FIN’ AMORS, ARABIC LEARNING, AND THE ISLAMIC
WORLD IN
THE WORK OF GEOFFREY CHAUCER

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by

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This thesis examines the influence of Arabic learning, in Latin translations, on Chaucer’s oeuvre. That Chaucer drew on Arabic sources has long been acknowledged by Chaucerians, but there has been little scholarly engagement with them, particularly in relation to his highly technical, diagnostic concept of *fin’ amors*. This study demonstrates Chaucer’s portrayal of *fin’ amors* is informed by Arabic learning in the related fields of medicine, natural philosophy, astrology and alchemy, disseminated through Latin translations from the Iberian Peninsula in particular. This study demonstrates that whilst Chaucer has the utmost respect for the scholarly achievements of the Islamic world, he adopts a condemnatory attitude toward the religious milieu that gave birth to these achievements, grounded in the contemporary context of the later crusades. Chapter One considers the influence of Arabic medical texts on Chaucer’s diagnosis of *amor hereos*, love as a life-threatening illness, in *Troilus and Criseyde* and the Knight’s Tale. Chapter Two examines Aristotelian natural philosophy and the effect of the 1277 Condemnations at the University of Paris on the genesis of love as a cerebral illness. Chapter Three turns to the diagnostic aspect of Arabic astronomy evinced in the *Treatise on the Astrolabe*, focusing on judicial astrology and saturnine melancholia in the Knight’s Tale. Chapter Four concentrates on the technical transmission of Arabic alchemical sources in the Canon’s Yeoman’s Tale, which act as a metaphor for *fin’ amors*. Chapter Five examines Chaucer’s dichotomous attitude toward Arabic learning and Islam as a religion.
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NOTE ON TRANSLITERATION

All Arabic terms follow the *International Journal of Middle Eastern Studies*’ transliteration System for Arabic, Persian and Turkish, because of its simplicity and ease of understanding for a non-Arabist reader, apart from Arabic quotations which remain as they appear in context in cited works. All Arabic terms, including names, will be kept in the Arabic original and transliterated fully, apart from ‘Abū ‘Ali Husayn ibn Abdullah ibn Sīna; Muhammad ‘Abū al-Wālid ibn Ahmad ibn Rūshd; Ibn al-Haytham; ‘Ali ibn al-‘Abbās al-Majūsi and Muhammad ibn Umail al-Shaikh who will be referred to as such in the first instance and thence after in their Latinised forms; Avicenna, Averroes, Alhazen, Haly Abbas and Senior Zadith, respectively. The Arabic definite article will remain as *al-* (‘the’) throughout.

*al-* definite article (‘the’)
- ‘ refers to the letter َ (‘ayn’)
- ’ refers to the letter ُ (‘hamza’)
- j refers to the letter ﺟ (‘jeem’) as in the English term ‘jam’
- ā long vowel referring to long ا (‘alif’) or ى (‘alif maksura’)
- ū long vowel referring to ﻉ (‘waw’)
- ī long vowel referring to ی (‘yaa’)

All Medieval names follow the form given in the *International Medieval Bibliography* and all Middle English terms are given in the original. Biblical quotations remain as they appear in context in cited Latin works. All other Bible quotations in Latin are taken from *Biblia sacra iuxta vulgata versionem*, ed. Robertus Weber *et al.*, 3rd edn (Stuttgart, 1983). All Bible quotations in English are taken from the Douay-Challoner translation of the Vulgate.
ABBREVIATIONS

AB  Art Bulletin
AH  Art History
AHDLMA  Archives d’histoire doctrinale et littéraire du moyen âge
AHR  American Historical Review
AnB  Analecta Bollandiana
ASNSL  Archiv für das Studium der neueren Sprachen und Literaturen
ASQ  Arab Studies Quarterly
BBSSMF Bullettino di bibliografia e di storia delle scienze matematiche e fisiche
BEC  Bibliothèque de l’école des chartes
BHM  Bulletin of the History of Medicine
BHR  Bibliotheque d’humaniste et Renaissance
BPM  Bulletin de philosophie médiévale
BSMES  British Society for Middle Eastern Studies
CHR  Catholic Historical Review
CL  Comparative Literature
CN  Chemical News
CR  Chaucer Review
CUP  Chartularium Universitatis Parisensis, ed. H. Denifle and E. Chatelain, 4 vols (Paris, 1889)
DS  Dante Studies
EETS  Early English Text Society
EHR  English Historical Review
ER  European Review
ESM  Early Science and Medicine
FZPT  Freiburger Zeitschrift für Philosophie und Theologie
HR  Hispanic Review
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<th>Abbreviation</th>
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<tr>
<td>HTR</td>
<td>Harvard Theological Review</td>
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<tr>
<td>IJMP</td>
<td>International Journal of Modern Physics</td>
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<tr>
<td>IR</td>
<td>Iranian Studies</td>
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<tr>
<td>JAL</td>
<td>Journal of Arabic Literature</td>
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<td>JAOS</td>
<td>Journal of the American Oriental Society</td>
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<td>JBS</td>
<td>Journal of Baltic Studies</td>
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<td>JCE</td>
<td>Journal of Chemical Education</td>
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<td>JE</td>
<td>Journal of Ethnopharmacology</td>
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<td>JHB</td>
<td>Journal of the History of Biology</td>
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<td>JHI</td>
<td>Journal of the History of Ideas</td>
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<td>JNES</td>
<td>Journal of Near Eastern Studies</td>
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<td>JRAS</td>
<td>Journal of Royal Asiatic Society</td>
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<td>JWCI</td>
<td>Journal of the Warburg and Courtauld Institutes</td>
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<tr>
<td>M&amp;H</td>
<td>Mediaevalia et Humanistica</td>
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<td>MD</td>
<td>Memorie domenicane</td>
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<td>ME</td>
<td>Medieval Encounters</td>
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<td>MH</td>
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<td>MKIF</td>
<td>Mitteilungen des Kunsthistorischen Institutes in Florenz</td>
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<td>MLN</td>
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<td>MLR</td>
<td>Modern Language Review</td>
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<td>MP</td>
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<td>N&amp;Q</td>
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<tr>
<td>OL</td>
<td>Orientalistische Literaturzeitung</td>
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<td>PCP</td>
<td>Pacific Coast Philology</td>
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<td>PMLA</td>
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<td>PR</td>
<td>Philosophical Review</td>
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<td>PRSM</td>
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<td>RES</td>
<td>Review of English Studies</td>
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<td>RHP</td>
<td>Revue de l’histoire pharmacie</td>
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<td>RPL</td>
<td>Revue philosophique de Louvain</td>
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<td>RT</td>
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<td>RTPM</td>
<td>Recherches de Théologie et Philosophie Médiévale</td>
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<tr>
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<td>SAC</td>
<td>Studies in the Age of Chaucer</td>
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<td>SHPBBS</td>
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<td>Studies in Philology</td>
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<td>TAPS</td>
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<td>YES</td>
<td>Yearbook of English Studies</td>
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INTRODUCTION

It has long been acknowledged that the scientific achievements of the Islamic world influenced the development of medicine, astronomy and natural philosophy in the medieval West. The dissemination of Arabic learning in England was first suggested by Charles Homer Haskins, augmented by J.C. Russell’s investigations into the dissemination of Arabic science in the cathedral schools of Hereford and Worcester, while Charles Burnett has returned to the topic most recently.¹ That Chaucer was familiar with the Latin translations of the studium Arabum was first acknowledged in John Livingston Lowes’ pathfinding articles regarding Chaucer’s concept of amor hereos, and Julius Ruska’s initial investigations into Chaucer’s depiction of alchemy.² Several critics went on to discuss Chaucer’s engagement with astronomy, especially the didactic Treatise on the Astrolabe, which R.T. Gunther associated with a Latin compilation based on a lost Arabic source, De compositione et utilitate Astrolabii, ascribed to the eighth-century Jewish astronomer, Mashāʾallah.³ Moreover, Walter Clyde Curry and John North widened the discussion concerning Chaucer’s use of astronomical and astrological sources, demonstrating the breadth and depth of his knowledge of the Aristotelian-Ptolemaic universe across a range of works.⁴

However, scholars have paid less attention to the influence of the wider parameters of Arabic learning on medieval European literature, and English literature in particular, with the notable exception of Dorothee Metlitzki.⁵ Metlitzki not only considers the influence of Arabic scientific material on Chaucer’s oeuvre, and such medieval romances as The Sowdane of Babylon, but also draws attention to the possible influence

of the Arabic philosophical tradition on Chaucer. Metlitzki’s study paved the way for this current examination of the influence of Arabic learning on all aspects of Chaucer’s oeuvre, through a close analysis of the sources available to him in Latin translations, which informs the discussion of his paradoxical, condemnatory attitude toward Islam in Chapter Five. Certainly, in recent studies, the critical tide has turned from a consideration of the influence of Arabic learning on Chaucer toward his depiction of Islam, particularly in the light of Edward Said’s discussion of Orientalism. Much emphasis has been placed on Said’s brief comments on Dante’s condemnatory view of Islam as barbarous, idolatrous paganism at worst, and a misguided Abrahamic heresy at best. In particular, Sheila Delany applies Said’s discussion of the background to eighteenth-century Orientalist discourse in developing her concept of ‘Chaucerian Orientalism’, which is predicated on the notion that Chaucer’s East was not influenced by scholarly writings, ‘Chaucer did not write political treatises but poems – not even political treatises in verse, but poems. The rational-scholarly approach to the Orient is far less useful poetically than the mythic one’. However that might be, this polemical approach chooses to ignore the fact that Chaucer’s oeuvre was consistently informed by intellectually complex ideas, appropriated directly from Arabic texts in Latin translations. As this study will demonstrate, Chaucer’s deep, scholarly engagement with Arabic learning differentiates his poetic approach to the East from that of his literary contemporaries. However, whilst he has the utmost respect for the scholarly achievements of Islamic culture, he takes a condemnatory attitude toward the religious milieu which gave birth to these achievements. This dichotomy is exemplified in Chaucer’s deployment of Arabic learning to authorize his rich and exceptionally erudite depiction of fin’amors. Until now, no detailed, systematic study has been undertaken


of Chaucer’s Arabic sources, in their Latin translations, in relation to the philosophical and scientific root of his depiction of fin’ amors. As we have seen, John Livingston Lowes was the first literary critic to suggest that Chaucer’s ‘loveris maladye / Of Hereos’ (l. 1373-4, p. 44) might owe a debt to the Arabic medical tradition, at a time when other scholars were fiercely debating the possible origins of fin’ amors in Hispano-Arabic texts.¹ Indeed, the peripheral position accorded to Chaucer’s actual Arabic sources in recent, Orientalist criticism goes hand in hand with a studied ignorance of earlier debates regarding the Hispano-Arabic origin of fin’ amors. As John Ganim observes,

The possibility, even the likelihood, of cross-cultural influence and literary revisionism has disappeared from the scholarly radar screen largely because Anglo-American scholarship has more or less made courtly love itself disappear, dismissing it as a neoromantic historical fantasy or explaining it as a transmutation of a European tradition of erotic poetry descending from Ovid.²

Certainly, one can argue that ‘courtly love’ is a ‘neoromantic historical fantasy’, but not fin’ amors as it is described by writers throughout the Latin West from the dawn of the twelfth century onward. However, not only have discussions of the cross-cultural aspects of fin’ amors been surpassed by other concerns, but recently discussions of the cross-cultural interchange between the Latin West and the Islamic East have been confined within the framework of post-colonial or Orientalist interpretations, as applied to the Middle Ages. Notwithstanding the twilight of ‘courtly love’, in ‘Anglo-American scholarship’, this study will demonstrate that a close examination of the influence of Arabic learning on Chaucer’s depiction of fin’ amors will not only give us a deeper understanding of his attitude toward love and loss, and the conflicting claims of reason and emotion, but also his attitude toward his Arabic sources.

¹ All references are to The Riverside Chaucer, ed. Larry D. Benson et al., 3rd edn (Boston, MA, 1987), cited parenthetically in the text by fragment, line number, and page number.

