxon Magic and Medicine*, Charles Singer commented that the book represented “a final pathological disintegration of the great system of Greek medical thought”.<sup>64</sup> While Singer’s successors in the field have taken issue with the vehemence of his claims and his condescension towards Anglo-Saxon medicine, this particular claim, when applied to *Lacnunga*, remains a solid part of the historiography. Even Charles H. Talbot, famous as one of the first historians to make a case for the Greek theoretical basis of Anglo-Saxon medicine, wrote in his seminal *Medicine in Medieval England* that the *Lacnunga* was “a rambling collection of about two hundred prescriptions, remedies, and charms derived from many sources, Greek, Roman, Byzantine, Celtic and Teutonic.”<sup>65</sup> And despite the evolving research into the Anglo-Saxon leechbooks as a subject, *Lacnunga* remains a curiosity and an outlier. Talbot argued that the irrational charms and superstitions of the *Lacnunga* did not represent the prevalent medical culture of Anglo-Saxon England, writing that:

[in] a society which produced writers like Aelfric, Aethelweard (the Wessex elderman who wrote a chronicle in Latin), Wulfstan, Bishop of London, Byrhtferth and others, superstition and magic would have little place. It should be borne in mind that the few vernacular manuscripts that survive from this period are a minimal proportion of what actually existed. Historians are at pains to point out that manuscripts of this type had very little chance of survival. [...] To lay great emphasis, then, on a single extravagant text like the *Lacnunga* is to throw everything out of perspective.<sup>66</sup>

That *Lacnunga* is a cultural outlier went unappreciated by Singer, who wrote of Anglo-Saxon medicine in sweeping strokes, but has persisted into the present

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<sup>64</sup> Singer and Grattan, *Anglo-Saxon Magic and Medicine*, 94.

<sup>65</sup> Talbot, *Medicine in Medieval England*, 23.

<sup>66</sup> Ibid.

historiography. Cameron, amid his discussion of rationality in other Anglo-Saxon leechbooks, observes the *Lacnunga* as “a source of superstitious medicine, and although it nowhere reflects the best in Anglo-Saxon medical practice, it gives a fascinating insight into its less rational aspects.”<sup>67</sup>

The superstitious aspects of the *Lacnunga* are often categorized by origin, as seen in Talbot’s work: Greek, Roman, Teutonic, Celtic, etc. However, Anne Van Arsdall has made an important point in that this mix of sources is not unique to Anglo-Saxon medicine, and is in fact a common trait of all medieval medical manuals. She writes: “it is misleading for Talbot, like Singer and Bonser, to find Greek, Roman, Byzantine, Celtic, and Teutonic sources for this work alone, since such sources are typical for early medieval medicine and its combination of the rational, folklore, and magic. [...] The modern fixation with data collection in subdivided and precise compartments fosters such fragmentation, to the point that one may lose sight of the tradition as a whole.”<sup>68</sup> Based on Van Arsdall’s observations, historians may find the *Lacnunga* useful as a representative of a larger European medical tradition that mixed pagan and Christian charms, with herbal recipes from classical sources such as Dioscorides and Pseudo-Apuleius.

Though the *Lacnunga* is notorious for its charms, many of its recipes appear elsewhere in the corpus of Anglo-Saxon medical texts.<sup>69</sup> This is likely due to shared

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<sup>67</sup> Cameron, *Anglo-Saxon Medicine*, 47.

<sup>68</sup> Van Arsdall, *Medieval Herbal Remedies*, 51.

<sup>69</sup> Medicinal magic, especially as it appeared in Medieval Europe, is a rich topic for discussion that deserves more time and attention than the scope of this paper allows. For a more complete discussion of both Anglo-Saxon medicinal magic and medieval magic in general, see Richard Kieckhefer’s *Magic in the Middle Ages* (New York: Cambridge University Press, 1989), particularly chapters 2, 4, and 6. For a more updated discussion, see

sources such as the Herbal of Pseudo-Apuleius, from which, for example, the *Lacnunga* scribes likely received the recipe for irritated bowels that was interrupted by the recipe for watering eyes on f. 170r. The *Lacnunga* version, as translated by Cockayne, reads thus: “If a man have irritation in the inwards, there is a wort called galluc, *comfrey*, delve...”<sup>70</sup> In the *Herbarium*, the analog recipe provides more specific instructions: “If someone has an internal rupture, take the roots of [comfrey/galluc], and roast them in hot ashes, eat this on an empty stomach with some honey. The patient will be healed and also it completely cleans out the stomach.”<sup>71</sup> Interestingly, the recipe for tearful eyes that interrupts the *Lacnunga* version also appears in Bald’s *Leechbook*. The *Lacnunga* version, with additions and italics added by Cockayne: “For tears of eyes; put ashes of hartshorn into sweetened wine, reduce [the roots] to dust, put *in* a good spoon full, an eggshell full of wine or of good ale and some honey, give it [the man] to drink early in the morning.”<sup>72</sup> And in Bald’s *Leechbook*: “If eyes be tearful, add to sweetened wine ashes of harts horn.”<sup>73</sup> The appearance of analog recipes across multiple manuscripts not only evidences the common source material of many Anglo-Saxon medical texts, it also reiterates the clumsiness of the *Lacnunga*’s compositors. As observed by Cameron, the *Lacnunga* at one point promises to relate twenty-eight treatments for erysipelatus

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Ankarloo and Clark, *Witchcraft and Magic in Europe* (Philadelphia: University of Pennsylvania Press, 2002), especially the work of Karen L. Jolly.

<sup>70</sup> Cockayne, vol. 3, 45.

<sup>71</sup> Van Arsdall, *Medieval Herbal Remedies*, 175.

<sup>72</sup> Cockayne vol. 3, 45-46.

<sup>73</sup> *Ibid.*, vol. 2, 35.

complaints, but only gives thirteen.<sup>74</sup> Meanwhile, Bald's *Leechbook* gives all twenty-eight of the same group.<sup>75</sup>

Taking all of this into account, the general consensus on the *Lacnunga* is that it is a commonplace medical text, poorly planned and edited, consisting of magical charms and cures which likely stemmed from a larger medico-magical tradition of medieval Europe as well as popular herbal remedies taken from widely-circulated sources such as Dioscorides and Pseudo-Apuleius.<sup>76</sup> In the search for rational or practical Anglo-Saxon medicine, *Leechbook III* overshadows the *Lacnunga* with better organization and more common-sense solutions. However, *Leechbook III* is in turn overshadowed by Bald's *Leechbook*.

#### Bald's *Leechbook*

Linguistically and topically, Bald's *Leechbook* is in good company with *Leechbook III*, *Lacnunga*, and a variety of other partial or fragmented Old English medical texts. However, when taking stock of the extant corpus of Old English medical manuals, Bald's *Leechbook* is in a class of its own. Its comprehensiveness, its organization, and its expertly hybridized contents of classical and native recipes have set it apart as a work of medical mastery and evidence of a well-read and experienced compiler. The only extant manuscript is found in the first two books of the tenth-century triad of Royal 12 D XVIII, separated from *Leechbook III* by a colophon that reads: "Bald

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<sup>74</sup> Grattan and Singer, *Anglo-Saxon Magic*, 164.

<sup>75</sup> Cockayne vol. 2, 98-104.

<sup>76</sup> Van Arsdall, *Medieval Herbal Remedies*, 175. For more background on European magic in general as well as its medical aspects, see Ankarloo and Clark, *Witchcraft and Magic in Europe* (London: The Athlone Press, 2002), as well as Valerie Flint, *The Rise of Magic in Early Medieval Europe* (Princeton, NJ: Princeton University Press, 1991).

owns this book, which he ordered Cild to write; earnestly here I pray all in the name of Christ that no treacherous person should take this book from me, neither by force nor by theft no by any false speech. Why? Because no best treasure is so dear to me as the dear books which the grace of Christ attends.”.<sup>77</sup> The exact identities of Bald and Cild remain unclear, though it is reasonable to assume that Cild was a learned Anglo-Saxon scribe. Still, it remains unclear if Cild, Bald, or neither is the master physician behind the organization of the work itself. Most scholars agree that the tenth century *Leechbook* is a copy of a somewhat older manuscript dating to the waning years of King Alfred the Great.<sup>78</sup> One basis for this belief is the mention of Alfred in the second book, where the author mentions how, at Alfred’s request, the patriarch of Jerusalem sent a variety of exotic medicinal plants to England, including instructions on how to use them. Considering Alfred’s lifelong battle against an unidentified illness, it makes sense that the king would seek out medical advice wherever he could find it, including from more distant regions in the Holy Land.<sup>79</sup> The extant manuscript for the *Leechbook* is likely to have been copied down from this lost Alfredian exemplar by the Benedictine monks at the Cathedral Priory at Winchester, which is the only positively identified member of provenance before its presentation to King George II’s Royal Library in 1757.<sup>80</sup>

Both books of the *Leechbook* contain an encyclopedic list of remedies for various ailments and ills, similar to the other texts discussed so far. What truly sets

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<sup>77</sup> Cameron, *Anglo-Saxon Medicine*, 20. While Cockayne includes the full Latin colophon in his *Leechdoms, Wortcunning, and Starcraft*, he does not contribute an English translation.

<sup>78</sup> *Ibid.*, 30.

<sup>79</sup> Cockayne vol. 2, 288-291, “Patriarch Helias sends these to King Alfred”.

<sup>80</sup> N. R. Ker, *Catalogue of Manuscripts containing Anglo-Saxon* (Oxford: Clarendon Press, 1957), no. 264.

Bald's *Leechbook* apart is the planning of the two volumes: the first book deals with external ailments in a head-to-toe fashion similar to *Leechbook III*, but the second book, unparalleled in England at the time, deals exclusively with "all disorders of the inwards".<sup>81</sup> The separation of external and internal medicine is an unusual and ambitious undertaking, especially when considering the labor and cost that went into the creation of vellum books. M. L. Cameron and Audrey Meaney have done much to further our understanding of the logistics required to create a leechbook of such scope, providing more insight into the sources of Bald's *Leechbook* and the lost medical scholarship of Anglo-Saxon England.<sup>82</sup>

Whereas *Leechbook III* provides a fair representation of 'pure' Anglo-Saxon medicine divorced from active Mediterranean influence, and the *Lacnunga* represents the less thoughtful, less rational side of the same, Bald's *Leechbook* is made remarkable for its combination of classical and native sources.<sup>83</sup> M. L. Cameron provides a lengthy analysis of recipes found in Bald's *Leechbook* in *Anglo-Saxon Medicine*, where he identifies analog remedies in Oribasius, Pliny, the Latin *Herbarium* complex, *Marcellus*, the *Practica Alexandri*, *Petrocellus*, *Pasionarius*, and many more.<sup>84</sup> Alongside these classical sources are native remedies and charms that also appear in both *Leechbook III* and the *Lacnunga*. Discussing Anglo-Saxon plant names in *Anglo-Saxon Magic and Medicine*, Charles Singer claims that all

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<sup>81</sup> Cockayne vol. 2, 159.

<sup>82</sup> Cameron, *Anglo-Saxon Medicine*, 89-90. Audrey Meaney, "Variant versions of Old English medical remedies", *Anglo-Saxon England* vol. 13, 235-268 (Cambridge: Cambridge University Press, 1984).

<sup>83</sup> *Leechbook III* undoubtedly enjoys plenty of Continental influence from the shared medieval medical/magical heritage of Europe (per Van Arsdall), but in terms of active and intentional borrowing from Mediterranean sources, *Leechbook III* is an Insular text.

<sup>84</sup> Cameron, *Anglo-Saxon Medicine*,



Anglo-Saxon medical texts were blindly copied from Latin sources and that “when the plant-names in these are merely transcribed or translated, the resulting product in an A.S. manuscript can seldom represent more than an empty sound.”<sup>85</sup> Singer’s concerns surrounding the use of Mediterranean plants in England has been adequately addressed and countered by Linda Voigts, but his reduction of Anglo-Saxon medical scholarship to mere copying bears discussion.