The medieval concept of *fin’amors*, most notably its origins, conceits and deployment, has been discussed at length by scholars of various disciplines.\(^1\) During the nineteenth century it became identified with the concept of *amor courtois* as defined by Gaston Paris in his discussion of *Le Chevalier de la charrette* by Chrétien de Troyes.\(^2\) Paris discussed the adulterous relationship between Lancelot and Guinevere in terms of a quasi-religious cult of love, codified in *De amore* by Andreas Capellanus, and centered in the respective courts of Marie of France (1145-98), countess of Champagne, and her mother, Eleanor of Aquitaine (c. 1122-1204). This theory, which had no sound basis in historical reality, was developed and popularized in the English speaking world by C.S. Lewis, ‘The sentiment, of course, is love, but love of a highly specialised sort, whose characteristics may be enumerated as Humility, Courtesy, Adultery and the Religion of Love’.\(^3\) By contrast, the term *fin’amors* has its roots in the literary culture of Provenç at the dawn of the twelfth century, where the grandfather of Eleanor of Aquitaine, William IX, duke of Aquitaine and Poitou, and various other troubadours, began to represent love in a new literary style, with distinct features not yet seen in the Latin West. The essence of *fin’amors*, according to A.J. Denomy, ‘lies in three basic elements: first, in the ennobling force of human love; second, in the elevation of the beloved to a place of superiority above the lover; third, in the conception of love as ever unsatiated, ever increasing desire’.\(^4\) Denomy also lists the literary topoi which originally define *fin’amors* in the lyrics of the langue d’oc:

The nature introduction, the personification of love as a god with absolute power over his army of lovers, the idea of love as a sickness with all its familiar exterior manifestations, the ceaseless fears of the lover at losing his beloved, at not being worthy of her.\(^5\)

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5 *Heresy of Courtly Love*, pp. 20-1.
However, as Peter Dronke points out, such ‘feelings and conceptions’ are, in fact, ‘universally possible, possible in any time or place and on any level of society’.\textsuperscript{1} According to Dronke, this universality is demonstrated by the poetry of ancient Egypt, Byzantium, Georgia, Islam, Mozarabic Spain, France, Germany, Iceland and love poetry written in the Greek dialect found in Calabria.\textsuperscript{2} Denomy himself points out ‘parallels and analogues in classical literature, in medieval Latin and Arabic love literature’.\textsuperscript{3} However, Denomy posited a direct link between the mode of expression in the poetry of twelfth-century Provençal and Arabic literary culture, as originally suggested by the sixteenth-century Italian philologist, Giovanni Maria Barbieri, in his \textit{Arte del Rimare} (1572), published in 1790 by Girolamo Tiraboschi under the more usual title, \textit{Dell’origine della poesia rimata}.\textsuperscript{4} Barbieri’s work sparked the debate regarding the possible influence of Arabic verse forms, particularly the \textit{zajal} and \textit{muwashshah} (pl. \textit{muwashshahāt}) found in al-Andalūs, on the Provençal troubadours. The Arabic influence was reasserted by the eighteenth-century Spanish Jesuit, Juan Andrés, in his universal history of literature, published in its entirety by 1822.\textsuperscript{5} Given the advancement of scholarship on Arabic strophic poetry in the 1940s, focusing particularly on these Hispano-Arabic poetic forms, ‘Ramón Menéndez Pidal, A.R. Nykl, Robert Briffault, and Gustav von Grunebaum went back to Barbieri and Andrés to propose an Arab origin of early Romance versification’.\textsuperscript{6} More recently, the theory of Hispano-Arabic origin has been discussed by Boase, who also examines the ‘Chivalric-

\textsuperscript{2} Cf. \textit{Medieval Latin}, I, pp. 9-51.
\textsuperscript{3} \textit{Heresy of Courtly Love}, p. 21.
\textsuperscript{4} See \textit{Dell’origine della poesia rimata opera di Giammaria Barbieri}, ed. Girolamo Tiraboschi (Modena, 1790). Barbieri’s original work survives in Bologna, Biblioteca comunale dell’Archiginnasio, MS B 3467, fasc. 6A and fasc. 6B.

The influence of Arabic culture on the concept of fin’amors has been discussed with particular reference to Arabic strophic poetry. According to Nykl, the poetry of William IX illustrates the transmission of Arabic ideas of love, through his marriages, his contact with Muslim Spain, and his time spent as a crusader. William returns ‘from the East, with entirely new melodies in his mind, he starts the type farai un vers de dreyt rien’, derived from Hispano-Arabic strophic poetry, written in both Arabic and Hebrew, especially the muwashshah and the zajal. Nykl draws particular attention to the final couplet of the muwashshah, called the kharja (pl. kharajāt), also known as the markaz, some of which were written in the Hispano-Romance dialects of the Iberian Peninsula.²

Samuel Miklos Stern noted the Hispano-Romance elements in the Hebrew corpus of muwashshahāt, which opened up the debate.³ Indeed, Alan Jones has estimated that in the corpus of muwashshahāt poetry there are approximately six hundred poems each with a kharja, of which forty-eight poems are written either wholly or partially in Hispano-Romance; thus, ‘for a more balanced perspective it is important to acknowledge the highly Arabic nature of the poetry in which the Romance kharjas are found’.⁴ Furthermore, Richard Hitchcock found that ‘about ninety-five per cent of the

surviving *kharjas* in Arabic *muwashshas* are indisputably Arabic'. However, it is important to remember that the study of the *kharajāt* is dominated by textual and palaeographic problems as the extant poems are poorly preserved. Allied to such investigations into the verse forms of Hispano-Arabic strophic poetry is the examination of the similarities between the content of the verse forms and European love lyrics. Boase describes the main themes shared by both forms of poetry:

The use of the pseudonym or *senhal* to conceal the identity of the lady addressed; the masculine form of address, *midons*, instead of *madomna*; the same *dramatis personae*, such as the guardian, the slanderer and the confidant; the same pathological symptoms of love, namely insomnia, pallor, emaciation and melancholy; a belief in the fatal consequences of this malady, known as ‘*ishq* or *amor hereos*; and the use of the spring or nature prelude. It is the ‘pathological symptoms of love’, ‘melancholy’ and ‘*amor hereos*’ which form the main focus of this study, as Chaucer depicts these with a forensic accuracy that sets him apart from his contemporaries. According to Nykl, these themes are exemplified in the work of the eleventh-century Andalusian scholar, Ibn Hazm (994-1064), which points to their importance in Islamic Spain. Ibn Hazm’s major treatise on the art and practise of love, the *Tawq al-hamāma* (‘The Ring of the Dove’), which he began writing in 1022, is paradigmatic of the conceits of love found in Arabic literary culture. It caught the attention of Western scholars, particularly at the beginning of the twentieth century, when it was translated into English, Russian, German, Spanish and

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3 *Origin and Meaning*, pp. 60-3.
4 In addition to poetry, ibn Hazm wrote works on Arabic linguistics and logic, psychology, theology and history, and several political works, aimed against certain jurists, such as the Maliki *fīkahā* and the ‘Abbāsids of Seville; cf. R. Armaldez, ‘Ibn Hazm’, *EF*, III, 790-9, and Theodore Pulcini, *Exegesis as Political Discourse: Ibn Hazm on Jewish and Christian Scriptures* (Atlanta, 1998). On his contribution to the development of *fin’amors* see Boase, *Origin and Meaning*, pp. 62-3, 80.
Italian. In a series of anecdotal experiences discussed first in prose, then in verse, Ibn Hazm discusses the nature of love, including love as a malady, which is known as _amor hereos_ in the _fin’ amors_ tradition. In the first chapter of the _Tawq al-hamāma_, he describes ‘Love’s signs’, which include ‘a fondness for solitude, as well as a wasting of the body not accompanied by any fever or any ache preventing free activity and liberty of movement. Sleeplessness too is a common affliction of lovers’. Furthermore, Ibn Hazm stresses the spiritual aspect of love:

he enjoins Good and reproves Evil, casts opprobrium upon sexual excess and recommends continence ... Ibn Hazm is the fire-feeling seeker of the spiritual union, even in corporeal relations, much preferring the former. In other words, he preserves the original Platonic and Sufi spirit.

Indeed, the Arabic origin of the _fin’ amors_ tradition became the topic of heated controversy. According to T.J. Gordon, ‘the long controversy over this thorny question has been characterised by more dogmatism and arbitrariness than is usual in scholarly debates’. As Hitchcock notes, ‘in the field of medieval Arabic literature no topic has generated more controversy than Hispano-Arabic strophic poetry’. Moreover, the putative influence of Hispano-Arabic strophic poetry on the troubadours of Provençele.

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3 Nykl, _Hispano-Arabic Poetry_, p. 371.


has been dismissed by Stern in particular.¹ According to Stern, the transmission of Arabic ideas into Western Europe is limited to Arabic scientific texts, beginning in the tenth century, which came to fruition in the twelfth century.² In contradistinction to Stern, Boas allows the possibility that Arabic science influenced the development of fin’ amors, and his argument, under the sub-division of ‘scholarship and culture of the Islamic world’, is of particular interest to this study. It is important to examine the highly technical, diagnostic knowledge Chaucer gleaned from Arabic sources in translation, especially astronomy and alchemy, in relation to his highly technical, diagnostic portrayal of fin’ amors.³ However, it is equally important to consider the pivotal role of philosophy in Arabic learning and its possible influence on fin’ amors. Denomy was the first to relate the origins of certain metaphysical conceits in the fin’ amors tradition to the influence of such Arabic philosophers as Averroes and Avicenna. Both philosophers were known in the Latin West through their translations and commentaries of Aristotle’s works, and Denomy examines their influence in this context. According to Denomy, it was due to the influence of the Arabic philosophers that the twin disciplines of philosophy and theology became distinct in medieval European cathedral schools and universities, and this distinction influenced the troubadours of Provençe. By the fourteenth century, Arabic science and philosophy was embedded in Latin scholasticism and exerted the greatest influence in four disciplines: medicine, natural philosophy, astronomy and alchemy. Here, it is important to note Chaucer demonstrates his greatest engagement with Arabic learning when drawing on ‘rational-scholarly works’, in these disciplines, which Delany dismisses in favour of the mythical Wonders of the Orientalized East. Consequently, this study is dedicated to these very disciplines: medicine, natural philosophy, astronomy and alchemy.

Chapter One focuses on fundamental medical texts in Arabic, which were widely circulated in translation in the Latin West. These include Constantinus Africanus’ Liber Pantegni and Avicenna’s Canon of Medicine. The reception of these texts in England and the Continent are examined, with specific regard to the concept of amor hereos, and

² Cf. ‘Esistono’, pp. 222-23.
Chaucer’s treatment of love as a life threatening malady in the *Book of the Duchess*, *Troilus and Criseyde* and the Knight’s Tale in the *Canterbury Tales*.

Chapter Two focuses on natural philosophy, which informed the classifications of the Arabic medical tradition, particularly in the case of melancholia. The philosophical works of Avicenna, Averroes and the mathematician, Alhazen in relation to Chaucer’s depiction of the processes of falling in love, especially in *Troilus and Criseyde* and the Knight’s Tale. Moreover, the reception of Arabic natural philosophy in the Latin West is examined in the light of the so-called Averroistic Controversy, which rocked the University of Paris during the 1270s, and reverberated across the universities in Northern Europe, including Oxford. We also consider how the Condemnations issued after this event affected Chaucer’s oeuvre.

Chapters Three and Four focus on the technical, diagnostic aspects of Arabic astronomy and alchemy which inform Chaucer’s depictions of the science of the stars, particularly in the *Treatise on the Astrolabe*, and the process of transmutation in Canon’s Yeoman’s Tale. We also consider how the close affinity between astronomy and alchemy informs the metaphorical language used to describe *fin’ amors* in Chaucer’s oeuvre.

Chapter Five considers Chaucer’s profound engagement with Arabic learning in light of his paradoxically dismissive attitude toward Islam, most clearly demonstrated in the Man of Law’s Tale. This study demonstrates that a similarly dichotomous attitude is prevalent throughout Chaucer’s oeuvre, which is informed by Chaucer’s view of Islam as an Abrahamic heresy, as witnessed in Andrea di Bonaiuto’s fresco cycle in the chapterhouse of the Dominican priory, Santa Maria Novella, and his espousal of the crusading ideal.

Throughout this study, the term Arabic is employed in relation to a wide spectrum of scholars and their works, because the term denotes the *lingua franca* of the Islamic world, in which these works were composed, as opposed to the ethnicity or religion of individual scholars. As we will see, this spectrum of scholars encompasses Persian, Jewish, Islamic and Zoroastrian writers writing in Arabic. Scholars have grappled with defining the terminology applied to writings from the Near and Middle East. Most notably, in his pivotal study entitled *Islamic Medicine*, Manfred Ullmann characterized the religion of Islam as the dominant cultural force during the period known as the
Middle Ages. However, this study adopts the terminology of Peter Adamson, who states categorically:

It is Arabic philosophy because it is philosophy that begins with the rendering of Greek thought, in all its complexity, into the Arabic language. Note that it is not ‘Arab’ philosophy: few of the figures dealt with here were ethnically Arabs, a notable exception being al-Kindī, who was called the ‘philosopher of the Arabs’ precisely because he was unusual in this regard. Rather, philosophy spread with the Arabic language itself throughout the lands of the expanding Islamic empire.

This terminology does not seek to diminish the fact that these philosophers lived in the Islamic world, which fostered and encouraged scholarly developments. Indeed, the term ‘Arabic’ has its roots in the scholarly tradition borne out of the Great Translation Movement centred in Baghdad between the eighth and tenth centuries, which preserved Greek science and philosophy in the language of the Islamic world. Yet, as Adamson notes, ‘Certain philosophers of the formative period, like al-Kindī, al-Fārābī, and Averroes, were interested primarily in coming to grips with the texts made available in the translation movement, rather than with putting forward a properly “Islamic” philosophy’. This is especially the case when it came to Greek medical works, which were amongst the first texts to be translated into Arabic, and subsequently into Latin. The medical aspect of the Greek corpus exerted the greatest influence on the Latin West, for the longest period of time, and it is to these works we now turn.

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3 ‘Introduction’, p. 3.
CHAPTER ONE

Chaucer, Amor Hereos and the Arabic Medical Tradition

In the General Prologue to the Canterbury Tales, Chaucer takes some pains to authorize the Physician’s medical training by citing the magisters of the Medieval medical curriculum:¹

Wel knew he the olde Esculapius,
And Desycorides, and eek Rufus,
Olde Ypocras, Haly, and Galyen,
Serapion, Razis, and Avycen,
Averrois, Damascien, and Constantyn,

In addition to the works ascribed to Asklêpios, Chaucer lists the first-century physician and pharmacologist, Dioskorides of Anazarbos; the first-century medical writer, Rufus of Ephesus, and the most influential classical authorities on medicine, Hippocrates of Cos and Galen of Pergamon. Chaucer also mentions three authorities from the thirteenth and fourteenth centuries: the French physician Bernard of Gordon, who completed the Lilium medicinae (‘The Lily of Medicine’) in 1305; the English physician, John of Gaddesden who responded to Bernard of Gordon’s work with the Rosa anglica medicinae (‘The English Rose of Medicine’), written after 1307, and Gilbertus Anglicus who completed his Compendium medicinae (‘Compendium of Medicine’) c. 1240.²

² Bernard of Gordon (c. 1258-1320) was a French physician who studied at Salerno and taught at the University of Montpellier, 1283-1308. The Lilium medicinae was a popular medical text, translated into Irish, Hebrew and French. He was the first to describe the causes and forms of seizures; cf. George Sarton, Introduction to the History of Science, 3 vols in 4 pts (Baltimore, 1947-50), III, i, 873-6. John of Gaddesden (c. 1280-1361), a fellow of Merton College, 1305-7, initially studied theology at Oxford. He most likely wrote the Rosa anglica medicinae while studying medicine, 1307-17; cf. Martha Carlin, ‘John of Gaddesden’, ODNB. Gilbertus Anglicus (d. c. 1250) was a physician and theologian, whose
However, Chaucer also cites several Arab and Persian scholars. The first scholar named in the passage is the Persian ʿAli ibn al-ʿAbbās al-Majūsī, known as Haly Abbas in Latin, who is placed rather fittingly between the twin pillars of classical medicine, Hippocrates and Galen.¹ Born in the tenth-century in Ahwaz, in South-West Persia, Haly Abbas compiled a medical compendium called the Kitāb kāmil al-sināʾa al-tībbīyya (‘The Complete Book of Medical Art’), also known as the Kitāb al-Malikī (‘Royal Book’).² The stated aim of this text was to cover every aspect of medicine necessary to become a good physician; thus Chaucer makes a point of foregrounding Haly Abbas because his authority adds to Physician’s credibility, at least at this point in the narrative. The Kitāb kāmil al-sināʾa al-tībbīyya was translated into Latin as the Liber pantegni by the eleventh-century medical scholar, Chaucer’s ‘Constantyn’ or Constantinus Africanus. Born in 1017, Constantinus was a North African monk from Kairouan, in what is now Tunisia, who entered the Benedictine order at Salerno. At the monastery of Monte Cassino, Constantinus translated medical works from Arabic into Latin, which were widely disseminated in the Latin West.³ The Pantegni was divided

Compendium medicinae was translated into High German, Catalan, Hebrew and Middle English. Little is known about his life, he may have been in the service of Robert de Breteuil, earl of Leicester during the early thirteenth-century; cf. Faye Getz, Healing and Society in Medieval England: A Middle English Translation of the Pharmaceutical Writings of Gilbertus Anglicus (Madison, WI, 1991), and ‘Gilbert the Englishman (d. c. 1250)’, ODNB. Cf. also Medieval Medicine: A Reader, ed. Faith Wallis (Toronto, 2010), pp. 269-81.

¹ ʿAli ibn al-ʿAbbās al-Majūsī’s name suggests he was of Mazdean origin. Al-Majūsī is most likely derived from the Arabic term ‘Magus’, which refers to Persian Zoroastrians at this period; cf. M. Morony, ‘Madjūs’, EF, V, 1110-18. It was also used by Arabic geographers and historians writing about Northern Africa and Muslim Spain to refer to Vikings; cf. A. Melvinger, ‘Al-Madjūs’, EF, V, 1118-21. The dedicatory preface at the beginning of Haly Abbas’ Kitāb kāmil al-sināʾa al-tībbīyya suggests a religious affiliation outside of Islam. It does not refer to the Qur’ān or the Prophet of Islam, unlike similar scientific works of the period, such as Avicenna’s Canon which begins with the shahādah, the first tenet of Islam; cf. Françoise Micheau, ‘ʿAli ibn al-ʿAbbās al-Mağusi et son milieu’, in Constantine the African and ‘Ali ibn al-ʿAbbās al-Mağusi: The Pantegni and Related Texts ed. Charles Burnett and Danielle Jacquet (Leiden, 1994), pp. 1-16 (pp. 6-7).


³ There are two biographical accounts of Constantinus Africanus: the Chronica monasterii Casinensis begun by Leo of Ostia, but completed by Peter the Deacon, and the De viribus illustribus Cassinensibus. According to Peter, Constantinus was born in Carthage in 1015, but was forced to flee across the Mediterranean when a plot was hatched against his life. He fled to Salerno in disguise, but was forced into the service of Robert Guiscard upon recognition. After leaving the Norman court, Constantinus
into two parts, the Theorica and Practica, which often circulated separately, and indeed, were often discussed separately, as evinced by the medical curricula of various Medieval universities.\(^1\) The Theorica Pantegni is derived from the Arabic original, although in true Constantinian fashion, all Arabic names are expunged from the Latin translation.\(^2\) The Practica Pantegni was formed from a variety of medical texts, most notably the Kitāb kāmil al-sināʾa al-tibbiyya, but also the Viaticum peregrinantis: Constantinus’ rather free translation of Ibn al-Jazzar’s Kitāb zād al-musāfir wa-qūt al-hadir (‘Provisions for the Traveller and the Nourishment of the Settled’).\(^3\) Although Constantinus’ translation was far removed from Haly Abbas’ original text, the Practica Pantegni is still considered an important work of Arabic medicine because ‘no other book in Latin comprised such a wealth of Arabic medicine between two covers’.\(^4\) The Kitāb kāmil al-sināʾa al-tibbiyya was also translated by Stephen of Antioch, also known as Stephen of Pisa, as the Liber regalis or Regalis dispositio, following its alternative title of Kitāb al-Malikī. This translation, which dates from c. 1127, is more faithful to the original Arabic, than that of Constantinus.\(^5\)

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2 See Danielle Jacquart, ‘Le sens donné par Constantin l’Africain à son oeuvre: les chapitres introductifs en arabe et en latin’, in Constantine the African and ‘Ali ibn al-‘Abbas al-Maǧusi: The Pantegni and Related Texts, ed. Charles Burnett and Danielle Jacquart (Leiden, 1994), pp. 71-90. Constantinus not only retained the Greek authorities, Galen and Rufus of Ephesus, but also changed Haly Abbas’s dedicatory preface to God to a dedication to Desiderius, the abbot of Monte Cassino.

3 On the Viaticum peregrinantis see Gerrit Bos, Ibn al-Jazzar on Sexual Diseases and their Treatment (London, 1997). Burnett and Jacquart note that the Practica Pantegni is made up of a variety of Arabic texts, ‘pre-Salernitan Latin medical texts, and further texts of unidentified origin, with only an occasional chapter taken from the Kitab kamīl the different contents of the different manuscripts of the Pantegni as well as some internal comments, show that the Practica Pantegni was built up to its full ten-book form in stages, and probably did not reach its final shape until well after Constantine’s death’ (‘Introduction’, p. vii).

4 Green, ‘The Re-creation of Pantegni’, p. 152

Chaucer’s invocation of ‘Razis’ refers to the ninth-century Persian philosopher, Abū Bakr Muhammad ibn Zakariya al-Rāzī. The Arabic name al-Rāzī comes from his place of birth, Rayy, just south of where Tehran now stands. In addition to his position as chief physician at the hospital in Rayy, then later in Baghdad, al-Rāzī produced over 113 works, but two texts were especially important for the study of medicine in Medieval Europe. The \textit{Kitāb al-Mansūri} (‘Book of Mansur’) was dedicated to the Samānid prince, ‘Abū Salih al-Mansūr ibn Ishāq, in 903, and translated into Latin in the twelfth century by Gerard of Cremona as the \textit{Liber Almansor}, or \textit{Almansor}. The most renowned of all of al-Rāzī’s works was the \textit{Kitāb al-Hāwi fī al-tibb} (‘Comprehensive Book on Medicine’), compiled posthumously and translated into Latin in 1279 under the title \textit{Continens}. This translation was made at the request of Charles of Anjou in 1279 by Faraj bin Salīm, a Sicilian-Jewish physician known in Latin as Farragius Judaeus or Farraguth (d. 1285).\footnote{On the manuscript tradition of the \textit{Kitāb kāmil al-sinā’ah at-tibbiyya}, see Gerard Troupeau, ‘Les Manuscrits du Kamil as-sina’a a la Bibliotheque Nationale de Paris’, in \textit{Constantine the African and ‘Ali ibn al-ʿAbbas al-Maḡusi: The Pantegni and Related Texts}, ed. Charles Burnett and Danielle Jacquart (Leiden, 1994), pp. 303-16.}

Al-Rāzī’s medical works were based on practical medicine, and he gained a reputation for ‘his generosity and compassion’ in ensuring ‘that the poor among his patients were properly fed and given adequate nursing care’.\footnote{In Paris, Bibliothèque Nationale MS lat. 6912, fol. 1v, Faraj bin Salīm presents his translation to Charles of Anjou. According to Collete Sirat, \textit{A History of Jewish Philosophy in the Middle Ages} (Cambridge, 1985), p. 215, this is ‘the only known portrait of a Jewish Medieval scholar’.}

Furthermore, al-Rāzī’s \textit{Kitāb fī al-judarī wa al-hasbah} (‘Book on Smallpox and Measles’), known variously in Latin as \textit{De peste} or \textit{De pestilentia}, not only proved invaluable to Medieval Europe, but remained a highly respected work into the eighteenth century.\footnote{L.E. Goodman, ‘al-Rāzi’, \textit{EI²}, VIII, 474-7 (p. 474).}