The author of Bald’s *Leechbook* appears keenly aware of what plants are and are not available to local physicians, and in many cases omits those exotic plants that are unobtainable in England.<sup>86</sup> Nevertheless, the recipes in Bald’s *Leechbook* include materials obtained from all over the world, from the Mediterranean, Africa, Arabia, the Near East, even China.<sup>87</sup> The inclusion of some exotic materials while others are omitted in the Old English versions of imported recipes indicates that the author of the *Leechbook* understands which medicines can be imported without losing their medicinal efficacy – likely dried or preserved in some way – and which cannot. This argument has been utilized by M. L. Cameron and owes a great deal to the work of Linda Voigts, who has compellingly argued that England and the whole of Europe enjoyed an extensive trade network through which monks, abbesses, and physicians exchanged exotic medicinal plants.<sup>88</sup> The existence of such a network is evidenced by the *Leechbook*’s own record of the shipment of medicine from Jerusalem to King Alfred’s court.

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<sup>85</sup> Grattan and Singer, 80-81.

<sup>86</sup> Cameron, *Anglo-Saxon Medicine*, 104-105.

<sup>87</sup> Ibid. As in *Leechbook III*, Bald’s *Leechbook* recommends silk sutures for surgical use.

<sup>88</sup> Voigts, “Anglo-Saxon Plant Remedies and the Anglo-Saxons.”

None of this is to say that all plants included in Bald's *Leechbook* would have been easy for an Anglo-Saxon leech to come by. The *Leechbook*'s authors recognized this, sometimes explicitly bemoaning the difficulty of finding the right materials. In book I of the *Leechbook*, a remedy for snakebite reads: "against bite of snake, if [the man] procures and eateth rind, which cometh out of paradise, no venom will damage him. Then said he that [sic] wrote this book, that [the rind] was hard gotten."<sup>89</sup> It is clear enough from the text that the authors of Bald's *Leechbook* had a far better understanding of medical materials and their availability than Singer gives them credit for. Not only that, but rather than blindly copying directly from Latin sources as Singer assumes, there is evidence that the Anglo-Saxon leeches who contributed to the *Leechbook* were a part of a medical tradition much older than the age of extant manuscripts would suggest.

A large number of the remedies found in Bald's *Leechbook* are translations of Latin remedies found elsewhere, in Pliny, *Marcellus*, and Dioscorides, to name a few. These parallels, especially those found in Pliny, have compelled the most outstanding authors in the field, such as Cameron, Rubin, and Talbot before both, to argue that the authors of Bald's *Leechbook* had access to the Latin works themselves. In Talbot's time and soon after, this argument was revolutionary, as it was assumed that various Latin texts were unavailable in England at the time. However, more recent scholarship by Audrey Meaney has pushed the proverbial envelope even further by positing that the authors of Bald's *Leechbook* were following in the footsteps of

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<sup>89</sup> Cockayne vol. 2, 115.

generations of translators, and likely accessed their Latin sources not through the Latin itself, but through Old English exemplars, now lost to time.

In addition to Bald's *Leechbook*, *Leechbook III*, and *Lacnunga*, there remain a variety of fragmented Old English medical texts that survive in snippets and pieces, including a copy of medical cures originally recorded in the MS Cotton Ortho B, which is now only extant in a sixteenth-century transcript taken down by Lawrence Nowell. In her article "Variant versions of Old English medical remedies", Meaney compares versions of the same remedies across the whole body of Old English medicine, but pays special attention to the Nowell transcript and its source (Ortho B), comparing their contents specifically to the recipes found in Bald's *Leechbook*.<sup>90</sup> As the title of her article suggests, Meaney observes linguistic variations between the Old English in the *Leechbook* and Ortho B/Nowell transcript which led her to conclude that while the authors of the two documents were copying recipes taken from Latin sources, they were not translating directly from the Latin, and were using two different Old English exemplars.<sup>91</sup> This implies that Latin remedies had been circulating "more or less independently" in England for quite some time before the creation of Bald's *Leechbook*.<sup>92</sup> To bolster this point, Meaney points out that the linguistic markers of the Nowell transcript date the original Ortho B MS to, at the latest, the very beginning of King Alfred's reign.<sup>93</sup> Furthermore, another medical fragment, the Omont leaf, dates to even earlier in the late ninth century.<sup>94</sup> This is only

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<sup>90</sup> Audrey Meaney, "Variant versions of Old English medical remedies", *Anglo-Saxon England* vol. 13, 235-268 (Cambridge: Cambridge University Press, 1984).

<sup>91</sup> *Ibid.*, 255.

<sup>92</sup> *Ibid.*, 250.

<sup>93</sup> *Ibid.*, 247.

<sup>94</sup> *Ibid.*, 243.

a barebones summary of Audrey Meaney's detailed analysis of the Old English medical manuscripts, but the implications of her research have changed the way scholars view Bald's *Leechbook* and the Anglo-Saxon medical tradition as a whole. If Anglo-Saxon leeches were translating and annotating Latin remedies as early as the ninth century, and distributing cures in multiple exemplars as Meaney's research indicates, it naturally follows that some leeches would begin adapting and modifying recipes independent of the sources.

Among the large number of remedies derived from classical sources or translated exemplars, Bald's *Leechbook* also contains native charms and remedies similar to those found in *Leechbook III* and the *Lacnunga*.<sup>95</sup> Some of these native remedies are Christian charms, others are herbal recommendations from "leeches" in general. Several remedies referenced in the contents of book II are headed by phrases such as, "Leeches teach this leechdom... or "Leeches speak of...", indicating some dependence on local medical knowledge.<sup>96</sup> Additionally, Bald's *Leechbook* attributes two recipes explicitly to Anglo-Saxon leeches by name: the first being Oxa, who recommended a complicated concoction of herbs steeped in ale to alleviate "dry disease".<sup>97</sup> Later on in book II, the *Leechbook* scribe relates a leechdom to combat lung disease originally taught by a physician called Dun.<sup>98</sup> Nothing is known for certain about either Oxa or Dun, as Bald's *Leechbook* is the only record of their

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<sup>95</sup> Some of these charms are likely sourced from older Insular superstitions, while others, such as the remedy for tearful eyes observed in the *Lacnunga*, are recipes adapted from Latin sources that had been absorbed into standard native practice by the time that the *Leechbook* was being assembled.

<sup>96</sup> Cockayne vol. 2, 161.

<sup>97</sup> Ibid., 121.

<sup>98</sup> Ibid., 293.

existence, but the remedies they recommend do not appear to have direct analogs in classical sources. Whether the recipes are of pure Anglo-Saxon innovation or of Anglo-Saxon improvement upon classical ideas, it is difficult to say.

Because there are so few extant records of early English medicine, it is natural for historians – such as Singer, Storms, Bosner, and others – to assume that Anglo-Saxon leeches did not have an ‘active’ medical field, that is, they relied on translated remedies and seldom if ever developed their own ideas or improved upon borrowed recipes. However, a closer look provides compelling hints to the contrary. The very presence of native voices such as Oxa and Dun are one such hint, but others are available by comparing Anglo-Saxon remedies to their classical sources. Considering the new knowledge gleaned from the AncientBiotics project, it may be fruitful to use Bald’s eyesalve as a case study in Anglo-Saxon innovation.

It’s useful to consider the complex and detailed nature of the recipe itself:

Work an eyesalve for a wen [stye], take cropleek and garlic, of both equal quantities, pound them well together, take wine and bullocks gall, of both equal quantities, mix with the leek, put this then into a brazen vessel, let it stand nine days in the brass vessel, wring out through a cloth and clear it well, put it into a horn, and about night time, apply it with a feather to the eye ; the best leechdom.<sup>99</sup>

The efficacy of the recipe will not bear repeating here, though one thousand years later, the discoveries of Freya Harrison and her team would justify the scribe’s claim that it was *se betsta læcdom*. Adding to the intrigue is the fact that Bald’s eyesalve does not have any analogs anywhere in the extant corpus of medieval medical sources. Writing of the unique remedy in 1993, Cameron mused, “it would be

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<sup>99</sup> Thomas Oswald Cockayne, *Leechdoms, Wortcunning, and Starcraft of Early England*, vol. 2, (London: Longman, Green, Longman, Roberts, and Green, 1865), 35.

interesting to know how and where it was developed.”<sup>100</sup> It is impossible to know who developed Bald’s eyesalve and where the recipe first emerged, but it is entirely likely that it was the result of observant Anglo-Saxon leeches adapting knowledge from Latin and Greek sources to their own experience with patients. Cameron has observed this kind of adaptive practice in some recipes of the *Leechbook*, including the addition of garlic mustard to a recipe for bloated stomach borrowed from the *Herbarium*.<sup>101</sup> Garlic, onion, animal gall, and various states of copper (used to create copper salts as the brazen vessel does in Bald’s recipe) are all recommended in the herbal of Dioscorides to address various eye complaints such as dimming eyesight, watering eyes, or “rugged” (infected) eyelids.<sup>102</sup> However, nowhere in the herbal does Dioscorides offer a recipe even remotely resembling that which appears in the *Leechbook*.

It is clear from Harrison’s research that while many of the ingredients have some antimicrobial properties on their own, Bald’s eyesalve only reaches its full potency when all of the ingredients are combined and carefully steeped as instructed. It is obvious that Dioscorides and other classical physicians knew about the helpful properties of garlic, onion, gall, and copper salts. We also know, based on Audrey Meaney’s research, that leeches in Anglo-Saxon England were translating and distributing classical sources (including Dioscorides) by the ninth century and likely earlier. We also know from Bald’s *Leechbook* itself that some local physicians like

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<sup>100</sup> Cameron, *Anglo-Saxon Medicine*, 120.

<sup>101</sup> Cameron, *Anglo-Saxon Medicine*, 127.

<sup>102</sup> Dioscorides, trans. Robert T. Gunther, *The Greek Herbal of Dioscorides*, (New York: Hafner Publishing Co, 1959,) 120, 188-190, 628, 639.

Oxa and Dun were prescribing remedies of their own modification, and that some recipes in the *Leechbook* were modified versions of classical concoctions. Though no leech is attributed to the eyesalve by name, it is not unreasonable to speculate that Bald's eyesalve may have been designed by a local Anglo-Saxon physician, using his own observations and those of his peers to build upon the popular works of Dioscorides.

### *The Old English Herbarium*

The work commonly referred to as the *Old English Herbarium* is an Old English translation of the *Herbarium of Pseudo-Apuleius*, an extremely popular text which consists of 130 chapters of herbal remedies. Many scholars believe that the Latin version of the text was circulating in England by the ninth century, and was then translated into Old English by the monastic medical community there in the mid tenth century. Though this timeline is widely accepted, the original tenth century exemplar no longer exists, and the extant manuscripts all date to the early eleventh century. Unlike all other Old English medical books, the *Herbarium* boasts not just one, but four surviving Old English copies: Cotton Vitellius C. iii, Hatton 76, Harley 585, and Harley 6258 B.<sup>103</sup> The Cotton Vitellius MS is particularly special for its incredible array of illustrations, which though the copper green inks have pockmarked the vellum in places, beautifully depict plants, snakes, scorpions, and more.<sup>104</sup>

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<sup>103</sup> Van Arsdall, *Old English Herbarium*, 101. As indicated earlier, Harley 585 also contains the text of *Lacnunga*, which appears after the *Herbarium* in the same MS.

<sup>104</sup> Primarily for its lush illustrations, the Cotton V. MS has become the most widely studied copy, and is the MS that Cockayne originally used for translation.