In 1766, a new Latin translation was commissioned by the London apothecary and Arabist, John Channing, from Salomon Negri, a Melkite priest from Damascus.\footnote{Emilie Savage-Smith, ‘John Channing: Eighteenth-Century Apothecary and Arabist Pharmacy’, \textit{Pharmacy in History} 30 (1988), 63-80.}
Chaucer’s ‘Avycen’ refers to the Persian philosopher, Abū ’Ali Husayn ibn Abdullah ibn Sīna, known as the Prince of Physicians, even in the Latin West, where he was called Avicenna. Born in Bukhara, c. 980, Avicenna was a child prodigy, who had studied the Qur’ān and other Arabic works by the age of ten. By the age of sixteen, he had mastered the major disciplines of philosophy, metaphysics, the natural sciences, jurisprudence, logic and mathematics, including works by Euclid and Ptolemy. By the age of eighteen, he was physician to the Samānid prince, Nūh ibn Mansūr, and he spent the rest of his career moving across Persia, serving different emirs and courts.\(^1\) Like al-Rāzī, Avicenna was a prolific writer on both medicine and philosophy, and two of his medical compendiums, \textit{al-Qan’ūn fī al-tibb} (‘Canon of Medicine’) and the \textit{Kitāb al-shifā} (‘Book of the Healing’ or ‘Book of the Cure’), became core medical texts in universities throughout the Latin West. That al-Rāzī’s medical approach differed from that of Avicenna was known to Latin scholars. In the thirteenth century, Roger Bacon notes that Avicenna ‘was a philosopher and not a doctor’, while ‘al-Rāzī put the diagnoses of diseases among the first duties in the practise of medicine, so that the causes and symptoms of any kind of illness might be clearly recognised’.\(^2\)

Chaucer’s ‘Averrois’ refers to the Andalusi Arab philosopher, Muhammad ’Abū al-Wālid ibn Ahmad ibn Rūshd, known as Averroes, who, like Avicenna, became an infamous figure in the Latin West, due mainly to his philosophical concepts regarding the essence and existence of the soul, as we shall see.\(^3\) His works were banned by the University of Paris in 1277, which paradoxically secured his popularity and his work remained influential throughout the Middle Ages. Averroes was born in Cordova in 1126, and studied jurisprudence and theology as well as medicine, literature and

\(^1\) Many details of Avicenna’s life are known to us due to the survival of an autobiography, completed by Avicenna’s student, al-Juzjānī, and quoted by Arabic scholars since the thirteenth-century bibliographer, Ibn ’Abi Usaybi’ā. For an English translation of this work see \textit{The Life of Ibn Sina}, ed. W.E. Gohlman (Albany, 1974). On its dissemination see Dmitri Gutas, \textit{Avicenna and the Aristotelian Tradition Introduction to Reading Avicenna’s Philosophical Works} (Leiden and New York, 1988). See also Soheil M. Afnan, \textit{Avicenna: His Life and Works} (London, 1958); Dag Nikolaus Hasse, \textit{Avicenna’s De Anima in the Latin West: The Formation of a Peripatetic Philosophy of the Soul 1160-1300} (London, 2000).

\(^2\) Mary Catherine Welborn, ‘The Errors of the Doctors according to Friar Roger Bacon of the Minor Order’, \textit{Isis} 18 (1932), 26-62 (pp. 38-9).

philosophy. Later on he was exiled from Spain, and died in Marrakesh in 1198. His *Kulliyāt fī al-tibb* (‘Generalities of Medicine’) was translated into Latin in 1255 by a Jewish scholar resident in Padua, Jacob Bonacosa. This Latin version, known as the *Colliget*, was in turn translated into Hebrew on two occasions: by an anonymous translator, but also by Solomon ben Abraham ben David.\(^1\)

Moreover, works by ‘Desycorides and eek Rufus’, were also known to the Latin West in Arabic translations.\(^2\) According to Manfred Ullmann, fifty-eight works by Rufus of Ephesus were translated into Arabic, and the fullest list of his oeuvre is derived from the Arabic medical tradition, as discussed below.\(^3\) The only work that can be attributed securely to Dioskorides is *De materia medica*, ‘the largest pharmaceutical guide in antiquity’, which discusses ‘over 600 plants, thirty-five animal products, and ninety minerals in simple, concise Greek’.\(^4\) This work exerted an enormous influence in the development of both Eastern and Western pharmacology, acting as ‘the bible of medical botany for centuries’.\(^5\) An illustrated version was commissioned for the Byzantine princess, Anicia Juliana, c. 512-13, now known as the Vienna Dioskorides (Österreichische Nationalbibliothek, cod. med. gr. 1), but this version is not faithful to the original organization of the material into five books.\(^6\) This structure was reinstated in the sixth-century Latin translation, of which the earliest extant manuscript, Paris Bibliothèque nationale de France Mss Latin 9332, dates from the late eighth or early

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4 John M. Riddle, ‘Dioscorides’ *DSB*, IV, 119-123 (p. 119). Pedanius Dioskorides was born in Anazarbos, now Anazarba, in Turkey, c. 50 C.E. He is thought to have studied at Tarsus and Alexandria.
ninth century, the product of Fleury Abbey.¹ A fragmentary Old English version of *De materia medica* also survives in BL MS Cotton Ms Vitellius C. iii, dating from the eleventh-century.² In the late eleventh or early twelfth century, another Latin translation was produced which arranged the contents alphabetically, as in the Vienna Dioskorides. This is ascribed to Constantinus Africanus in a rubric in Bamberg Staatsbibliothek, MS med.6, fol. 28v, which dates from the late twelfth or early thirteenth-century.³

*De materia medica* was also translated into Arabic in the ninth century by Istifān ibn Basil (‘Stephanus son of Basilius’), and revised by the Nestorian Christian scholar and translator, Hunāyn ibn Ishāq, discussed below. Although this remained the most authoritative Arabic version of *De materia medica*, a Greek version of the text was also presented to the ‘Umayyad caliph at Cordova, ‘Abd al-Rahmān al-Nāsir, by the Byzantine Emperor, Constantine VII, c. 948. The caliph requested that someone be sent from Constantinople to translate the text, and in 951 a monk named Nicholas was despatched to his court. Nicholas not only translated the Greek, but also revised the Arabic text already in existence, ‘using this new manuscript and adapting terminology to reflect the Hispano-Arabic nomenclature of Muslim Spain’.⁴

Chaucer also cites ‘Serapion and Damascien’: two names associated with Arabic medicine in the later Middle Ages, but ultimately of Greek origin. Gerard of Cremona translated the *Practica*, also known as the *Therapeutice methodus* or *Brevarium*, by the ninth-century Syrian, Yohannan bar Serapyon or Yahyā ibn Saryfūn. Known in Latin as Johannes Serapion, or Serapion the Elder, he ‘completed a comprehensive manual of

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¹ Cf. Munich, Bayerische Staatsbibliothek, Clm 337, which most probably dates from the tenth century, and Bibliothèque nationale de France Mss Latin 11214, which is a nineteenth-century copy. A work based on Dioskorides, and erroneously attributed to him, the *Ex herbis femininis*, is extant in twenty-nine manuscripts from the twelfth century. See John M. Riddle, ‘Pseudo-Dioscorides’ “Ex Herbis Femininis” and Early Medieval Medical Botany’, *JHB* 14 (1991), 43-81.


medicine (kunnāsh) in Damascus’, c. 873, which ‘existed in both a long and a short version (little kunnāsh), the latter gaining an early place in Latin medical literature under the title Pratixa’. Yet it is important to distinguish the work of Serapion the Elder from that of Pseudo-Serapion or Serapion the Younger, who wrote the Liber aggregationis in medicinis simplicibus sometime after 1250. Works by both authors were often printed beside each other in the fifteenth century. The Liber aggregationis focuses on botany, and survives in over fifty late Medieval manuscripts, being particularly influential between the fourteenth and sixteenth centuries. Serapion the Elder was also referred to as Johannes Damascenus by Latin scholars, including Roger Bacon. It is worth noting that Chaucer mentions ‘Serapion and Damascien’, which suggests he understood the distinction between Pseudo-Serapion and Serapion the Elder. However, it is possible, albeit unlikely, that Chaucer’s ‘Damascien’ may refer to the seventh-century Melkite theologian, John of Damascus.

The process of transmission of Greek texts into Arabic began in the eighth century during the ʿAbbāsid caliphate, at which time they were initially translated into Syriac and thence into Arabic. These texts, which proved vital for the development of Arabic intellectual thinking, were largely medical and philosophical, taken from such authorities as Galen, Hippocrates and Aristotle. The paucity of literary and historical

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2 ‘In both manuscripts and printed editions, the Liber aggregatus often appears in conjunction with the Practica of the other Serapion, known as the Elder’ (Dilg, ‘Liber aggregatus’, p. 222).
5 The writings of John of Damascus are discussed below in Chapter Five.
6 The ʿAbbāsids came to power in the eighth century, ruling from 750-1258. They continued to wield a limited amount of power from 1261-1519. At the zenith of their power, they ruled a vast area ‘from their eastern frontier on the banks of the Indus to the western borders in Tunisia’ to ‘the Yamani capital at San’a to the capital of Arab Armenia at Bardha’a, near the Caucasus’ (Hugh Kennedy, The Early Abbasid Caliphate: A Political History (London, 1981), p. 18). The court of the caliphate, situated in Baghdad, fostered an intellectual and scholarly environment; cf. Hugh Kennedy, The Court of the Caliphs: The Rise and Fall of Islam’s Greatest Dynasty (London, 2004).
7 For a general introduction to the translation process see Richard Walzer, Greek into Arabic. Essays on Islamic Philosophy (Oxford, 1962), and Religion, Learning and Science in the Abbasid Period, ed. M.J.L
works translated from Greek into Arabic during this period has been ascribed to Islamic opposition to Greek literature on religious grounds. However, it is due principally to the preferences of the Melkite, Jacobite and Nestorian Christians who translated Greek texts into Syriac. These translators favoured philosophy, and by extension medicine, above the other disciplines because of their relevance to the Christian faith. Even though the translation process also included Greek works translated directly into Arabic, and from Arabic into Syriac, more often than not texts were translated from Syriac into Arabic. This meant the Arabic world, with the notable exceptions of Alexandria and Persia, ‘could only acquire that part of the Greek corpus of learning which the Christians in Syria and Egypt were then in a position to offer’.\(^1\) However, the role of Christians in the development of Arabic intellectual thought was by no means purely mediatory. Although the Jacobite Sergius of Rēsh ’Āynā (d. 536) is ‘the first-known link between the enthusiasts for Aristotle in Neoplatonist Alexandria and the Syriac-speaking communities in northern Syria’, Christian scholars developed alongside their Muslims compatriots and many were fluent in Syriac, Greek and Arabic.\(^2\) We may note the example of the Nestorian Patriarch, Timothy I (727/8–823), who not only accepted a commission to translate Aristotle’s *Organon* from the ‘Abbāsid caliph, al-Māḥdi, *c.*

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\(^1\) Ullmann, *Islamic Medicine*, pp. 7-8, notes that when the Arabs conquered Alexandria in 642, Greek continued to be used as a scholastic language: ‘This would explain why we have only the Arabic translations of the synopsis of the sixteen basic works of Galen, or, of the book on paediatrics by Paul of Aegina. Greek manuscripts of these works could obviously no longer reach Constantinople because the political boundaries were now different.’ From the fourth to the seventh centuries, commentaries on Aristotle were produced at Alexandria by Ammonius, John Philoponus, David, Elias and Stephanus, as well as such medical writers as Palladius and Asclepius. Moreover, Greek medical works also influenced Persian medicine in the sixth century and were translated into Pahlavi (Middle Persian); cf. Pormann and Savage-Smith, *Medieval Islamic Medicine*, pp. 12-15.

782, but also engaged with Aristotelian ideas in his letters and treatises. Timothy’s translation into Arabic drew on a Syriac version and parts of the original Greek; he was assisted by Abū Nuh al-Anbarī, the ‘Christian secretary of the Muslim governor of Mosul’. Moreover, Christian translators often worked alongside Muslim philosophers to produce commentaries and translations. One of the most famous Muslim philosophers, Abū Nasr al-Fārābī (c. 870-950), credited with bringing Aristotelianism into the fold of Islamic intellectual development, studied with the Nestorian Christian scholars, Yūhanna ibn Haylan (d. 910) and Abū Bishr Matta ibn Yunus. Similarly, al-Fārābī taught the Jacobite philosopher Yahyā ibn ʿAdī, who may also have been taught by al-Rāzī. This interaction is not only indicative of the status of Arabic as the lingua franca of the caliphate, and the status ascribed to Aristotelian philosophy, but also the religious dimension of this highest form of intellectual speculation. As ahl al-kitāb (‘People of the Book’), Christians and Muslims alike attempted to reconcile the new philosophy with their own religious beliefs.

One of the most prominent Nestorian Christian translators was Hunāyın ibn Ishāq (808-73), known to Latin Christendom as Johannitius, whose medical compendium, the Isagoge, was a core text of the Western medical curriculum during the Middle Ages. The role played by Hunāyın ibn Ishāq in the formation of the Arabic medical tradition during this period, and its subsequent influence on the West, is immense. He was principally interested in translating medical works and it was once believed that he,

1 Griffith, Church in the Shadow, p. 47.
2 Abū Nasr Muhammad b. Muhammad b. Tarkhan b. Awzalagh al-Fārābī was of Turkish origin, born in Farab in Turkestan, but lived in Baghdad for most of his life. He was one of the first Islamic philosophers who attempted to reconcile his faith with Greek philosophy, ‘which had reached him as an almost closed system of truth and an established method of reaching felicity’, yet it ‘could provide valid explanations of all the important issues raised in contemporary Islamic discussion’ (R. Walzer, ‘al-Fārābī’, EF, II p. 779). His philosophical thought is grounded in the tenth-century Christian Nestorian circles in which he studied and taught; thus his ‘proximate ancient sources are within the orbit of the Greek philosophical schools in sixth-century Alexandria’ (Walzer, ‘al-Fārābī’, p. 779). In addition to Griffith, Church in the Shadow, pp. 114-15; cf. Muhsin Mahdi, ‘al-Fārābī’, DSB, IV, 523-25.
along with other Nestorian Christians, trained at the medical school in Jundishapūr. He studied under Yūhanna ibn Masawaih (d. 857), known in Latin as Johannes Mesue, who was a court physician to the ‘Abbāsids. Hunāyn ibn Ishāq acted in turn as court physician to the caliph al-Mutawakkil (r. 847-61), but he also travelled throughout the Islamic and Byzantine world collecting scientific, philosophical and medical manuscripts. He became the chief co-ordinator of a school of translators in Baghdad which included his son, Ishāq ibn Hunāyn. Here, a multitude of texts were translated from Greek into Arabic, often through the medium of Syriac. The locus of this scholarly activity was formerly thought to be the bayt al-hikma (‘House of Knowledge’), allegedly founded by the ‘Abbāsid caliph al-Ma’mūn and Harūn al-Rashīd. However, it remains doubtful as to whether the bayt al-hikma ever existed; the historical evidence is exiguous, even though similar repositories, which housed poetic and historical accounts, were established from the Sasanian period onwards:

On this basis, we are justified in assuming only that it was a library and, as an institution, part of the Sasanian administration and bureaucratic state apparatus that was knowledge with the caliph Harun ar-Rašīd that was adopted under the early ‘Abbasids.

1 Jundishapūr, now in southwest Iran, was founded in the third-century by the Sassanian Shapur I as a military camp for prisoners of war. On the authority of the Arabic historian al-Qiftī (d. 1248), it was formerly believed it had developed into a centre of learning and scholarship, with a particular emphasis on medical studies. However, this vision of Jundishapūr has been ‘found to be without substance. There seems to be no evidence that there was a hospital at Gondeshapur, nor a formal medical school. There may have been a modest infirmary where Galenic medicine was practised and a forum where texts could be read, as was the case in other towns such as Susa nearby to the west’ (Pormann and Savage-Smith, Medieval Islamic Medicine, p. 20).

2 Ishāq ibn Hunāyn (d. 911/12) translated medical works from Greek to Syriac to Arabic, like his father, albeit a greater number into Syriac, rather than Arabic. He held the position of physician in the court at Baghdad, but was far more interested in the Greek philosophical tradition, and mathematical and astronomical works. His Taʾrikh al-atibbā (‘History of Medicine’) was the first history of science to encompass philosophy and religion; cf. G. Strohmaier, ‘Ishāq ibn Hunāyn’, EP, IV, p. 110.


4 Gutas, Greek Thought, p. 55.
Furthermore, it seems unlikely that such an institution had as its principal focus the translation of Greek texts into Arabic. Rather, it remained a centre for translating Persian texts, as it was during the Sasanian period:

Its primary function was to house both the activity and the results of translations from Pahlavi into Arabic of Sasanian history and culture. As such there were hired translators capable to perform this function as well as book binders for the preservation of books. This was its function in Sasanian times, and it retained it throughout the time of Harun ar-Raşid.¹

In spite of the putative role of the bayt al-hikma in the translation process, it is clear that ‘Abbāsid Persia fostered such intellectual activity. This is evinced by the career of Hūnayn, who was not only the primary translator of the period, but also developed Arabic lexicography by enriching ‘the scientific terminology with apt renderings, with new word forms (neologisms), or by taking over foreign words; he also introduced analytical-syntactical constructions which made Arabic into an instrument capable of expressing complicated and abstract ideas’.² Moreover, Hūnayn’s own works were translated into Latin, particularly, the Isagoge and his De oculis (‘On Optics’).³ These works were revised and commented upon throughout the Middle Ages, from the Middle East to Spain.⁴ The importance of the Isagoge to medical training can be gleaned from Bartholomaeus of Salerno’s commentary on the text in the twelfth century:

Among the Latins, no authority has definitely established the proper order in which books should be read. Nonetheless the book entitled Isagoge by Johannitius the Alexandrian serves as an introduction to all the other books, and so deserves to be read first.⁵

¹ Gutas, Greek Thought, p. 55.
² Ullmann, Islamic Medicine, p. 9.
³ Hunāyn’s works on ophthalmology are extensive and demonstrate the keen interest in diseases of the eye in Arabic medicine; cf. David C. Lindberg, Theories of Vision from Al-Kindi to Kepler (Chicago, 1976), pp. 34-42.
⁴ Cf. Ullmann, Islamic Medicine, pp. 41-55.
⁵ Bartholomaeus of Salerno, Commentary on the Isagoge, quoted in translation by Wallis, Medieval Medicine, p. 157.
It was held up as an authoritative work not least because it provided an *accessus* to Galen’s *Tegni* (‘Art of Medicine’), which was ‘inaccessible due to its brevity and difficulty’.¹ Indeed, ‘Johannitius wrote this book as an introduction to the *Tegni* of Galen ... It is useful for knowing about things that are natural, non-natural, and against nature’.² Gradually, Arabic texts were recognized as one of the principal conduits of the classical *magisters* in the Latin West and this contributed to the wealth of Arabic texts translated into Latin during the scholastic period.

The scientific and philosophical texts translated from Arabic into Latin contributed significantly to the Latin West’s reacquaintance with its classical past. Indeed, George Sarton describes the foundations of Medieval Europe as ‘Greco-Arabic-Latin’.³ The task of translating Arabic philosophical and astronomical texts into Latin was largely undertaken during the twelfth century in Spain and Southern Italy. Prior to this, medical works had been translated at Salerno, while some mathematical works found their way to France and England. By the tenth century, Arabic astrological and astronomical texts were in circulation in Catalonia, and Gerbert of Aurillac, later Pope Sylvester II, used Latin translations of Arabic texts in the composition of his mathematical treatises.⁴ During the early twelfth century, Adelard of Bath undertook a seven year expedition to the newly-conquered crusader state of Antioch and *Magna Graecia*, the Greek-speaking, Southern coast of Italy, in order to master what was then termed the *studium Arabum*, which included works on the natural sciences, geometry, astrology and medicine, but not the Constantinian translations.⁵ Charles Burnett notes this first wave of Arabic into Latin translations emanated in the main from the

¹ *Commentary on the Isagoge*, p. 157.
³ Sarton, *History of Science*, II, i, p. 3.
Benedictine abbeys of Fleury and Micy. He also notes the connection between Fleury and Ramsey Abbey, founded in 969 by Saint Oswald, which is important for the dissemination of the studium Arabum in England.\footnote{Burnett, \textit{Introduction}, p. 5.} Greek texts were also translated directly into Latin by James of Venice, Burgundio of Pisa and William of Moerbeke, but these translations were supplemented in the Latin West by a range of philosophical treatises and commentaries translated from Arabic into Latin. Moreover, by the twelfth century, Latin translations of Arabic texts were regarded as fundamental to teaching such subjects as mathematics and astronomy as part of the Liberal Arts curriculum.\footnote{Cf. Sarton, \textit{History of Science}, II, pp. 7-8.}

In terms of the study of medicine, Salerno set the standard for Europe as early as the eleventh century. Adelard of Bath made a point of visiting Salerno, and ‘the unique fame of Salerno as a school of medicine was fully established long before the dialectical movement centred in Paris or the legal in Bologna’.\footnote{Hastings Rashdall, \textit{The Universities of Europe in the Middle Ages}, ed. F.M. Powicke and A.B. Emden, 3 vols (Oxford, 1936), I, 76. Cf. Burnett, \textit{Introduction}, p. 23.} Here, the curriculum concentrated on the \textit{Civitas Hippocratica}: the study of early Graeco-Latin translations of medical works by Galen and Hippocrates.\footnote{Cf. Charles Singer, \textit{From Magic to Science: Essays on the Scientific Twilight} (New York, 1958), pp. 140-1, 148; Rashdall, \textit{Universities}, I, p. 79.} However, it is important to remember that the Campanian maritime cities of Amalfi and Salerno had good trade connections to North Africa throughout the Middle Ages. Although it was not a regular trading place for Muslim and Jewish merchants during the eleventh and twelfth centuries, ‘Salerno is occasionally mentioned as a destination in merchants’ accounts coming out of Egypt’.\footnote{Monica H. Green, ‘Introduction’, \textit{The Trotula: An English Translation of the Medieval Compendium of Women’s Medicine} (Philadelphia, 2002), p. 5. As Green points out, there was some cultural exchange in Salerno between Muslims, Jews and Christians as well as Greeks, Lombards and Normans, but it was not a place of \textit{covivencia} in the manner of Islamic Spain.} Furthermore, Salerno’s close proximity to Sicily, which itself had strong ties to the Middle East, meant it was easy to ‘obtain the spices, resins, minerals, and other items of \textit{materia medica} (some of local manufacture, some imported from the East) that were to become integral parts of their medical system’.\footnote{Green, \textit{Trotula}, p. 5.} It is also important to remember that Constantinus Africanus was based in the neighbouring monastery of Monte Cassino.\footnote{See Herbert Bloch, \textit{Monte Cassino in the Middle Ages}, 3 vols in 5 pts (Rome, 1986).}
Here, he produced the *Viaticum peregrinantis, De melancholia* and *De coitu*, which informs part of Januarie’s typification as the *senex amans* in the Merchant’s Tale:

And many a letuarie hath he ful fayn,
Swiche as the cursed monk, daun Constantyn,
Hath written in his book *De Coitu*. (IV. 1809-11, p. 161)

Furthermore, the Wife of Bath invokes the authority of ‘Crisippus, Trotula, and Helowys’ (III. 677, p. 114), which demonstrates Chaucer’s familiarity with the *Trotula*. This is a gynaecological handbook compiled at Salerno, containing some Galenic tracts on the humours, but also some ‘neonatal procedures’, which are ultimately derived from the ‘ninth-century Persian physician named al-Rāzī’. Similarly, the *Articella*, a collection of texts and their commentaries designed for students of medicine, was first compiled at Salerno. The *Articella* not only includes translations of Hippocrates’ *Aphorisms* and *Prognosis*, Theophilus’ *On Urines*, Philaretus’ *On Pulses*, and Galen’s *Tegni*, but also Hūnayn ibn Ishāq’s *Isagoge*, and this recourse to Arabic works is typical of Salernitan medicine. The two categories of medicine, *theoria* and *practica*, which dominated the organisation of the Western medical education throughout the Middle Ages, were established in Salerno. In addition to the study of anatomy and dissection, Salernitan medicine also incorporated the natural sciences, such as Galenic humoural pathology and its influence on health and disease, and Aristotelian natural philosophy. However, Chaucer’s engagement with Salernitan medicine is not a fourteenth-century innovation. Burnett has demonstrated that many twelfth-century English manuscripts which contain Salernitan medicine are earlier than those produced in Italy, ‘One can only suppose that the contacts between England and South Italy were very close, and this supposition is substantiated by the presence of several doctors from Salerno in England, or Englishmen who went to study in Salerno’.

Adelard was one such Englishman who gravitated toward Salerno, but his pursuit of the *studium Arabum* initially took him to Antioch, which was captured by the Crusaders

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1 ‘Green, *Trotula*, p. xiii.
in 1098. Burnett points out that the significance of Antioch as a place of translation and transmission of Arabic learning has been considerably underestimated. While no school of translation existed in Antioch, there are several indicators which suggest it was a place of considerable cultural exchange. Due to the Crusades, strong links were forged between Antioch and Pisa, which continued well into the thirteenth-century:

The Pisans with their ships helped the Crusaders to conquer the Holy Land. In recognition of their services in 1108 Tancred, in addition to giving them a large part of the important seaport of Laodicea (Latakia) presented them with a quarter in Antioch itself: it included the parish of Saint-Saviour and was in the centre of the city.