Of all the Old English medical texts, the *Herbarium* is the most direct translation from the original Latin, and thus has the most distinct Mediterranean flavor. Whereas *Leechbook III* and *Lacnunga* rely almost entirely on native names for plants and Bald's *Leechbook* uses Latin loanwords only periodically, the *Herbarium* is chock-full of Latin plant names, most of which are supplemented with the English synonyms in the text itself. Much like the herbal of Dioscorides, the *Old English Herbarium* is organized into chapters, each chapter dealing with a specific herb or plant and its applications for medical use. The popularity of the *Herbarium* is obvious not only from its many copies and translations,<sup>105</sup> but also because it is a known source of medical knowledge for other texts. For instance, a great number of recipes found in the *Herbarium* also appear in Bald's *Leechbook*.<sup>106</sup> Audrey Meaney's research indicates that it may be possible that Bald or Cild were referring to one English translation of select *Herbarium* recipes while composing the *Leechbook*, while the authors of other Old English medical texts such as the Omont leaf were using a different copy of the same recipes with small variations in the translation.<sup>107</sup> The fact that four copies have survived since Anglo-Saxon times is impressive in and of itself, but there were likely more translations or partial translations that have since been lost or destroyed.<sup>108</sup>

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<sup>105</sup> Audrey Meaney's research indicates that there were likely even more variant translations of the *Herbarium* floating around England during the time that Bald's *Leechbook* was constructed, which would indicate that the surviving copies of the *Herbarium* are a fraction of what likely existed in the early middle ages.

<sup>106</sup> Cameron, *Anglo-Saxon Magic*, 127, 133.

<sup>107</sup> Meaney, "Variant Versions", 249-250.

<sup>108</sup> Per Van Arsdall's comprehensive research in *Medieval Herbal Remedies*, p. 101: Harley 6258B dates to about 1200. Harley 585 is contained in the same manuscript as the *Lacnunga* and dates to about 1000. Hatton 76 dates to the 11<sup>th</sup> century, and appears in the MS after translations of Gregory's *Dialogues* and St. Basil's *Monita*. Cotton Vitellius C. iii includes a



The *Herbarium* is one of the most notable cases of classical Mediterranean influence on Anglo-Saxon medicine, and the earliest example of classical medicine directly translated into the vernacular Old English. However, even the *Herbarium* was not subject to the blind duplication that scholars such as Singer expected of medically incapable Anglo-Saxon scribes. Linda Voigts observed that the Anglo-Saxon scribes responsible for the *Herbarium*'s translation not only added useful information on plant names and habitats, but also omitted some from the original Latin, like spells or charms, to improve the utility of the text. She writes:

In the transmission of this herbal, not only were other plant chapters added, but changes were made in the book to make it a more useful pharmacopeia; lists of synonyms to the plant names were added to each chapter and sometimes information concerning the habitat of the plants. [...] In short, what we find in the Old English version is what might be called an "improved" text, a version easier to use than the Latin. Inessential information, some of it magical, has been omitted, and the information important to anyone who might want to find, dig, and dry the plant has been combined from two locations in the Latin and placed at the beginning of the chapter. The redactor, whether he was working in the vernacular or composing a Latin intermediary, was concerned with making the text a useful one.<sup>109</sup>

That the Anglo-Saxons found the *Herbarium* useful is evidenced by its many extant copies, its use in other leechbooks, and its careful editing in the Old English version. However, many scholars study it separately from other Anglo-Saxon leechbooks because it is a translation rather than an original Old English composition. In her 2002 translation of the *Herbarium*, Anne Van Arsdall takes issue with this trend, and argues that all of the leechbooks, including the *Herbarium*, are "essential pieces in a

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plethora of illustrations and has been historically favored by scholars (including Cockayne) for study. It dates to the early 11<sup>th</sup> century.

<sup>109</sup> Voigts, "Anglo-Saxon Plant Remedies and the Anglo-Saxons", 255-256.

large and complex puzzle.”<sup>110</sup> Van Arsdall first argues that the *Herbarium* documents the relationship between classical medicine and Anglo-Saxon medicine, and then takes this argument a step further, claiming that Anglo-Saxon medicine was only one iteration of a broader European medical tradition that was largely homogeneous across the continent.<sup>111</sup> While this may be true in one way or another, even with a direct translation like the *Herbarium*, it is easy to see how the Anglo-Saxon scribes left their unique mark on the document through editing, omitting, and streamlining the *Herbarium* to fit the active practice of England’s burgeoning medical community – not unlike the innovation and adaptations of Bald’s *Leechbook*.

A close examination of the main sources of Anglo-Saxon medical knowledge paints a picture not of a scriptorium full of monks blindly copying the works passed down from ancient times, as Cockayne or Singer suggest. More recent scholarship challenges the modern reader with images of a diverse and active medical field that ran the gamut from the ill-edited magical charms in the *Lacnunga* to the far more rational and soundly-organized *Leechbook III*. Even when basing their medicine on classical sources, as is most evident in the *Herbarium* and in Bald’s *Leechbook*, the Anglo-Saxons who composed these manuscripts evidenced their innovations on the page. When compared with contemporaneous sources such as the Omont leaf, the language of Bald’s *Leechbook* indicates that translations of Latin medical recipes were circulating in England a century earlier than previously thought. The unique recipes left behind by physicians such as Oxa, Dun, and the mystery author of Bald’s

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<sup>110</sup> Van Arsdall, *The Old English Herbarium*, 75.

<sup>111</sup> *Ibid.*, 94-95.

eyesalve testify to ability of Anglo-Saxon physicians to absorb classical medical knowledge and improve upon known cures to create entirely new ones. Even the *Herbarium*, taken directly from the Latin, shows signs of careful editing: omitting unobtainable herbs, reorganizing contents for quick identification, and adding helpful information about plant habitats and storage.

These are not the kinds of innovations and improvements that we would expect from an island of medical barbarians. Rather, it suggests that Anglo-Saxon medics operated on an advanced level in tenth-century Europe. They relied predominantly on classical medical sources, and supplanted this learning with local superstition and plant lore. This being the case, in order to understand the erasure of Anglo-Saxon medical knowledge, we must not look to the manuscripts themselves, but to the world that forgot them.

## IV. Medieval Loci of Medical Knowledge

The erasure of Anglo-Saxon medical knowledge did not happen overnight, and was in many ways the victim of England's own evolution. In order to understand the intellectual, political, and linguistic changes that ultimately excluded Anglo-Saxon medical knowledge from the realm of acceptable medicine, we must trace the evolving locus of medical authority in England through the middle ages, beginning in the eighth and ninth centuries.

### *English Medicine in the Time of King Alfred*

Anglo-Saxon England was a dangerous place to live in the ninth century, especially if you had the misfortune of being a monk. Viking attacks were a very real danger for English monasteries, not only for the monks who lived and worked there, but for the treasures they kept: gold, silver, and an unknown number of books. It is impossible to say exactly how many books were lost to Viking attacks, just as it is impossible to say exactly how many books existed in early England. As discussed in the previous section, the leechbooks themselves indicate that even by the eighth century, the monastic libraries of England enjoyed a decent helping of Latin medical texts or translations thereof. Moreover, there is significant evidence that the monks overseeing those libraries were part of a European network of ecclesiastics who travelled far and exchanged medical knowledge and medicinal substances. However, while medicinal trade was possible and prevalent, many medicines remained unknown or out of reach.

In c.754, Cynehard, the bishop of Winchester, wrote to Lull, a fellow English clergyman and at that time Archbishop of Mainz, and beseeched his countryman for any medical plants or spices that he might come across, especially those that were unobtainable in England.<sup>112</sup> Cynehard wrote:

As well, if you should come into the possession of any books of secular learning unknown to us, for example, concerning medicines – of which we have a goodly quantity here, but nonetheless drugs from overseas which we find written about in these [books] are unknown to us and difficult to come by – or if you were to see to other purchases or spices [*i.e.* drugs] which we are in need of, you might consider sharing them [with us], as you did by sending the towel.<sup>113</sup>

“Cynehard’s problem”, that is, the difficulty of finding certain medicinal plants that do not grow in England, has received much attention from Linda Voigts as well as Anne Van Arsdall in their respective discussions on plant cultivation and trade in England. Both scholars have adequately shown that if plants could not grow in England, English physicians – or at least, ecclesiastical physicians who could take advantage of the extensive networks of power, travel, and trade associated with church administration and missionary journeys – could acquire some materials through trade with the continent and even more distant lands, as Cynehard’s letter suggests.

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<sup>112</sup> That Cynehard claimed that Winchester had access to many medical texts is in itself an interesting comment. Though difficult to prove through provenance alone, many historians believe that Bald’s *Leechbook* was composed at Winchester, and some believe the same for *Leechbook III*. Though this discussion falls outside the scope of this paper, examining Winchester as a potential leader in Anglo-Saxon medical development, especially around the time of King Alfred in Wessex, could provide a microcosmic study into the world that produced the leechbooks.

<sup>113</sup> Faith Wallis, *Medieval Medicine: A Reader*, (Toronto: University of Toronto Press, 2010), 110-111.

This trade is further exemplified by accounts like that of St. Willibald, a missionary and kinsman to St. Boniface of England, who in c.726 smuggled balsam out of the Holy Land for its medicinal properties.<sup>114</sup> A few years later, in c.740, the German Church, host to several English missionaries at the time, sent gifts of pepper, cinnamon, and frankincense to Abbess Cuniburg in England.<sup>115</sup> And of course, over a century later, Elias III, Patriarch of Jerusalem, sent recipes and a wealth of ingredients at the encouragement of King Alfred. In addition to the international trade of medicinal materials, John Harvey has demonstrated that royal and monastic gardens in England could and did cultivate non-native and exotic plants in special gardens created for such a purpose.<sup>116</sup> It is important to emphasize, however, that the best medicines, the best recipes, the best materials, and the broadest variety of ingredients, all necessitated connection with either the King, the Church, or both. As the keepers and creators of medical texts, the cultivators and collectors of medicinal materials, the distributors of medical care, and the centers of medical learning, the Church – its monasteries in particular – became the central locus of medical knowledge and power in early England.

Especially in England, nearly all extant medical manuscripts were compiled, copied, translated, or composed by monastic scribes. There are multiple contributing factors to this monopoly, including the ability to read and write in multiple languages, access to sources, access to the trade networks described by Voigts and Van Arsdall, and not least of all, the wealth required to fund the labor and vellum needed to

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<sup>114</sup> Faith Wallis, *Medieval Medicine*, 111.

<sup>115</sup> Pollington, *Leechcraft*, 70.

<sup>116</sup> John Harvey in *Medieval Gardens*, (London: B. T. Batsford, 1981).

produce manuscripts. Despite the church's command of medical knowledge, in his letter to Archbishop Lull, Cynehard refers to medical books as "secular learning", indicating that he and his fellow clergymen did not consider medicine a solely monastic study. Whether this refers to the classical (and non-Christian) origins of European medical knowledge or to the existence of lay medical practitioners in England or both at the same time, it is difficult to say for certain. That there were lay medics and leeches practicing medicine in England in the early middle ages is evidenced at very least by the native pagan charms recorded in the *Lacnunga*, but even medical-magical charms were absorbed by the church and reformatted to feature Christian prayers, masses, and other biblical charms. These medics are impossible to identify without textual evidence, but it is reasonable to postulate that outside of Church oversight, they were a diverse group of Christians and pagans, male and female, with varying levels of success and experience. However, monks and other ecclesiastics – invariably Christian and male with only rare exceptions – were responsible for the preservation of medical texts, the acquisition of medicinal substances, and at times the cultivation of medicinal plants.<sup>117</sup> This placed them at the center of the preservation and dissemination of medical knowledge in the early middle ages.

The preservation of medical texts (and indeed of any kind of text) in Latin became a problem in the ninth century. Monasteries may have had plenty of Latin

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<sup>117</sup> R. A. Buck, "Women and Language in the Anglo-Saxon Leechbooks," *Women and Language* 23, 2 (Fall 2000), 41-50, provides an excellent analysis of gendered language in the leechbooks, the masculine voice of the author, and the language used to discuss women in the text.

filling their libraries, but monks themselves increasingly lacked the linguistic training necessary to comprehend Latin scholarship.<sup>118</sup> King Alfred famously lamented England's fading grasp of classical languages, claiming that some clerics couldn't even understand rituals in English, to say nothing of Latin. Inspired by the traditions of translation passed from one culture to the next, he wrote:

I wondered extremely that the good and wise men who were formerly all over England, and had perfectly learned all the books, had not wished to translate them into their own language. But again I soon answered myself and said: 'They did not think that men would ever be so careless, and that learning would so decay, that through that desire they abstained from it, since they wished that the wisdom in this land might increase with our knowledge of languages.' Then I remembered how the law was first known in Hebrew, and again, when the Greeks had learned it, they translated the whole of it into their own language, and all other books besides. And again the Romans, when they had learned them, translated the whole of them by learned interpreters into their own language. And also all other Christian nations translated a part of them into their own language. Therefore it seems better to me, if you think so, for us also to translate some books which are most needful for all men to know into the language which we can all understand.<sup>119</sup>

Next to his long conflicts with the Danish Vikings, King Alfred's adamancy on educational reform and the translation of books from Latin into English became one of the most defining aspects of his reign. Alfred personally translated multiple texts from Latin into the vernacular Old English, and encouraged many more translation

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<sup>118</sup> Helmut Gneuss, "King Alfred and the History of Anglo-Saxon Libraries" in *Modes of Interpretation in Old English Literature: Essay in Honour of Stanley B. Greenfield*, edited by P.R. Brown, G. R. Frampton, and F. C. Robinson, 29-49. (Toronto: Toronto University Press, 1986) This is commonly correlated to the sustained incursions of Danish Vikings in the mid-to-late ninth centuries, but as observed by Helmut Gneuss, Alfred himself describes a deficiency that would have arisen before the Danish attacks on the English mainland and substantially affected monastic operation. Though the attacks undoubtedly interrupted the functions of monasteries through the ninth and tenth centuries, the problems with Latin comprehension among monks and clergy existed before the Vikings complicated it further.

<sup>119</sup> Alfred, King of Wessex, "Preface to St. Gregory's *Pastoral Care*" in *The Anglo-Saxon World: An Anthology*, translated by Kevin Crossley-Howard, 218-220, (Oxford: Oxford University Press, 2009), 219-220.



projects across the scriptoriums of England.<sup>120</sup> It is widely believed that the original exemplar on which the Royal D XVII copy of Bald's *Leechbook* was based was originally translated and compiled in King Alfred's day, perhaps a product of his vision for an England population educated in their own vernacular. Whether originally composed in Alfred's day or later, the Old English leechbooks are heirs to Alfred's conviction that the education of the English people started with learning in their own language. In the field of medicine, this resulted in the innovations observable in Bald's *Leechbook* and the *Herbarium* especially. However, the use of Old English, while it may have inspired innovation in the ninth and tenth centuries, experienced an upheaval after the end of the first millennium.

#### English Medicine After 1066

English medical knowledge and practice experienced a significant shift following the arrival of William the Conqueror. Monasteries remained the primary repositories and distributors of medical knowledge, but the Norman Conquest united England with Normandy, creating new political and cultural ties across the channel that invited travel, trade, and the introduction of continental ideas to England, including continental ideas on medicine. In his insightful study of Anglo-Norman medicine, Edward Kealey observed:

In many fields native Saxon practices continued to outweigh the Norman genius for administration and the continental flair for theoretical scholarship. So it was in medicine: although most known physicians had Norman names, medical manuscripts usually had Saxon associations. Within a generation,

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<sup>120</sup> Talbot, *Medicine in Medieval England*, 17. Rubin, *Medieval English Medicine*, 44.

however, the separate traditions were intermingling and producing their own novel effects.<sup>121</sup>

This slow handoff from Saxon to Norman medical culture coincided with both an increase in English physicians and an increase in the number of medical manuscripts.<sup>122</sup> The introduction of Norman scholarship was in many ways a massive boon to English medicine, and in the first hundred years of Norman rule, the number of known hospitals grew from seven to one hundred and thirteen.<sup>123</sup> However, the transition was not without its losses.

Like the Anglo-Saxons before them, Anglo-Norman physicians demonstrated a particular fondness for medical herbals and compendiums drawn from classical sources. However, while the Anglo-Saxons translated portions of these Latin herbals into Old English and morphed many of the recipes into new medicines, their Anglo-Norman successors opted to copy directly from the Latin, without translation or adaptation. Many of the resulting manuscripts are beautifully illustrated and elegant. The scriptorium at Bury Saint Edmunds in Suffolk produced a particularly fine book that contained Latin copies of the herbal of Pseudo-Apuleius,<sup>124</sup> portions from Dioscorides, and a treatise from Sextus Placitus. It is notable that these texts also appear in the *Old English Herbarium*. The Bury copy, written in Latin, offers not only beautiful illustrations of plants, but also Latin marginalia that indicates its use for education in later centuries.<sup>125</sup> Many of the marginal notes in the Bury herbal offer

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<sup>121</sup> Edward J. Kealey, *Medieval Medicus: A Social History of Anglo-Norman Medicine*, Baltimore: Johns Hopkins University Press, 1981.

<sup>122</sup> Edward J. Kealey, *Medieval Medicus*, 2. The illustrated Cotton Vitellius C. iii copy of the *Old English Herbarium* dates to the Norman period.

<sup>123</sup> Edward J. Kealey, *Medieval Medicus*, 2.

<sup>124</sup> Also referred to as Apuleius Barbarus

<sup>125</sup> Edward J. Kealey, *Medieval Medicus*, 9.

the vernacular English equivalent of Latin plant names, essentially recreating the work done by Anglo-Saxon scholars several centuries earlier. Additionally, whereas Anglo-Saxon leechbooks lacked the discussion of Greek medical theory as Singer lamented 900 years later, the Anglo-Norman texts copied Greek theory alongside their herbals, and introduced treatises on humoral theory and other Greek medical theory which were already gaining steam on the continent – nearly all, it can go without saying, were copied in Latin.<sup>126</sup> Though Latin had never disappeared from England during the reign of King Alfred or after, its explosive popularity for non-liturgical books in the Norman era was largely tied to cultural and linguistic habits brought across the Channel by William and his court of Normans.

In his first decade as King, William the Conqueror had all but displaced the Anglo-Saxon aristocracy. In 1072, all but one of the English earls were Normans; the one Anglo-Saxon Earl was executed in 1076, and his title subsequently granted to a Norman.<sup>127</sup> This subjugation of the English people to French rulers was a political movement, but precipitated massive cultural consequences. Like many Anglo-Saxon kings, William's court conducted liturgy, ritual, and administration in Latin, exemplified in his famous Domesday Book. Latin dominated the textual landscape. In the first few centuries of Norman rule, the production of English texts rapidly declined, whereas the production of Latin copies doubled.<sup>128</sup> By the time English medical manuscripts began to crop up once more in the thirteenth centuries and

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<sup>126</sup> Ibid.

<sup>127</sup> Albert C. Baugh and Thomas Cable, *A History of the English Language*, 3<sup>rd</sup> Ed., (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1978), 111.

<sup>128</sup> Edward J. Kealey, *Medieval Medicus*, 5.

onwards, their language was much changed from the days of Alfred. Norman England effectively replaced the Old English leechbooks with Latin copies of Greek sources. Some of these sources, such as the Herbal of Dioscorides, were already familiar to the English and had been used to produce Bald's *Leechbook*. However, the unique blend of native and classical recipes found in the *Leechbook* were disregarded in favor of unaltered classical knowledge found in Latin copies. Old English itself marked the leechbooks as the creations not only of a conquered people, but a conquered language.

The subjugation of the English to French rulers does not fully explain the erasure of Anglo-Saxon medicine from the corpus of medical knowledge.<sup>129</sup> For functional recipes (such as Bald's eyesalve) to be so completely excluded from the collective medical consciousness that they would be categorically ignored for a thousand years required a conquest far more complete than that of the Normans. This second conquest was not a political conquest, but an intellectual one, wrapped in nuances of language and education. Hundreds of miles from England's shores, it began in the burgeoning new locus of medical power that emanated not from Normandy, but from Italy, and Arabia beyond.

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<sup>129</sup> Michael Clanchy, *From Memory to Written Record 1066-1307*, 2<sup>nd</sup> ed. (Oxford: Blackwell, 1993). Particularly the first chapter. While the production of English texts was devalued and simultaneously the production of Latin and French texts boomed, Anglo-Saxon customs still persisted in many English churches.

*Islamicate Scholarship, Salerno, and Medical Theory*

In any discussion of medieval medicine, it is impossible to circumvent discussion of the medical school at Salerno. Historiographically, Salerno divides the chronology of medieval medicine into the distinct halves of pre- and post-Salernitan medicine. Even in the medieval era, especially in the twelfth and thirteenth centuries, Salerno was the standard that informed the curriculum of all other medical schools and the sources of knowledge for physicians, surgeons, and medical theorists alike. To understand the cultural dominance of Salerno and its effect on English medicine and the fate of the leechbooks, it is important to understand Salerno's beginnings and the Islamicate scholarship and translation that fueled its rise to prominence.

The origins of the school at Salerno are shrouded in uncertainty, but even a review of the unknowns is a helpful way to begin a discussion of the school's influence. Salerno was known as a place of healing even in ancient times, a place where people would flock to find cures for their various ills.<sup>130</sup> In 839, it became the capital of a Lombard polity, and two hundred years later in 1077, it became the capital of the Norman duchy of Apulia. The capital was moved away from Salerno in 1127, but the change did little to affect its significance in the region, and it remained one of the most important cities under Norman rule.<sup>131</sup> It was sometime in the middle of the tenth century, sandwiched between its time as a Lombard capital and the Norman takeover, that the school of Salerno is said to have been founded. It is unclear whether the school was established by a church authority, secular authority,

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<sup>130</sup> Plinio Prioreschi, *A History of Medicine : Volume V : Medieval Medicine*, (Omaha: Horatius Press, 2003), 215-216.

<sup>131</sup> Ibid.

or by common consensus of physicians and their students. Some early documentation suggests that early Salernitan physicians may have been associated with the church, but later documentation makes it clear that if there ever was a direct connection with the church, that association faded over time.<sup>132</sup> Over the centuries, one of the most powerful images of Salerno is reflected in woodcut illustrations of later centuries that depict the four supposed founders of the medical school: an Arab, a Jew, a Greek, and a Latin (a Latin-speaking European), who as a group decided to found a school to study and teach medicine, a subject that transcended all nationality.<sup>133</sup> Though almost certainly apocryphal, this image of four ethnically and cultural diverse founders setting aside their differences to pursue the knowledge of medicine is certainly romantic, and is likely a fantasy constructed in later centuries. However, there is a nugget of truth in this four-founders story, as cross-cultural exchange and translation played a foundational role in Salerno's success.

In the early middle ages, while the physicians of Western Europe relied predominantly on herbals, recipe books, and native superstition, the physicians in the Islamicate regions to the east were in the middle of the Islamic Golden Age.<sup>134</sup> Over the years of conquest that propelled the Umayyad and Abbasid caliphates to their success, Islamicate scholars had gained access to libraries of Greek and Roman works

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<sup>132</sup> Ibid., 219-220.

<sup>133</sup> Ibid., 216.