This ‘provided a route for Arabic texts’, exemplified by the translations of Stephen of Pisa, or Stephen of Antioch, as he is sometimes known. Although Stephen had studied at Salerno, Pisa itself was a centre of translation activity during the twelfth century, with ‘John the Saracen working with Rusticius Pisanus on completing Book nine of Constantine’s Practica Pantegni’. Burnett points out that ‘the scientific works of Abraham ibn Ezra, Stephen of Pisa, and their collaborators, were known, if not composed there’. Moreover, Arabic astronomical texts entered Spain via Antioch and Pisa. Aside from Stephen of Pisa, the only other known translator from the Crusader

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3 ‘Antioch as a Link’, p. 4.


5 ‘Antioch as a Link’, p. 16.

6 ‘Antioch as a Link’, p. 16.

states was Philip of Tripoli, who under the patronage of the Bishop of Tripoli, Guy de Vere of Valence, translated the pseudo-Aristotelian *Secreta secretorum* into Latin.¹

In an English context, the importance of Arabic translations into Latin to the development of medical knowledge in particular was emphasized as early as Roger Bacon:

> There are certain hindrances to the acquisition of knowledge on the part of ordinary persons. One is the ignorance of the languages in which medicine is discussed. For the authoritative works are Arabic, Greek, Chaldean and Hebrew works, so that it is impossible for anyone to understand what the authors mean, as is shown in many places, and because they are ignorant of the Greek and Arabic and Hebrew languages from which an infinite number of words in the Latin books are taken, and because of their lack of knowledge they are not able to understand drugs nor how to make them.²

Bacon puts a particular stress on this point yet again in his *Opus maius*, where he dedicates a chapter to the importance of studying foreign languages.³ Similarly, Chaucer’s Physician is aware of the contribution of Greek and Arabic scholars to medical knowledge, as we have seen, but this physician is more interested in gold in all its forms than the *theoria* and *practica* of Salernitan medicine, ‘For gold in phisik in a cordial / Therefore he lovede gold in special’ (I. 433-4, p. 30).⁴ However, the list of names Chaucer gives us is indicative of the range of texts on the medical curriculum of the period, and demonstrates his familiarity with it. According to Curry, this list is nothing more than a random assortment of names, which the Physician bandies about to bamboozle his audience:

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⁴ Cf. Curry, *Chaucer and the Mediaeval Sciences*, pp. 34-6. The significance of the Physician’s love of gold is discussed below in Chapter Four.
The names of 15 illustrious physicians – Greek, Arabian and modern – roll impressively from his tongue as if they were selected on the spur of the moment and at random from a much larger reading-list. It does not particularly matter that he fails to present them in strict historical order, his hearers are laymen and will not discover the difference.¹

Curry is correct in assuming that they come ‘from a much larger reading-list’; they are drawn from the authorities on fourteenth-century medical curriculum lists, as we shall see. However, that they are ‘spur of the moment’ and not in ‘strict historical order’ is hardly indicative of a lay audience in itself, on the contrary, it is demonstrative of the Western medical curriculum and the attitude toward Arabic learning during this period. The medical curricula of the universities of Bologna, Montpellier, Paris, Padua, and, by the fourteenth century, Oxford, all contained the works of these scholars in no historical order, alongside works by the classical authorities, Galen and Hippocrates.

Forty students are known to have studied medicine at Oxford in the fourteenth-century, which seems disproportionately few, but it is important to remember that many Continental physicians came to England to practice medicine. As at Paris, students at Oxford could study both theology and medicine.² Furthermore, Oxford students had to study logic and natural philosophy, inherent to the arts curriculum, before moving on to the study of medicine, which entailed the study of Greek and Arabic texts in Latin translation.³ However, medicine was considered to be the weakest of the faculties; only the work of ‘Gatesden’ (I. 434, p. 30) was well-regarded on the Continent.⁴ This was in spite of a well-established tradition of the theoria and practica of medicine in England, dating back to the Anglo-Saxon period and evinced by the collection now housed at Worcester Cathedral, which includes translations from Arabic into Latin. As we have seen, manuscripts of Constantinus and the Articella were known in England from at least the twelfth century. The Benedictine Abbey of Bury St Edmunds possessed a

¹ Chaucer and the Mediaeval Sciences, p. 29.
⁴ Getz, ‘Faculty of Medicine’, p. 347.
manuscript of the Articella, now housed in the Wellcome Institute (MS 801A), which contains a Constantinian text and Hunāyn ibn Ishāq’s Isagoge. Bury also possessed two manuscripts of the Pantegni, one of which is now preserved in the library of Trinity College, Cambridge.¹ That Constantinus was revered as a medical practitioner into the fifteenth century is attested by Oxford, Bodleian Library, MS Rawlinson C.328, fol. 3r. Here, Constantinus is depicted in the Benedictine habit, holding a text book, representing no doubt his own writings, while some men and one woman stand in front of him holding their specimen flasks, ready for diagnosis. The text above the illumination emphasises his crucial role in the development of uroscopy:

> This is Constantinus, monk of Monte Cassino, who is as it were the fount of that science of long standing concerning the diagnosis of urines (iudiciis urinarum) and all ailments. In this book and many others he has set forth the true cure. To him come women with urine so that he may tell the ailment in the case.²

Following in the footsteps of Constantinus, the thirteenth-century diagnostician, William of Marseilles or William of England, wrote a notable treatise on uroscopy, c. 1209, De Urina non visa (‘On Urine Which Has Not Been Seen’). This treatise used medical astrology, specifically the casting of horoscopes, in the diagnosis of urine, if the physician was incapable of examining the specimen directly. William ‘was one of the first to use such judgements in the traditional area of uroscopy’, but his analysis of the quality of the urine is Constantinian.³ In the Introduction to the Pardoner’s Tale, Harry Bailey displays an improbable command of uroscopy, which reflect Chaucer’s debt to

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the contemporary medical curriculum. Here, our host refers to ‘urynales’ and ‘jurdones’, reminiscent of the specimen flasks depicted in MS Rawlinson C.328:

I pray to God so save thy gentil cors,
And eek thyne urynales and thy durdones,
Thyn ypocras, and eek thy galiones,
And every boyste ful of thy letuarie. (VI. 304-7, p. 194)

The Latin translations of Arabic texts were read by medical students in tandem with Galenic and Hippocratic texts translated from the Greek. However, the historical chronology of the authorities consulted was not important from a diagnostic perspective, as reflected in Chaucer’s list in the General Prologue. For instance, in order to gain a medical license from the University of Paris in 1270-4, the student had to have attended the ordinary and cursory lectures on the Articella, the Viaticum peregrinantis of Constantinus, the works of Isaac Israeli or Ishāq ibn Sulāyman al-Isrā‘īl (d. c. 932), the Antidotary of Nicholas of Salerno, and Giles of Corbeil’s De uriniis.¹ This was in addition to one book of the Theorica Pantegni and the Practica Pantegni of Constantinus, ‘He should take an oath to this effect; if anyone is convicted of perjury or lying, he can be departed of the license’.² Prior to commencing the medical curriculum at Paris, the student must have studied Aristotelian natural philosophy and Ptolemaic astronomy, which also relied on Latin translations of Arabic works. In this respect, the University of Oxford followed Paris: in order to incept in medicine a Bachelor in the late thirteenth century would have had to listen to the ordinary and cursory lectures on the Articella, except for Theophilus’ Liber urinarum (‘Book on Urine’), which he could hear only once, either ordinary or cursorily. Furthermore,

Other required books were the Viaticum, the works of Isaac Israeli on diets, fevers and urines and the Antidotarium of Nicholas of Salerno. The poems of

¹ On Isaac Israeli see Lynn Thorndike, University Records and Life in the Middle Ages (New York, 1944), pp. 81-2; cf. CUP, i, 517.
Giles of Corbeil might be offered even though they were not required as form (de forma) for a degree.¹

The 1309 list for Bachelor of Arts students in Montpellier is similar in content, but here the Articella has been replaced with Galenic tracts, and Hunāyn’s Isagoge is considered separately. In addition to a selection of works by Galen, the student must have also have studied Avicenna’s Canon of Medicine, Constantinus’ Pantegni, or Isaac Israeli’s Book on Fevers.² Clement V’s letter of 8 September 1309 to the medical school at Montpellier codified this new curriculum:

We, therefore, assenting with the favour of paternal benevolence to your worthy desires in this matter and wishing that the qualifications and competent expertise of these bachelors be fully established, by apostolic authority, on the advice and appeal of our beloved sons, masters Guillelmo of Brescia and Jean d’Ales, physicians and our chaplains, as well as of Master Arnau of Vilanova, physician, for the benefit of this same university, do decree that every bachelor in this faculty who is a candidate for promotion to this rank within this university should be obliged to possess, at the time of his promotion: the commented books [of the Articella]: Galen’s On Complexions, The Vices of Different Complexions, On Simple Medicine, On Disease and Accident, On Crisis and Critical Days, and Therapeutic Method; the books of Avicenna, or failing him, Rhazes, and also of Constantine and Isaac. Furthermore, they are expected to have read [studied and lectured on] two commented and one uncommented [works], namely, the Art of Medicine [of Galen] and the Prognosis or Aphorisms of Hippocrates (the latter up to part 5) and Regimen and Johannitius and the book on fevers by the same Isaac on the Antidotary [of Nicholas of Salerno] or [Galen’s] On Disease and Accident and Therapeutic Method up to book 8.³

¹ Getz, ‘Faculty of Medicine’, p. 386.
³ Cartulaire de l’Université de Montpellier, ed. Conseil général des facultés de Montpellier, 2 vols (Montpellier, 1890-1912), I, 219-21, trans. Wallis, Medieval Medicine, p. 196. According to Siraisi, the inclusion of al-Rāżī in place of Averroes is an obvious consequence of the 1277 condemnations. Siraisi also notes that this bull was possibly influenced by Guglielmo da Brescia, a scholar at the University of
Furthermore, the Masters curriculum list at Montpellier in 1340 contains, among the other texts, parts one and four of Avicenna’s *Canon of Medicine*, Hippocrates’ *Aphorisms*, several Galenic works and the *Isagoge* by Hunāyn.¹

The University of Bologna’s medical curriculum differed slightly from the French universities as medicine and arts were combined into one faculty, and students could study either or both. As Wallis notes, ‘this distinctive arrangement originated in the career of the first recorded professor of medicine at Bologna, Taddeo Alderotti’, whom Dante placed in the second circle of paradise.² His fame rested on the introduction of Aristotelian natural philosophy at Bologna, allied to the *theoria* and *practica* of medicine.³ Alderotti introduced Galenic and Hippocratic tracts to the curriculum and was among the earliest Latin commentators on Avicenna’s *Canon of Medicine*. He also commented upon many Arabic-Latin medical texts and his will included a copy of the *Almansor* by al-Rāzī.⁴ Alderotti and his colleagues at Bologna consolidated ‘the final stages of the two hundred year assimilation of Arabic medicine in the Latin West’.⁵ This consolidation is reflected in the 1405 curriculum list, which is as exhaustive as its French counterparts. Students had to study the Aristotelian philosophy of arts before proceeding to medicine which contained, in addition to the Galenic and Hippocratic treatises, al-Rāzī’s *Continens*, Avicenna’s *De anima*, and Averroes’ *Colliget*.⁶ Lectures on astronomy and astrology were also on the curriculum, concentrating on a range of Greek and Arabic texts in translation.⁷ These not only included the *Kitāb al-madkhāl ilā sinā‘at ahkām al-nūjūm* (‘The Book of the Introduction to the Art of Judgement from the Stars’) by the tenth-century astrologer, Abū al-Saqr ‘Abd al-Azīz bin Uthmān

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⁷ Wallis notes that the lectures on ‘the “new Galen” and the Arab encyclopaedists’ at Bologna, ‘pushed the old *Articella* into the background. The exceptional space devoted to astronomy and astrology is a distinctive feature of Italian universities’ (*Medieval Medicine*, p. 198).
bin ʿAlī al-Qabīsī, or Alcabitius, but also the *Centiloquium*, a commentary of Ptolemaic astronomy ascribed to the Egyptian ʿAlī ibn Ridwān ibn ʿAlī ibn Jaʿfar al-Misrī, known in Latin as Haly Eben Roden and John of Sacrobosco’s *Algorism on Integers and Fractions* and *The Sphere*. The treatise of the astrolabe by Messahalla, the Latinised form of the Arabic name of the Jewish astrologer, Mashāʾallāh was also studied and it is likely that Chaucer consulted this text in composing the *Treatise on the Astrolabe*, as we shall see. During their years of study at Paris, Montpellier and Bologna, medical students became entirely familiar with these Arabic authorities, and their auctorial value was reinforced by their curricular position alongside the fathers of medicine, Galen and Hippocrates.