<sup>134</sup> Michael Cooperson has aptly criticized the term "Golden Age" in his 2017 article, "The Abbasid 'Golden Age': An Excavation" as an inaccurate and incomplete representation of the period. The term here is not intended to summarize this complex historical period of history, but as a familiar semantic tool used for brevity's sake.

not enjoyed by more remote parts of western Europe.<sup>135</sup> This encompassed not only works of medicine, from authors such as Galen, Hippocrates, and Dioscorides, but philosophers as well: Socrates, Plato, Aristotle, and many others. Though the realms of medicine and philosophy may seem naturally divided in the modern era, in the early medieval Islamicate world, the two were considered naturally intertwined. Islamicate scholars translated a great number of Greek texts into Arabic and began commentating on them, combining them with philosophical texts, and using them to create whole new systems of medicine.<sup>136</sup> The world-famous physician and philosopher Avicenna (Ibn Sina) attempted to harmonize the work of Galen and Aristotle, while the Andalusian scholar Averroes (Ibn Rushd) incorporated Aristotelian ideas into his treatises on all subjects, including medicine.<sup>137</sup> This marriage of practical medicine, Greek medical theory (predominantly humoral medicine) and Greek philosophy was a hallmark of classical and, in turn, Islamicate medicine. Even aside from these commentaries, Islamicate physicians and surgeons made considerable advances in the understanding of medicine. Practicing doctors drew heavily on the medical teachings of the Greeks, but also on other sources from India and even China, and the medicines they developed from their studies became the platinum standard of their day.<sup>138</sup> It was also relatively easy to distribute, because

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<sup>135</sup> Vivian Nutton, “Early-Medieval Medicine and Natural Science” in *The Cambridge History of Science* vol. 2, eds. David Linberg and Michael Shank (New York: Cambridge University Press, 1989).

<sup>136</sup> Emilie Savage-Smith, “Medicine in Medieval Islam” in *The Cambridge History of Science* vol. 2, eds. David Linberg and Michael Shank (New York: Cambridge University Press, 1989).

<sup>137</sup> Cooperson, “The Abbasid ‘Golden Age’”, 571.

<sup>138</sup> Dimitri Gutas, *Greek Thought, Arabic Culture* (London: Routledge, 1998), 24, 39. See the rest of Gutas’ book for further information on this period of scientific development in the Islamicate world. Gutas contextualizes the translation movement in the early Abbasid dynasty

the Islamicate world enjoyed a technological advantage over the medics of Europe: paper. Whereas the scribes of Western Europe relied on expensive and labor-intensive vellum for their books, paper made it cheaper and easier for Islamicate scribes to produce more manuscripts for less cost, which allowed Arabic medical treatises, studies on Galenic medicine, classical philosophy, and commentaries on both to travel more easily across the Mediterranean.<sup>139</sup>

The Greek medical theories that informed Arabic medical developments and later Latin scholarship were almost entirely based on the works of Hippocrates and Galen and their combined scholarship on the theory of bodily humors.<sup>140</sup> Introduced by Hippocrates and expounded and popularized by Galen and later Aristotle, the humoral system of medicine classified all bodily functions and ailments as results of the interaction of the four humors (phlegm, black bile, yellow bile, and blood), and their respective effect on the body's balance of hot and cold, dry and wet. Though the humoral system of medicine was a fairly simple schema in and of itself, it informed hundreds of complex theories surrounding the functions of different parts of the body as well as the hot-cold or wet-dry qualities of the organs, ages, sexes, and so forth. Nearly all medical practice of the medieval era was informed by humoral theory.

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as deliberate, political undertaking of Abbasid rulers to reclaim Greek and Persian texts. Alternatively, George Saliba in *Islamic Science and the Making of the European Renaissance* (Cambridge, MA: MIT Press, 2007), examines this same ninth-century translation movement in terms of a mature scholarly community that often challenged Greek scholarship. While Saliba's work is primarily occupied with astronomy, the implications for the development of Arabic medical scholarship bear consideration.

<sup>139</sup> F. Jamil Ragep, "Islamic Culture and the Natural Sciences" in *The Cambridge History of Science* vol. 2, eds. David Linberg and Michael Shank (New York: Cambridge University Press, 1989).

<sup>140</sup> Vivian Nutton, "Early-Medieval Medicine and Natural Science" in *The Cambridge History of Science* vol. 2, eds. David Linberg and Michael Shank (New York: Cambridge University Press, 1989).



Even the leechbooks and herbals, which lacked articulated theory or diagnostic tools, borrowed prescriptions from classical Latin texts which in turn borrowed from Greek remedies, which were often developed in a humoral understanding of the human body. The Islamicate scholarship of the ninth-twelfth centuries did not re-invent the humoral system of medicine, but expounded upon it, expanded it, blended it with natural philosophy and debated its more complex effects on the body. This intense academic discussion and theoretic discourse is what would define medical discourse in post-Salernitan Europe.

As a port city positioned on the western coast of the Italian peninsula just south of Naples, Salerno was in a perfect position to become one of the primary recipients of Islamicate scholarship as the texts travelled west. However, in the very early days of Salernitan scholarship, Arabic texts were slow to take hold in the Mediterranean.<sup>141</sup> This changed considerably following the work of Constantine Africanus, who almost singlehandedly introduced Arabic medical texts into medieval Europe. Constantine, who lived in the eleventh century, translated a great number of Arabic medical texts into Latin, including the *De febribus* (“On Fevers”) of Jewish-Arabic physician Isaac Israeli (Isha1 al-Isra’ili), as well as Constantine’s most important translation, the *Pantegni* of Haly Abbas (al-Majusi). These texts (the *Pantegni* in particular) would become so foundational to Salernitan medicine that the ideas expressed in Constantine’s translations are often inseparable from the

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<sup>141</sup> Vern L Bullough, *Universities, Medicine and Science in the Medieval West*, (Burlington, VT: Ashgate Publishing Company, 2004), 8.

curriculum at Salerno.<sup>142</sup> It is unclear whether Constantine ever actually taught at Salerno, as he spent much of his life in Montecassino, but his translations of Arabic sources solidified his place as a founding member of Salernitan philosophy. In the twelfth century, as translators rendered more and more works of Arabic scholarship into Latin, a new wave of medical study flourished across Europe, based in the classical medical theories of Galen.<sup>143</sup> By the thirteenth century, theory was in many ways synonymous with medical study, and medical study was paramount to medical practice. If a lowly leech wanted to become a respectable licensed doctor, he would first have to study at medical school and prove his mastery of the humoral theory of medicine.

Aside from Salerno, continental Europe was home to three important medical universities at this time: Montpellier, Paris, and Bologna. Second to Salerno, Montpellier was likely the most highly reputed center of medical education in twelfth century Europe. Even before the school was formally established, John of Salisbury claimed that students who failed in their philosophical studies in Paris moved to Salerno or Montpellier to pursue the study of medicine instead.<sup>144</sup> In 1181, just one year after John of Salisbury's death, Montpellier's growing community of medical masters and students compelled the city's seigneur, William VIII, to grant all medical

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<sup>142</sup> See Charles Burnett, "Translation and Transmission of Greek and Islamic Science to Latin Christendom" in *The Cambridge History of Science* vol. 2, eds. David Linberg and Michael Shank (New York: Cambridge University Press, 1989).

<sup>143</sup> For more information on Salernitan pedagogy, see Mark Jordan, "The Construction of a Philosophical Medicine: Exegesis and Argument in Salernitan Teaching on the Soul", *Osiris* 6 (1990), 42-61.

<sup>144</sup> Vern L. Bullough, "Development of the Medical University at Montpellier" in *Universities, Medicine and Science in the Medieval West*, (Burlington, VT: Ashgate Publishing Company, 1988), 17.

teachers the right to teach regardless of their national origin.<sup>145</sup> Cultural exchange and scholarship was as important at Montpellier as it was at Salerno. Like Salerno, Montpellier was in a favorable geographic location to enjoy influence from a broad range of scholastic influence, from Muslim schools in Spain, Jewish schools in France, and Christian schools like Salerno.<sup>146</sup> However, whereas Salernitan education seems to have strayed further away from ecclesiastic authority, Montpellier's operation grew increasingly connected with the church. By the very beginnings of a formal university, medical instructors were only allowed to teach with the approval of the bishop.<sup>147</sup> However, with this increased ecclesiastic oversight came a more regimented curriculum that bore the marks of the Salernitan medicine and Montpellier's own intercultural background.

In order to earn a medical degree at Montpellier, a thirteenth century bachelor would have to meet a lengthy checklist of requirements: he had to have studied the liberal arts, he had to have studied medicine at Montpellier or somewhere similar for three and a half years, and he would have to have a master attest to his academic qualifications.<sup>148</sup> These requirements met, he would then study at Montpellier for five to six years, working his way through a list of required list of reading during the fall and spring and performing a relatively paltry eight months of applied medical practice, likely completed during summer breaks.<sup>149</sup> The curriculum of Montpellier reflected that of Salerno, and leaned heavily on classical sources, such as Galen and

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<sup>145</sup> Ibid.

<sup>146</sup> Ibid., 18. This particular sentiment is linked with the Jewish writer, Benjamin of Tudela.

<sup>147</sup> Ibid., 19.

<sup>148</sup> Ibid., 20-21.

<sup>149</sup> Ibid., 22.

Hippocrates, as well as the work of Islamicate scholars, such as Avicenna, Rhazes, and Isaac.<sup>150</sup> It is vital to note, however, that while many of these works originated in Greek and Arabic, by the time they reached the students at Montpellier, they were invariably rendered in Latin, a fact emphasized by the heavy reliance on the writing and translations of Constantine. Of these Latin texts, the bachelor was required to explain one book without commentary and two with commentary. Similarly, the hopeful graduate was expected to give three lectures – one on medical practice, and two on medical theory.<sup>151</sup> This lopsided emphasis on theory over medical practice became a hallmark of medical education in this era.

While Salerno and Montpellier were the oldest centers of medical study in Europe, the universities at Paris and Bologna became the archetypal models for medieval universities, and were so similar in their curricula that they may be discussed together.<sup>152</sup> For rhetorical purposes, it will be more productive to study the requirements and curriculum at the University at Paris, as it was, overall, the more influential university in Europe at the time. However, it is important to note that in nearly all cases, whatever texts and practices Paris assigned, Bologna was sure to follow a similar standard.<sup>153</sup>

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<sup>150</sup> Ibid., 22-23.

<sup>151</sup> Ibid., 23.

<sup>152</sup> There is one large and notable difference between the two universities that is interesting, if not entirely relevant to this paper: whereas Paris focused primarily on theory, the medical curricula at Bologna included courses in surgery and anatomy, which even featured human dissections in the fourteenth century.

<sup>153</sup> Bullough, *Universities, Medicine and Science in the Medieval West*, 148. See Michael H. Shank, “Schools and Universities in Medieval Latin Science” in *The Cambridge History of Science* vol. 2, eds. David Linberg and Michael Shank (New York: Cambridge University Press, 1989).

In the thirteenth and fourteenth centuries, Paris was home to the most preeminent theological school in Europe, which made Paris the most preeminent scholastic city at that time. Paris' medical school was largely overshadowed by the university's theological school, but nevertheless, the medical school at Paris helped define one of the most structured curricula in Europe. While Paris adopted almost all of its texts from Salerno, it would eventually surpass its predecessor in influence and would itself become the standard for other universities.

The school at Paris offered explicit and fixed requirements for its students. If a student wished to earn his license to become a practicing physician, he would first have to complete three major steps. First, he would have to earn his bachelor's degree, which consisted of at least thirty-two months of study (not including the summer vacation) during which time he was expected to participate in at least two formal disputes (proposal and defense of a solution to a question) in a master's class, and pass an examination by four masters.<sup>154</sup> Second, after completing his bachelor's degree, the student would study to receive his license. For a medical license, he would need to have attended medical lectures for a total of five and a half years (including the years spent earning his bachelor's degree). If he did not possess a licentiate degree in art, an additional six months was added to this requirement.<sup>155</sup> He had to provide references who could verify that he had completed the residential requirements, and had to have taught courses on four entire books which he had studied under a master: two with commentary, two without. His choices on these

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<sup>154</sup> Bullough, *Universities, Medicine and Science in the Medieval West*, 36.

<sup>155</sup> *Ibid.*, 37.

books were restricted to medical topics and medical authors, with the exception of two works of Aristotle.<sup>156</sup> After meeting these requirements, the bachelor was presented to the Chancellor for conference of a licentiate degree, contingent on the decision of a majority of the teaching masters. Every two years, the Chancellor conferred licentiate degrees to students who had met the necessary requirements. Third and finally, in order to teach and practice medicine, a freshly-minted licensed bachelor would have to wait six months to join the society of medical masters, an enlistment that required him to have taught in Paris for two years, or outside of Paris for two summers.<sup>157</sup>

Earning a medical degree at Paris in the thirteenth and fourteenth centuries involved many long years of study, lecture, debate, and practice – though the last occupied significantly less time in the timeline between bachelor and master. The structure of Paris’ degree requirements is itself indicative of a broader pedagogical revolution taking place across Europe in the middle ages, but the exact curriculum of Paris’ medical school is of far more importance to this paper. There are three surviving booklists which give us an indication of what titles a medical student was required to read, teach, and debate during his days in study: the first dates from the early thirteenth century, the second from the late thirteenth century, and the third from the late fourteenth century.<sup>158</sup> The successive lists depict an evolving lineage of medical scholarship that depended on classical Greek authors such as Galen, Hippocrates, and Dioscorides, as well as prominent Islamicate authors such as

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<sup>156</sup> Ibid.

<sup>157</sup> Ibid. 39.

<sup>158</sup> Ibid., 42-43.

Avicenna, Isaac, Averroes, Rhazes, and, without fail, several works penned or translated by Constantine.<sup>159</sup> The fourteenth century list also contained works compiled or written by authors from around the world: Johannes de Sancto Amando and Peter de Vallibus from Paris, Mesue the Younger (Masawaih al-Mardini) from Syria, Nicholas Myrepsus from Nicaea, Albucasis (Al-Zahrawi) from Al-Andalus, and many others.<sup>160</sup> Despite the fact that Paris assigned long lists of medical books sourced from all over the world from authors of diverse national origins, every single one of the books assigned, without exception, was rendered in Latin.

In Montpellier, Paris, and Bologna, all books taught to medical students were written in Latin. Harping on the exclusive use of Latin in the medical curricula of medieval Europe may seem like an exercise in redundancy, but pointing out the obvious in this case helps highlight the pervasive, indomitable power of language over medicine. The use of Latin as a universal (or at least, continental) linguistic standard is not in itself surprising. Bologna and Paris, like Montpellier, operated under secular as well as ecclesiastical oversight, and Latin had long been the language of the Christian church in Europe, to say nothing of its administrative use on the local level. Latin was perhaps the only natural choice of language to standardize medical scholarship across the European continent, and the translation of Arabic and Greek sources into Latin undoubtedly played a major role in facilitating medical study across the whole continent. However, since Latin functioned as the language of the clergy and, later, the university-educated elites, it was also a significant limiting

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<sup>159</sup> Ibid.

<sup>160</sup> Ibid., 43-44.

factor that delineated what medicine was “right,” or taught at universities, and “wrong,” or relegated to the fringes of superstition. We have seen from the Old English manuscripts themselves that the Anglo-Saxon leechbooks, particularly that of Bald, contain many strong rational elements and efficacious treatments that would have been salutary to medieval patients. However, the hegemonic use of Latin in the medical community made the texts utterly useless to continental European scholastics. One last question remains, however: were the Anglo-Saxon leechbooks useful to medics from England?

### *The Medical Schools at Oxford and Cambridge*

While the schools at Salerno and Montpellier grew organically from the study of medicine within each city, and the universities at Paris and Bologna developed rigid, independent degree paths toward medical licenses, England’s medical schools lagged behind. No one in the modern era would ever classify Oxford or Cambridge as backwater schools, but in the middle ages, studying at either of England’s medical schools was about as backwater as a university physician could be. England never had the chance to enjoy similar medical stature with Paris or Montpellier, and had been relying on imported Latin texts ever since the Norman conquest.<sup>161</sup> While England grappled with the Normans’ administrative change, the schools in Italy and France had already begun taking shape. Later on, as the schools at Oxford and Cambridge respectively rose to prominence, English subservience to continental medical research continued to shape the curriculum.

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<sup>161</sup> See section III.2 of this paper, ‘English medicine after 1066’, pages 44-46.



Compared to its continental counterparts, Oxford had practically no medical students. It is difficult to document any kind of medical study at Oxford until the thirteenth century, and is then restricted to Merton College, where it was not even formally allowed.<sup>162</sup> The only reference available for medical study within Merton College dates to 1284, when Archbishop Peckham complained that the scholars there were neglecting their divine studies to read medicine, which they passed off as philosophical study.<sup>163</sup> The first solid evidence of Oxford's medical school does not appear until the fourteenth century, where we find record of several Oxford graduates who earned medical degrees. Curiously, many of these graduates held degrees in other fields, particularly the arts and theology.<sup>164</sup> Even the physician Nicholas de Tingewick, Oxford's first known medical lecturer and physician to Edward I, who would lend his name to one of Oxford's dedicated medical buildings, held not only a degree in medicine but a degree in theology as well.<sup>165</sup> This tendency of medical graduates to earn additional degrees may be related to the fact that Oxford itself could not support the number of doctors produced by Montpellier or Paris. As was the case in continental cities, medical graduates at Oxford were only licensed to practice medicine in the city from which they earned their degree, namely, Oxford proper.

Whereas Paris, Montpellier, and Bologna were all large cities where opportunities

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<sup>162</sup> Bullough, *Universities, Medicine and Science in the Medieval West*, 64. See also n. 19 on this page and the corresponding paragraph, in which Bullough relates the contents of a letter dated 31 August 1285. In it, Archbishop Peckham bemoans the fact that some students at Merton study medicine and attempt to pass it off as philosophy so that they can work it into their curriculum, despite the fact that the curriculum and statutes of the college did not allow the study of medicine.

<sup>163</sup> Vern Bullough, *Universities, Medicine, and Science in the Medieval West*, 64.

<sup>164</sup> Ibid., 65-66.

<sup>165</sup> Ibid.

were growing with the urbanized population, Oxford was little more than a large village in the fourteenth century, and it did not allow more than a handful of medical students each year.<sup>166</sup>

The medical school at Oxford took a backseat to the faculty of arts and theology, perhaps for the practical reasons of Oxford's size and the needs of its relatively small population. The demure size and importance of Oxford's medical school made it dependent on the models of larger, more important universities, particularly that of Paris. In the medical school and across the entire university, Oxford took most of its curricular cues from Paris, and in 1246 Pope Innocent IV declared that no one should be allowed to teach in any faculty unless they adhered to Parisian standards.<sup>167</sup> The English clergy warned Oxford to be careful to follow Paris, and it is likely that the medical faculty would've been required to follow suit and copy their French counterparts.<sup>168</sup> As such, the titles found in Oxford's medical lectures were similar to those found in Paris and were based on the traditions of Salerno, featuring Galen, Hippocrates, Issac, Haly Abbas, and other authors from both Europe and the middle east.<sup>169</sup> One notable addition was the *Rosa medicinae* of Englishman and physician John of Gaddesden, perhaps the only known medical graduate of Oxford who ever rose to prominence in the middle ages. John's unique position in the history of English medicine deserves examination, and we will consider the spirit of his work in the following section. First, however, we will look

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<sup>166</sup> Ibid., 73.

<sup>167</sup> Ibid., 67.

<sup>168</sup> Since Paris led the intellectual pack of Europe at the time, it is probable that they were happy to do so.

<sup>169</sup> Bullough., *Universities, Medicine and Science in the Medieval West*, 68. Nicholas of Salerno is one such author.

briefly at Oxford's peer and England's only other medical school at the time, Cambridge.

It is difficult to say much about the medical school at Cambridge that has not already been said about the medical school at Oxford except to say that while it also followed Parisian curricular standards, it had a tendency to follow outdated ones.<sup>170</sup> Like Oxford, Cambridge did not produce a great number of medical graduates, and the records on those who did earn medical degrees are few and far in between. Also like Oxford, those who studied medicine may have done so concurrently with other studies, earning degrees in divinity and theology, and perhaps even completing their courses in arts – which were meant to be a prerequisite to any medical study – at the same time as their medical courses.<sup>171</sup> The texts taught at Cambridge can be found in the statutes of the university and in booklists. The statutes, which date to around the end of the fourteenth century, recommend a large helping of Galen, with additional texts from Isaac, Philaretus, Theophilus, and other classic authors, but lack the expected appearance of Dioscorides, Hippocrates, and other texts popular in Europe. Vern Bullough has noted that the books detailed in the statutes closely resemble booklists found for Oxford in the twelfth century. That Cambridge had not expounded upon the list by the end of the fourteenth century may indicate that it was far behind the curve of medical scholarship.<sup>172</sup> In later library catalogs of the fifteenth century, the writings of Hippocrates, Averroes, Avicenna, and more contemporary continental

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<sup>170</sup> Bullough, *Universities, Medicine and Science in the Medieval West*, 164. University statutes describe the requirements for various degrees. A section on the required texts for a medical degree is dated to around 1398.

<sup>171</sup> Ibid., 78-81.

<sup>172</sup> Ibid., 79.

scholars appear, indicating that the medical students had begun to consult a fuller run of medical books. However, the lag in the adoption of these commonly accepted texts indicates that Cambridge, like Oxford, was not fully aware of the medical norms of Paris and its peers. Medical study at either English school would not pick up until further into the fifteenth century, when Parliament restricted the practice of medicine in England to physicians approved by either school.<sup>173</sup>

The Latin curricula of both Oxford and Cambridge were, like those of all Europe, based primarily in the humoral Greek medical theory of Galen and Hippocrates, supplanted by the influx of Islamic synthesis and commentary that flowed into the western Latin world through Constantine and other European translators. However, in addition to the work of Greek, Arabic, and continental scholars, English schools also utilized the work of English scholars. John of Gaddesden, as has been mentioned, featured in the booklists of his alma mater at Oxford. By 1341, Cambridge students also had access to the work of Gilbertus Anglicus, who was perhaps the most famous English physician of the middle ages.<sup>174</sup> Though not explicitly mentioned in the booklists of the English schools, the thirteenth century also produced the English physician Bartholomeus Anglicus, who wrote an extensive overview of the natural world, including medicine. Speculatively, it would make sense that, if anyone in post-Norman England were to incorporate medicine from the Anglo-Saxon leechbooks into their work, it would be an Englishman, who may have found the Old English texts more accessible than his continental neighbors.

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<sup>173</sup> Ibid., 82.

<sup>174</sup> Ibid., 80.

Whether these authors knew about the leechbooks is impossible to prove, but looking at the content of their scholarship may shed light into how English scholars preserved or erased England's own medical history in the age of medical universities.

*Gilbertus Anglicus, Bartholomeus Anglicus, and John of Gaddesden*

The impact of Gilbertus Anglicus, Bartholomeus Anglicus, and John of Gaddesden on the history of English medicine was observed by Stanley Rubin in his 1974 *Medieval English Medicine*, where he concluded that the works of these three authors “demonstrate that a more rational medical practice was evolving,” based largely on the reintroduction of classical texts through Arabic translation.<sup>175</sup> Even though Rubin agreed with Talbot that the Anglo-Saxons had a stronger Greek medical basis than many suspected, he would not agree with the bolder claims of M. L. Cameron in the 1980s and 90s. For the purposes of understanding Rubin's argument and whatever lingering preservation or dismissal these three authors owed to their Anglo-Saxon forefathers, it will be useful to briefly consider each physician's work and their response (or lack thereof) to the Anglo-Saxon tradition. For simplicity's sake, this paper will mimic Rubin's order and will address the three chronologically by the date of their primary publications.