Avicenna’s *Canon of Medicine* enjoyed a particular longevity in European universities; it was part of the curriculum well into the eighteenth-century, even though its diagnostic was challenged from the seventeenth-century onward. Nevertheless, it retained a formidable reputation in the Latin West for five centuries as a core medical text, because it explained the *theoria* of medicine in a coherent, organised manner. As we have seen, several sections of the *Canon of Medicine* were integrated into the curriculum, particularly, Book One, Part One, on physiology; Book Four, Part One on fevers, and Book Five on diseases *a capite ad pedes*. Most medical treatises arranged their exposition of diseases from head to toe, including the ninth book of al-Rāzī’s *Almansor*, notwithstanding its principal focus on practical medicine:

The materialist psychology associated with the concept of complexion and humoral qualities ensured that, in the *Almansor* and similarly arranged treatises, mental complaints (frenzy, melancholy) were interspersed among other afflictions of the head. Thus, too physicians included passionate love (*amor hereos*) among the physical diseases and enumerated the languishing lover’s physical symptoms.

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1 Gentile de Foligno (d.1348) wrote a commentary on the *Canon*, utilised extensively during the Italian Renaissance, and the Medieval Latin version of the text was revised by Andrea Alpago in 1522. Between 1500 and 1674 one hundred copies of the *Canon* were printed; cf. Nancy G. Siraisi, *Avicenna in Renaissance Italy* (Princeton, 1987).

The profound importance of al-Rāzī’s work concerning the development of *amor hereos* is discussed below, but the division of medicine illustrates the pervasive influence of ‘Razis, and Avycen’.

Avicenna’s work treated medicine as a science in the ‘Aristotelian sense of a body of knowledge’, which synthesised medical science with natural philosophy.¹ The association between medicine and natural philosophy, developed by generations of Arabic scholars after Avicenna, was endorsed by the Medieval university system. In order to study medicine, whether at Bologna, Montpellier, Paris, Padua, or Oxford, students were expected to have a thorough grounding in the seven liberal arts, thus incorporating philosophy, astronomy and the natural sciences into their medical training. However, the association of medicine with natural philosophy was not always clearly defined and often the topic of much debate. It was through the works of Avicenna and Averroes that medical writers in the Latin West began to explore the similarities and differences between symptoms, particularly the differences between Aristotelian and Galenic physiology. Medical knowledge, particularly physiology, was based on Galenic and Hippocratic works, and medical writers ‘identified themselves as the heirs and exponents of a primarily Galenic physiological tradition’:

Adherence to a learned tradition expressed in a body of authoritative medical writings constituted a guarantee of the separate identity of rational inquiry about the human body by *medici* as an authentic intellectual enterprise, distinct from natural philosophy. Moreover, in general, Galenic medicine provided a more richly detailed account of the human body than Aristotelian natural philosophy and one that in many particulars was likely to be confirmed by the experience of practitioners.²

However, Aristotle came to be regarded as just as much an authority in the field of medicine as Galen and Hippocrates, and this blurring of boundaries ‘was further complicated by the fact that Galen himself had had eclectic philosophical interests, drawing upon both Plato and Aristotle, and that philosophical concepts underlay many

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of his physiological formulations'. Although Salerno was the first to employ both Aristotelian and the Galenic systems in the study of medicine, as we have seen, this uneasy synthesis of Aristotelian philosophy and Galenic medicine was further disputed in the West throughout the Middle Ages. Avicenna, both as an Aristotelian philosopher and a medical theoretician and practitioner, was fully aware of the complicated relationship between medicine and philosophy. In the *Canon of Medicine* he focuses trenchantly on the physiological aspects of medicine as opposed to the philosophical, continuously highlighting instances where the approach of the physician differs from that of the philosopher. In discussing the organ of the heart he states, ‘There is a great disagreement between the philosophers and the physicians’, but he also attempts to reconcile Aristotelian and Galenic concepts, as we shall see.

Avicenna’s distinction between the physiological and the philosophical may well have influenced Chaucer’s oeuvre. In addition to the passing reference to him in the General Prologue, Avicenna is explicitly named in the Pardoner’s Tale. In decrying the ‘empoisonyng’ (VI. 891, p. 201) undertaken by the youngest brother to kill Death, the Pardoner names the Prince of Physicians and his most famous work in the Latin West, ‘But certes, I suppose that Avycen / Wroot nevere in no canon, ne in no fen,’ (VI. 889-9, p. 201). Here, the word ‘fen’ is in fact the Latinised form of the Arabic word, ‘fann’ (‘specimen’), which demonstrates Chaucer is aware that each book of the *Canon of Medicine* is sub-divided into categories, including the ‘fann’, in relation to diseases, symptoms, and cures. The term ‘fann’ in associated exclusively in Latin medical lexicography with Avicenna. Similarly, the condemnation of the ‘cursed monk, daun Constantyn’ (IV. 1810, p. 161) in the Merchant’s Tale is indicative of a more complex engagement with the work of Constantinus Africanus than the passing reference to him in the General Prologue might suggest. Certainly, his translations were studied at the universities of Paris, Montpellier and Bologna from the twelfth century onward, as we have seen, and cited by such thirteenth-century physicians as John of Gaddesden, and such surgeons as Lanfranc de Milan and Bruno da Longoburgo. However, Maurice Bassan points to the influence of ‘Alderotti’s contemptuous criticism of Constantine’, as a ‘barbaric translator’, which ‘became part of the conventional fourteenth-century view

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1 Siraisi, *Medieval and Early Renaissance Medicine*, p. 81.
of Constantine among learned men'.¹ This opinion ‘could be held along with the belief that Constantine was one of the great “physicians” … Chaucer could both cite Constantine among the great medical authorities, and cause him to be labelled, in a different context, a “cursed monk”’.² This suggests Chaucer understood contemporary academic concerns regarding the quality of Constantinus’ translations from Arabic into Latin; that Chaucer was aware that he freely adapted Arabic works, as opposed to producing a faithful translation. However that might be, there is another reason why the Merchant, as opposed to Chaucer, might regard Constantinus as ‘cursed’.

Although Constantinus’ translations of Haly Abbas and Ibn al-Jazzar were an intrinsic part of the medical curriculum of the Medieval university, *De melancholia*, *De coitu*, and the *Vitium peregrinantis* reached a larger audience throughout Western Europe. In this broader context, Constantinus was considered particularly important due to his translation of ‘*ishq*, with all its implications, to which we now turn. This word ‘*ishq*, which is not derived from the Qur‘ān, refers to passionate love and differs from such common Arabic words for love as *hubb* or *mahābba*. During the classical Arabic period, it came to denote the kind of love Western writers described as *fin’ amors*: a furious, yet ennobling force. It became a topic not only discussed in poetry and *adāb* (‘belles-lettres’) literature, but also by theologians and philosophers, including those studying medicine and law, throughout the Near and Middle East.³ There are several classical Arabic works on ‘*ishq*, most notably, Muhammad al-Washshā’s *Kitāb al-muwashshā aw al-tarf wa al-turāfa* (‘Book on the Adorned’), Ibn Dawūd al-Isfahānī’s *Kitāb al-Zahra* (‘Book of the Flower’), Abū al-Hasan ‘Alī ibn Muhammad al-Daylamī’s *Kitāb *atf al-alif al-ma’līf ‘ala l-lām al-ma’ţāf* (‘Book on Mystical Love’), Abū ’Uthman ‘Amr ibn Bahr al-Kīnānī al-Basrī Ibn al-Jahīz’s *Risāla fī al-*ishq* (‘Treatise on Love’), Avicenna’s *Risāla fī al-*ishq* (‘Treatise on Love’) and Abū al-

² Bassan, ““Cursed Monk””, p. 139.
³ According to Hans Hinrich Biesterfeldt and Dmitri Gutas, ‘The Malady of Love’, *JAOS* 104 (1984), 21-5 (p. 23), ‘*ishq* is only discussed fully in the medical tradition and after this, in linguistic analyses of *mahābba* and ‘*ishq* concerned with ‘whether the latter exceeds the limits of acceptable human emotions, and whether it should be defined as a malady which forces the lover from responsibility for his behaviour’. It is also discussed in *adāb*, but ‘with only incidental reference to the technical humoral material’. Cf. Lois Anita Giffen, *Theory of Profane Love among the Arabs: Development of the Genre* (London, 1972), p. 96.
Hasan ‘Alī ibn al-Husayn ibn ‘Alī al-Mas‘ūdī’s *digressio* on love in his discussion of the fall of the Barmakids in *Mu‘rūj al dhahab wa ma‘ādin al-jawhar* (‘Meadows of Gold and Mines of Gems’). The thirteenth-century Syrian scholar, Ibn Qayyim al-Jawzīyya speculates on the etymology of the term, and notes it was used to denote both heterosexual and homosexual love:

Ibn Sida said, “*Ishq* is the lover’s admiration for the beloved. It may occur in chaste love or in immoral love’ … Ibn al-‘Arābī said, ‘Ashaqa is synonymous with *lablāba* [an ornamental climbing bean, *Dolichos lablab*], which is green or yellow and clings to the trees which are close to it.2

There are a compelling number of similarities between *ishq* and *fin’ amors*. Firstly, like *fin’ amors*, *ishq* describes ‘the irresistible desire (shawk tashawwuk) to obtain possession of a loved object or being (ma’shūk).’3 It conforms to a hierarchical model where the beloved or ‘āshiq has a need for ennoblement, which also mirrors the philosophical concepts of soul and body. This is triggered by the ‘aspiration (tawakān) towards the Beauty (al-husn)’, which reflects the Islamic ideal of beauty.4

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3 Arkoun, ‘‘Ishk’, pp. 118-19.

4 Arkoun, ‘‘Ishk’, pp. 118-19.
God manifested in the world when He created Adam in His own likeness … Because of this, the eyes and the ears are the noble organs, since they perceive the supports of the beautiful (al-hasan): a face, a head of hair, a heavenly landscape, melodious sounds, etc’.¹

This ideal of beauty mirrors Geoffrey of Vinsauf’s descriptio femininae lampooned in Chaucer’s description of the Priorress and Alison in the Miller’s Tale. Furthermore, this concept was coupled with the Greek philosophical ideal of the ‘one indissoluble Unity (wahda)’.² The development of ʿishq in classical Arabic texts can be divided into ‘1) natural love (mahabba tabi’iyya), 2) intellectual (akilyya) love, and 3) divine (ilāhiyya) love’.³ Ennoblement is the most important element of ʿishq, ‘All natural beings (mawdjudāt) are moved by the desire to raise themselves to the degree of existence immediately above them’.⁴ This dynamism, which animates the entire universe, is ʿishq. In the case of human beings in particular, ʿishq develops from affectionate feelings to passionate love which has both a physiological and psychological effect, and because it is ‘purified of all carnal demands, this passion is sublimated into an attitude of adoration which provokes a mental imbalance (ikhtilāt)’.⁵

The concept of ʿishq was further developed with the translation of Greek philosophical texts into Arabic and the emergence of the falsafa, the peripatetic philosophers. Many of the early writers on ʿishq also studied philosophy and medicine, for instance, Ibn Dawūd who wrote the Kitāb al-Zahra, also commented on ‘scholarly traditions’ inherited ‘from al-Kindi, and we might therefore conclude that he studied under that scholar, whose work encompassed the whole field of science and philosophy’.⁶ Moreover, through the incorporation of philosophy, ʿishq involved the quest for ‘supreme happiness (al-saʾāda al-kuswā).’⁷