Bartholomeus or Bartholomew Anglicus was a member of the Franciscan order and though he was born in England, by 1225 he was teaching medicine at the

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<sup>175</sup> Rubin, 196. Interestingly, Rubin here uses the word “rational” more in reference to observation and experience-based medicine, but still links this practice to the introduction of Greek medical theory via Latin translations of Arabic texts. Rubin is, of all authors in the field, the one who uses “rational” in the broadest and most fluctuating definition.

University of Paris. Around 1230-1250, Bartholomew published his work *De proprietatibus rerum*, 'Concerning the properties of things', an exhaustive survey of the natural world that attempted to categorize and discuss a dizzyingly large array of subjects. His work, like the contemporary work of Gilbertus Anglicus, followed in the time-honored tradition set by classical authors such as Pliny the Elder, who became a wildly popular and widely cited medical authority because of one portion of his encyclopedic writings on the natural world. Bartholomew's *De proprietatibus*' seventh book addressed the topic of medicine. In many ways, Bartholomew's writing did not so much offer exhaustive solutions to medical problems as it sought to explain the nature behind various diseases. While Bartholomew did relate a great deal of practical medical advice, he detailed few medicinal recipes. The majority of his work is theoretical, and reads as a digest of the most prevalent and popular medical theories of his day, owing to the same great minds that dominated the curricula of universities across Europe. In this seventh book on medicine, Bartholomew cites Hippocrates by name eleven times, Galen fifteen times, Isaac eight times, and Constantine Africanus he cites an astounding ninety-six times. Given that Constantine's translations of Arabic medical texts were fairly new when Bartholomew was writing, his enthusiasm is understandable. However, it also underscores his disregard for non-Salernitan, non-classical medicine. Dominated by his Salernitan scholarship and predominantly concerned with theory, Bartholomew's *De proprietatibus* is so different from the Anglo-Saxon leechbooks that the two can scarcely be compared. It is somewhat easier to search for similarities and differences in texts with large amounts of recipes, such as the *Compendium Medicinae* of Gilbert Anglicus.

Born in the late twelfth century to a prominent Anglo-Norman family, Gilbertus Anglicus or “Gilbertus Aquila” Gilbert Eagle, studied medicine likely studied medicine at Paris or Salerno, and published his well-known *Compendium Medicinæ* around 1240.<sup>176</sup> Though there were precious few English physicians who rose to fame, Gilbertus Anglicus undoubtedly surpassed them all, and even merited a mention in Geoffrey Chaucer’s *Canterbury Tales* alongside such lofty names as Dioscorides, Hippocrates, Haly Abbas, Galen, Avicenna, Averroes, Constantine, and others.<sup>177</sup> His inclusion among the mainstream pantheon of medics should give some indication to the content of his *Compendium* to which he owes much of his fame and influence. The *Compendium* was one of the longest and most comprehensive medical texts available in Europe at the time. It was also one of the first medieval medical encyclopedias, along with that of Bartholomeus. As a compilation, Glibertus’ work was almost entirely derived from other sources, including classic Greek works such as Galen and Hippocrates, as well as works taken from Arabic sources, usually through the translation of Constantine Africanus. Gilbertus’ relatively early adoption of Islamicate scholarship in a full encyclopedic text is another likely reason for the *Compendium*’s popularity.<sup>178</sup> Whereas the Anglo-Saxon leechbooks offered

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<sup>176</sup> Faye Gets, *Medicine in the English Middle Ages*, (Princeton: Princeton University Press, 1998), 39-40.

<sup>177</sup> Geoffrey Chaucer, *The Canterbury Tales*, ed. A. C. Cawley, (New York: Alfred A. Knopf, Inc., 1992), 14. “Wel knew he the olde Esculapius, / And Deyscorides, and eek Rufus, / Olde Ypocras, Haly, and Galyen, / Serapion, Razis, and Avycen, / Everrois, Damascien, and Constantyn, / Bernard, and Gatesden, and Gilbertyn.”

<sup>178</sup> See Getz, *Healing & Society in Medieval England*, lvi and notes. Gilbertus’ popularity reached even to the seventeenth century. As described by Getz, in 1672, a Mr. Henry Stubbe praised the application of old English medical practice for the treatment of smallpox, claiming that he cited John of Gaddesden and Gilbertus Anglicus with the same readiness that he cited Avicenna.

unannotated recipes, Gilbertus honors the zeitgeist of post-Salernitan Europe with discussion of theory and diagnosis in addition to his recipes. His discussions on these topics remain in line with the mainstream humoral theories of the day, and he classifies diseases in terms of hot, cold, moist, and dry humors. However, it was not Gilbertus' humoral theory, but his list of recipes that gave his text lasting popularity.

Much like any other medical textbooks of the medieval era (including the leechbooks) Gilbertus' *Compendium* is arranged in a head-to-toe fashion with the exception of the opening chapter on fevers, which he considers first based on the fact that they affect the whole body.<sup>179</sup> The rest of the book follows through and offers not only diagnostic tools and theories of how illnesses came about, but remedies to address them. Nearly all of the remedies can be traced to Greek or Arabic sources, usually through Latin intermediaries such as Constantine. The recipes that Gilbertus offers remained the most popular part of his work, and the recipes from the last six chapters of the *Compendium* were translated from Latin into English and edited into a Middle English edition near the end of the fourteenth century, which seems to have enjoyed popularity not only in universities but with a more general vernacular audience.<sup>180</sup>

Searching for explicit Anglo-Saxon content in the *Compendium* is difficult. Stanley Rubin believed that the presence of charms and other superstitious material

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<sup>179</sup> Getz, *Medicine in the English Middle Ages*, 40.

<sup>180</sup> Ibid., 42. See Faye Getz, *Healing & Society in Medieval England: A Middle English Translation of the Pharmaceutical Writings of Gilbertus Anglicus*, (Madison, WI: University of Wisconsin Press, 1991). See also Getz "Charity Translation, and the Language of Medical Learning in Medieval England," *Bulletin of the History of Medicine* 64 no. 1 (1990), 1-17, for an analysis of the revival of the English language in the 14<sup>th</sup> century and the expansion of medical audiences in England from Latin university elites to vernacular readers.



(such as the recommendation that bloodletting not be attempted during certain days – see *Leechbook* bk II, section LXXII,) indicated that Gilbertus must have drawn from the Anglo-Saxon tradition, but the *Leechbook* itself attributes these recommendations to Roman practice.<sup>181</sup> It is difficult to prove that Gilbertus drew his more superstitious ideas from the Old English leechbooks and not from other sources. Voigts and Van Arsdall have reasonably argued that the charms and spells found in the Old English leechbooks owed from a broader tradition of superstition found across Europe. A search for more explicitly Anglo-Saxon material, particularly from the prominent *Leechbook*, turns up considerably fewer similarities. A search of the *Compendium* for something resembling Bald's eyesalve, for instance, turns up not the detailed recipe recounted in the *Leechbook*, but far simpler remedies involving similar ingredients but none of the detailed processes: the application of pig's gall, or a plaster of lily root and garlic, or copper salts (vinegar stood for three days in a brass vessel) warmed with honey.<sup>182</sup> These recipes can be linked to the recommendations of Dioscorides or other sources, and are simple when compared to the Anglo-Saxon recipes. Other distinctly Anglo-Saxon leechdoms, such as the remedy for lung disease prescribed by the Anglo-Saxon physician Dun, find no analog in Gilbertus. Therefore, while it is almost certain that the *Compendium* shared some common sources with Bald's *Leechbook*, it is unlikely that Gilbertus was drawing on Anglo-Saxon leechbooks as sources – or if he did, he omitted some of their more unique recipes.

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<sup>181</sup> Cockayne, *Leechdoms*, vol. 2, 146-149

<sup>182</sup> Getz, *Healing & Society in Medieval England*, 62.

Of the three medieval English physicians we will consider here, John of Gaddesden has the distinction of being the first major English physician to have completed his medical studies at Oxford. Born in 1280, John attended Merton College at Oxford, where he earned a bachelor, a master of arts, and a master of medicine, and was licensed to practice medicine by 1309. Before going back to university to earn his bachelor's in theology, John wrote his medical treatise, the *Rosa Medicinæ*<sup>183</sup>, in 1314.<sup>184</sup> The purpose and content of the *Rosa* was similar to the *Compendium* of Gilbertus, which had been available and popular for about seventy years by the time Gaddesden was writing, but Gaddesden himself saw his work with the *Rosa* as superior to anything Gilbertus had produced, and indeed, superior to all other medical texts. In the preface to the *Rosa*, John lauds himself: "as the rose overtops all flowers, so this book overtops all treatises on the practice of medicine, and it is written for both poor and rich surgeons and physicians, so that there shall be no need for them to be always running to consult other books, for here they will find plenty about all curable disease both from the special and the general point of view."<sup>185</sup> A lofty claim for any author, let alone a medic from one of Europe's most remote and least famous medical schools. Nevertheless, John's text became immensely popular and appeared in the curricula of medical schools across Europe, and even earned a place alongside his countryman Gilbertus in Geoffrey Chaucer's list of master physicians.<sup>186</sup> The popularity of John's *Rosa* is reminiscent to that of Gilbertus' *Compendium*.

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<sup>183</sup> Also goes by the title "*Rosa Anglica*".

<sup>184</sup> J. Pearn, "Two medieval doctors: Gilbertus Anglicus (c1180-c1250) and John of Gaddesden (1280-1361)" in *Journal of Medical Biography*, vol. 21 issue 1, 2013, 4-5.

<sup>185</sup> H. P. Cholmeley, *John of Gaddesden and the Rosa Medicinæ*, (Oxford: Clarendon Press, 1912), 25.

<sup>186</sup> Chaucer, *Canterbury Tales*, 14. "Gatesden".

Like Gilbertus, John compiled the advice from the medieval medical masters of his day: Avicenna, Galen, Hippocrates, Haly Abbas, Constantine, and others. Like Gilbertus and Bartholomew. John deferred to these authorities in nearly all medical matters. Naturally following from his deference to these medical minds, John spent much of his book discussing medical theory and diagnosis. Even in sections where he prescribes treatments for disease, he first gives the definition, causes, and diagnostic tools for the disease at hand, making his text useful for academic physicians as well as practicing medics. While Bartholomew gives specific remedies only seldom, John offers a dizzying array of cures, drugs, and recipes over the course of his book. Most of them he relates to the teachings of one of the great masters, though many John recommends on account of his personal experience with medicine. Between his expected sourcing of medieval medical greats and the more innovative additions of his personal experience, there is no real part of John's writing that could be attributable to Anglo-Saxon influence. The parts of the *Rosa* that resemble the leechbooks the most closely are those sections where John recommends the use of magical charms to cure particularly intractable diseases, but even these charms, upon close examination, do not resemble those of the Anglo-Saxons. For instance, for toothache, short of destroying the tooth, John recommends various charms:

Again, write these words on the jaw of the patient: In the name of the Father, the Son and the Holy Ghost, Amen. + Rex + Pax + Nax + in Christo Filio, and the pain will cease at once as I have often seen. Again, whosoever shall say a prayer in honour of St. Apollonia, Virgin, (Feb. 9) shall have no pain in his teeth on the day of the prayer. The same thing is said of St. Nicasius the martyr (Oct. 11). Again, draw characters on parchment or panel and let the patient touch the aching tooth with his finger as long as he is drawing, and he is cured. The characters made in the shape of running water by drawing a

continuous line, not straight but up and down. Three lines are to be drawn in the name of the Blessed Trinity and this is to be done often. Again[...]<sup>187</sup>

John goes on to recommend alternate treatments: the beak of a magpie hung from the neck, signing the tooth with the holy Cross at mass on Sunday, and pricking the offending tooth with a needle which has also pricked a pill bug.<sup>188</sup> These charms, be they Latin, Christian, or otherwise, do not appear in any of the leechbooks. That being said, considering that the leechbooks themselves recommend such unappetizing remedies as chewing pepper<sup>189</sup> and submerging the tooth in herbal tinctures held in the mouth near boiling (“as hot as thou hottest may”),<sup>190</sup> John’s charms may fall into that same category of the charms of the *Lacnunga* and *Leechbook III*: noble, if misguided attempts to solve a painful and intractable malady.

Stanley Rubin believed that Gilbertus Anglicus, Bartholomeus Anglicus, and John of Gaddesden were the first precipitators of English medicine that “emphasized clinical observation and practice, [and] was comparably superior to the rather debased and corrupted Greek medicine which was all the Anglo-Saxons and their Norman successors had available.”<sup>191</sup> While Rubin’s overall view of Anglo-Saxon medics was generous for his time, after the work of Cameron and Harrison, it is safe to say that Rubin was not quite as generous as he perhaps ought to have been. This paper is not attempting to take issue with Rubin’s assertion that Gilbertus, Bartholomew, and John were innovative in their own ways. However, Rubin is wrong to claim that their

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<sup>187</sup> H. P. Cholmeley, *John of Gaddesden and the Rosa Medicinæ*, 49.

<sup>188</sup> *Ibid.*, 49-50.

<sup>189</sup> Cockayne, vol. 2, 311. (*Leechbook III*)

<sup>190</sup> *Ibid.*, 51. (Bald’s *Leechbook*)

<sup>191</sup> Rubin, *Medieval English Medicine*, 207-208.

emphases on observation and personal practice (as is especially the case with Gilbertus and Gaddesden) was unique in England by the thirteenth century. As Cameron, Harrison, Van Arsdall, and others have adequately demonstrated, Anglo-Saxon medics dealt with their sources critically and were developing new medicines based on their own observations and experiences up to three centuries before any of these three university-educated medics. The difference, it seems, is that Gilbertus, Bartholomeus, and John had a firmer and more articulate grasp on classical theory thanks to their post-Salernitan educations.

This very brief review of the works of these three English medics is in no way intended to minimize the importance of their contributions to medieval medicine, and can draw no conclusions on the efficacy of their various recommendations. The work of these authors and of other medieval physicians have been dissected and analyzed by other historians far more satisfactorily than the scope of this paper allows. The purpose of this review has been to demonstrate the utter lack of influence that the Anglo-Saxon leechbooks had on medieval medicine, specifically in the work of native English physicians who often studied within England itself. As three of the most prominent medieval English physicians, these authors' negligence of Anglo-Saxon knowledge indicates that whatever efficacious practices evolved from a written medical tradition in pre-Norman England, later physicians, even native Englishmen, either did not study them or did not consider them applicable to contemporary medical concerns. The question remains: why?

## V. Conclusion: Linguistic Orphans

One possible explanation for the erasure of Anglo-Saxon medical knowledge has already been mentioned: the linguistic upheaval that followed the Norman Conquest and rendered the Old English leechbooks outdated linguistically. Another possibility is that Anglo-Norman physicians, whether they could read Old English or not, knew that the leechbooks were sourced from classical texts – a fact which would have been particularly obvious in the case of the *Old English Herbarium* – and, given the opportunity to consult newer Latin translations of the same texts, some with cutting-edge commentary from Islamicate scholars, opted to abandon the Anglo-Saxon texts. There is a third possibility that is an extension of the second, and it is that because English medical schools were utterly dependent on the curricula established in Paris, they were equally dependent on the use of Latin texts. Latin and its unilateral, exclusive use in the universities of Europe may not have kept physicians from consulting vernacular works, but it certainly drew a linguistic line in the sand between the mainstream of accepted medicine and medicines found on the fringes – the medicine of pagans, of unlicensed leeches, of women. This linguistic division would have been necessarily hazy, and some medics, English or otherwise, were sure to have known about the existence of or even consulted the leechbooks. But just as the hazy beginnings and boundaries of Salerno produced the centerpiece of medieval medicine, so the de facto dominance of Latin demarcated those texts which would influence scholarship and those which would not.

It is important to remember that many of the most influential texts taught in medieval universities were not originally written in Latin, but were instead composed

in other languages, usually Greek or Arabic. Particularly in the case of Islamicate scholars, the momentum of medieval learning, be it medical or otherwise, was dependent on schools of translators across Europe and elsewhere. Why, then, were some texts translated while others were not? For one thing, as has been previously mentioned, Arabic writers often had access to paper, which made the dissemination of their work technologically far easier than authors who remained bound to parchment. Far more importantly, leaving all content aside, Arabic had the benefit of life that Old English did not. By the time significant numbers of translations began to inform the curricula of European universities, Arabic scholarship was flourishing and, through Arabic, Greek texts previously neglected or forgotten by European scholars were re-entering the continental consciousness. Old English, on the other hand, had been choking under the foot of French rule for several centuries by the same time, and English as a living language had evolved to Anglo-Norman, and had begun making turns into what we know as Middle English. For this linguistic weakness alone, there is no circumstance where a medieval scholar, even an English one, would have advocated for the translation of an Anglo-Saxon text into Latin when he could devote his efforts into procuring newer, more popular Latin texts.

The medical dependence on Latin was likely the most powerful factor in the erasure of Anglo-Saxon medicine. Though the exact context of the leechbooks is unique, the quiet elimination of knowledge by the hegemony of Latin over medical authority and the growing requirement of a university education is well known in other circles of medieval medical study. Monica Green, one of the foremost scholars of medieval medicine, particularly medieval women's medicine, has observed Latin

as one of the primary agents in the “masculine birth” of gynecology and obstetrics in the middle ages and the exclusion of women from the medical care of their own bodies. In her 2008 *Making Women’s Medicine Masculine*, she cites women’s illiteracy rates – particularly in Latin – as a major factor in the progressive ejection of women from the professions of gynecology and obstetrics, a field which had been historically (and understandably) dominated by women.<sup>192</sup> However, the questions of literacy and language are not confined to the subject of women’s medicine. Green writes:

Studies of medical readers and writers traditionally focused on university physicians whose literacy and Latinity need never be questioned. [...] Yet thus far there has been no systematic concern to document how literacy or the lack of it may have set up more or less impermeable barriers in the transmission of medical knowledge nor how literacy may have played a role in the process of professionalization.<sup>193</sup>

Though Green’s focus on women’s medicine in the later medieval and early-modern is somewhat removed from the Anglo-Saxon leechbooks, scholars of early medieval vernacular medicine should take cues from Green’s observations on medicine. As she discusses far more eloquently in her book, female involvement in gynecology faded not because female physicians were bad practitioners, but because male, Latin-educated, university-licensed doctors defined what medicine was correct in their day. Likewise, the innovations of Anglo-Saxon leeches did not fall into disuse because their cures did not work. Rather, their vernacular language fell outside of the Latin

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<sup>192</sup> Monica H. Green, *Making Women’s Medicine Masculine : The Rise of Male Authority in Pre-Modern Gynaecology*, (Oxford University Press, 2008), 21. It should be noted that high female illiteracy rates, especially in Latin, were propelled by the fact that women were not allowed to attend university.

<sup>193</sup> *Ibid.*, 10-11.



medical cannon that crystalized in the post-Salernitan universities of Europe. To borrow Green's phrasing, it may be beneficial for historians of vernacular medical knowledge to ask how Latin, or the lack of it, may have set up more or less insurmountable barriers in the preservation of medical knowledge across cultures and over centuries

It is an interesting, if perhaps a fruitless intellectual exercise to imagine what might have become of Bald's *Leechbook* and its peers if they had been compiled in Latin rather than in Old English. If the monks of Alfred's day hadn't been quite so unskilled in Latin, if Alfred hadn't advocated for translation into the vernacular, would the Anglo-Saxons' knowledge have survived into the medical canon of later centuries? Would they, perhaps, have made it in bits and pieces into Oxford, Cambridge, even Paris? Of course, it is entirely possible that without Alfred's reforms, the likes of Bald's *Leechbook* would have never existed. However, one must wonder if, had Bald or Cild written in Latin instead of their own language, future physicians might not have forgotten the careful innovations developed by their forebears: the reorganized and annotated *Herbarium*, the remedies of Oxa and Dun, and the curiously potent eyesalve that has only recently re-emerged some one thousand years later.

It is a sad irony that the Old English language itself probably contributed to the neglect and ultimate forgetting of the *Leechbook*. Ever the patron of education and knowledge, King Alfred no doubt had the best intentions at heart when he encouraged English scholars to translate texts from Latin into English "that all the youth now in England of free men [...] be set to learn [...] until they are able to read English

writing well.”<sup>194</sup> Alfred never intended vernacular learning to overshadow knowledge of other languages, and longed for the day when English monks would again be well-versed in classical languages such as Latin.<sup>195</sup> However, while their vernacular language empowered the Anglo-Saxons to develop new medicines, improve upon classical texts, and put practical recipes in the hands of experienced everyday leeches, it also pinned their recipes into a vulnerable position linguistically. The linguistic shift that came with the Norman Conquest created this weakness first, changing the textual landscape and linguistic trajectory of English itself. Over time, even at home, the leechbooks’ language became obsolete. The Latin medical universities of continental Europe followed suit later with their own decisive blow. The establishment of Latin as the only academically and professionally acceptable language of medicine left no room for vernacular innovation, and nullified whatever non-Latin scholarship survived from times past. Cut off from mainstream medical education for its lack of Latin and cut off from its cultural heirs for its use of a dying language, Bald’s *Leechbook* was rendered a linguistic orphan. Unwilling to revisit a vernacular document when newer, ostensibly better Latin sources were available, later scholars shelved the *Leechbook* alongside its linguistic siblings in the halls of intellectual oblivion, where it would remain for another one thousand years under the persistent notion that its value was primarily one of curiosity; a literary souvenir left over from an age of ignorance.

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<sup>194</sup> King Alfred, “Preface to St. Gregory’s *Pastoral Care*”, 220. Truncated for brevity.

<sup>195</sup> Ibid. In the following lines, Alfred recommends that after learning English, the “youth” ought to be taught increasingly in Latin.

Cockayne, Singer, Bonser, and others share a dichotomous place in the history of the *Leechbooks*. They have simultaneously reinforced the millennium-long assumption that the Anglo-Saxon leechbooks have nothing practical to say, but also brought these texts back to life by reasserting them into the modern historical consciousness. If it were not for Cockayne, it is unlikely that the discussion surrounding these documents would have ever expanded as rapidly or as fervently as it has, and it is uncertain whether thoughtful minds like Talbot, Cameron, or others would have re-examined the rationality of this long-neglected corner of medical thought. Now, however, science is prodding history with the proverbial hot poker. Freya Harrison and her team at Nottingham were not hesitant or uncertain in their conclusions on the efficacy of Bald's eyesalve, and whether or not historians are interested in the specific science of medieval medicine, the proven practicality of this single recipe should compel historians to carefully reconsider other vernacular medieval medical texts that may bear more rational value than historically thought. Armed with analytical tools and arguments such as those employed by Monica Green to analyze the state of women's medicine in the middle ages, historians ought to revisit medical texts long studied as literary curiosities and consider them not only for who wrote them, who read them, and what they say, but why peoples of the past chose to forget them.

In the case of the Anglo-Saxons, language seems to have played a primary role in the erasure of innovative medical practice developed over the centuries of early England. Language might likewise play a role in the forgetting of other useful vernacular medical texts, particularly those surviving under the dominance of Latin.

Such a suggestion may seem overly optimistic, considering that early peoples attempted to solve their problems more often than not with prayer and magic. However, Bald's eyesalve may be something of a parable, a case study not only in oblivion, but the persistence of prejudiced memory. Just because every scholar for nine centuries is convinced that something is barbaric because of the place, time, and language of its composition does not mean it does not work. Important things, functional things, helpful things, are forgotten every day. Sometimes, it takes a thousand years to remember them.

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