¹ Arkoun, ‘ʿIshk’, pp. 118-19. However, as Giffen notes, the ideal of beauty differs in each work on love: ‘these writers as a rule are not much concerned with the analysing or describing of the fine points of manly or womanly beauty and the sensual appeal of particular features’ (Theory of Profane Love, p. 59).
² Arkoun, ‘ʿIshk’, p. 119.
⁴ Arkoun, ‘ʿIshk’, p. 119.
The more the wise man advances in his passionate quest for the one True One (al-wāhid al-hadd), the more he feels growing within him the ineffable joy (ibtihad), the absolute pleasure (al-ladhidha al-mutlaka), which are secured through the contemplation (mushāhadda) of the perfection and beauty of the necessary Being (wādjib al-wudjūd).¹

Within the Sūfī tradition 'ishq was combined with the Qur’ānic ideal of affection ('mahabba’) and was used to describe the love of God. Such Sūfī mystics as the ninth-century Persian, Abū al-Mujīt Husayn Mansūr al-Hallāj; the twelfth-century Andalusian, Muhammad ibn 'Alī ibn al-'Arabī, and the twelfth-century Persian, 'Abū al-Najib Suhrawardī, all contributed to this development. Love ‘becomes an absolute necessity, entailing neither enjoyment nor alleviation, but intensifying as the reciprocity of perspectives between the lover and the Loved comes into effect’.² 'Ishq is also found in jurisprudence, especially the writings of the eleventh-century Persian, Abū Ḫāmid Muḥammad ibn Muḥammad al-Ghazālī, and the thirteenth-century Turkish scholar, Taqī al-Dīn Ahmad ibn Taymiyya, as the defining characteristic of ‘self-awareness’, specifically an obsession ‘with the quest for the eternal, the transcendent and the sacred’.³ Thus the contemplation of 'ishq led to an examination of the physiological and psychological effects of passionate love, including its ‘culmination in a mental imbalance (ikhtilāt) and the ideal of beauty’.⁴ The association of 'ishq with madness is noted by Ibn Qayyim al-Jawzīyya, ‘Some of the Arabs say, ‘ishq is a kind of madness. Madness has its varieties and ‘ishq is one of them’.⁵

Indeed, an almost forensic examination of passionate love as a disease became central to the Arabic medical tradition; all of the Arabic authorities mentioned by Chaucer’s Physician, apart from Averroes, included a section on love in their medical compendiums. The Latin idea of amor hereos was particularly influenced by the translations of Constantinus, and the works of Avicenna, which contained the most

⁴ Arkoun, ‘ʿIshk’, p. 119.
developed diagnosis of lovesickness. The *Viaticum peregrinantis* was the principal text used to diagnose this malady up to the thirteenth-century, only to be gradually supplanted by translations of Avicenna’s *Canon of Medicine*, as it was integrated into medical curricula in the Latin West.\(^1\) Avicenna discusses lovesickness in the *Canon of Medicine* (Book Three; Fen One, Tract Five) and this section, translated into Latin by Gerard of Cremona, was incorporated into the Medieval medical curriculum. Gerard’s Latin translation translates ‘*ishq* as *De ilisci*, and defines it as a melancholic solitude which befalls men who indulge in excessive meditation on the beauty of the beloved.\(^2\) He goes on to discuss the symptoms and cures for this disease. It affects the eyes and alters the disposition towards excessive laughter and elation, alternated with sadness and weeping, especially when listening to music, or after the dissolution of any relationship with the beloved.\(^3\)

The transition from *amor eros* to *amor hereos* is itself indicative of the translation process. In the Knight’s Tale we are told Arcite suffers from ‘the loveris maladye / Of Hereos’ (I. 1373-4, p. 44). The origin of this phrase was identified by Lowes, who provided a survey of the medical texts which included the diagnosis of *amor hereos*. Boase also includes a brief explanation of the term *amor hereos* in his study of *fin’ amors.*\(^4\) More recently, Wack has demonstrated that in the case of works by Haly Abbas and Ibn al-Jazzar, Constantinus translated ‘*ishq* as *amor eros*, ‘He was the first, as far as we know to endow the Arabic work for passionate love or lovesickness “*išq*” with a Latin equivalent, and thus to give western physicians a diagnostic term for the malady of love’.\(^5\) Wack notes that in Johannes Afflacius’ *Liber de heros morbo* the oblique forms *eriosis* and *eriosos* found in Constantinus have been replaced with

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heroicus, giving it ‘a new and unique meaning’.\(^1\) The *Liber de heros morbo* is a translation of Ibn al-Jazzar’s chapter on ‘ishq in his *Zād al-musāfir*. According to Wack, who first noted its importance for the origin of the term *amor hereos*, its very translation ‘indicates an interest around 1100 in medical doctrines of passionate love not satisfied by Constantine’s version of the *Viaticum*.\(^2\) The *Liber de heros morbo* is also important because it is a faithful translation of Ibn al-Jazzar:

The Latin author of the *Liber* must have worked with the Arabic version in front of him. The vocabulary, syntax, and content are so internally consistent on the one hand and so distinct from the *Viaticum* on the other as to make it highly improbable that the *Liber* originated from the Latin version alone.\(^3\)

Not only is it a closer rendering of the Arabic original than Constantinus’ *Viaticum peregrinantis*, but the replacement of ‘Constantine’s *eros* and his neologism *eriosus* (attested forms *eriosis, eriosos*)’ with ‘new uses of the established *heros* “noble” and *heroicus* “belonging to the nobility”’, suggests for the first time that lovesickness was a disease of the nobility.\(^4\) Furthermore, Wack maintains that the change from *eros* to *heros* or *heroicus* could only have occurred if Johannes Afflacius knew of Constantinus’ *Viaticum peregrinantis*, ‘Otherwise he had no motive for interpreting Arabic ‘ishq’ as heros, ‘whose usual meanings were “hero, noble, baron”’’.\(^5\)

There is a clear progression from the Constantinian translation of ‘ishq and the later Latin term *amor hereos*, but ‘whether heros was adopted from a *Viaticum* manuscript’, or ‘whether it was intended as a deliberate contrast to *eros*’ remains a great deal more difficult to discern. The noble overtones of *heroicus* are reinforced in the *Liber de

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\(^1\) *Lovesickness*, p. 47. Johannes Afflacius studied at Monte Cassino under Constantinus Africanus. The *Liber de heros morbo* survives in two manuscripts, Vatican, Biblioteca Apostolica, Borghesiana 86 (B), from the twelfth century, and Wurzburg, Universitätsbibliothek, m.p. med. f. 3 (W), from the thirteenth century. Wack notes that in ‘both manuscripts it is embedded among short medical works attributed to Constantine the African and others. The later manuscript contains the title “Domini Constantini liber de heros morbo” (‘Liber de Heros Morbo’, p. 325).

\(^2\) Wack ‘Liber de Heros Morbo’, p. 325.


\(^4\) ‘Liber de Heros Morbo’, p. 332.

*heros morbo* where ‘intense sexual love’ is compared to ‘loyalty to a lord’. Moreover, this emphasis on nobility is echoed by the thirteenth-century Catalan scholar, Arnald of Villanova. In his *Tractatus de amore heroica* (‘Treatise on Heroic Love’), he tells us this kind of love is termed ‘heroic as though lordly (*quasi dominalis)*, not only because it befalls lords, but also either because it dominates, subjugating the soul and ruling a man’s heart, or because the acts of such lovers toward the desired object are similar to the acts of servants toward their lords’. Here, there is a clear parallel established between the love and loyalty the lover directs toward the object of his affection and an idealised relationship between a servant and his master, emphasising the inherently ennobling aspect of *amor hereos*. By the close of the twelfth century, this metaphorical service had developed into a literary topos, exemplified by the Man in Black’s sorrow in the *Book of the Duchess*, ‘In this debat I was so wo / Me thoghte myn herte braste atweyne!’ (ll. 1192-3, p. 344). We are also reminded of the Clerk’s Tale, when Walter sees Griselda for the first time while engaging in the quintessentially noble pastime of hunting:

As he on huntyng rood paraventure;  
And whan it fil that he myghte hire espye,  
He noght with wantown lookyng of folye  
His eyen caste on hire, but in sad wyse  
Upon hir chie he wolde hym ofte avyse. (IV. 234-8, p. 140)

However, a distinction must be drawn ‘between heros morbus and the erotic suffering of stylised love service in later Medieval literature’. Constantinus begins the *Viaticum peregrinantis* with a definition of *amor hereos* as a mental disease, ‘The love that is also called “eros” is a disease touching the brain’. The Latin commentators on the *Viaticum peregrinantis* adhere to this definition in developing the idea of *amor* as a heroic disease; for instance, the thirteenth-century physician Gerard of Berry, begins the earliest extant commentary on the topic with the definition, ‘Love that is called

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hereos'. Gerard’s commentary, the *Glosule super Viaticum*, written c. 1220-36, was the first to include the newly translated Aristotelian physiological treatises and Avicenna’s psychological work, *De anima*. Indeed, all subsequent discussions of lovesickness in the *Viaticum peregrinantis* relied on the *Glosule super Viaticum*, which circulated widely in manuscript form throughout England. Examples survive from ‘Merton, Canterbury, Dover and York’, in manuscripts ‘owned by laymen as well as physicians’. Moreover, Latin commentators continued to develop the correlation between nobility and lovesickness well into the fifteenth century. In commenting on Avicenna’s *Canon of Medicine*, Jacques Despars ‘explains that this insane love is called “hereos” or “hereosus” because it befalls noble men and heroic men more often than men of the common people’. Similarly, in *De viribus cordis* (‘On the Strength of the Heart’), extracted from Book Five of the *Canon of Medicine* and translated by Arnald of Villanova, Avicenna relates the very essence of life to social standing, ‘The effect of the quality of the breath, the more noble the character possessed by it and the more noble its substance, the more luminous does it become, and the more like celestial substance will it be’. This reflects one of the principal topoi of *fin’ amors*: the nobler the spirit and the physical body which houses it, the more susceptible both are to the malady of love. In his depiction of Arcite’s lovesickness in the Knight’s Tale, Chaucer places a particular stress on the physical effect *amor hereos* has on his mouth:

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Thanne wolde he wepe, he myght nat be stent.
So feble eek were his spiritz and so lowe,
And chaunged so, that no man koude knowe,
His speeche nor his voys, though men it herde. (I. 1368-71, p. 44)
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Not only is he prone to continuous weeping, but his speech and voice have also changed; he is down in the mouth because his spirits have fallen. Arcite will never again attain spiritual uplift and fulfilment unless he is ennobled in love by Emelye.

Moreover, the therapies for lovesickness were particularly geared toward the nobility, not only in the Latin West, but also in the courtly milieu of Arabic culture, although the Arabic medical texts do not make it explicit that ‘ishq is peculiar to the nobility. Certainly, adāb literature employed the motif of lovesickness, but with reference to the medical tradition, in which ‘ishq was intrinsically linked with melancholy, in contradistinction to the Greek tradition. Galen is the earliest extant Greek writer to discuss lovesickness in a medical manner, but he does not define it as a disease. Galen’s analysis of love is endorsed by a succession of later Greek writers, most notably, Oribasius, Caelus Aurelianus and Paul of Aegina. However, when translating these Greek texts, Arabic scholars redefined lovesickness as a disease and, most importantly, paired ‘ishq with melancholia. Lovesickness is manifested physically through changes in appearance and behaviour as well as mental imbalance, therefore, two cures are needed, one for the body and one for the mind, in order to restore health. During the Great Translation Movement, books on melancholia were translated into Arabic, including those of Chaucer’s ‘Rufus’ (I. 430, p. 30). The original Greek works ascribed to Rufus of Ephesus no longer survive, except in fragments, extracts and quotations attributed to him in over a hundred Greek, Syriac, and Arabic texts. However, his De melancholia is the foundation of the Greek and later the Arabic medical diagnosis of lovesickness. Rufus of Ephesus was considered to be the ‘most important author’ on the subject by Galen because ‘like no other physician from Antiquity, Rufus of Ephesus combines the two major strands in the concept of melancholy: melancholy as a mental disease having physiological origins, and melancholy as a disposition leading to both despair and creativity’.

De melancholia is divided into two books, the first book describes the symptoms and causes, while the second book discusses the cures and therapies. According to the

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3 Pormann, ‘Introduction’, p. 3.
tenth-century physician, Ishāq ibn Imrān, who used De melancholia in his own Maqāla fī al-malikhūliya (‘Treatise on Melancholy’).

I have read no satisfying book or comprehensive details about melancholy by any ancient author except one by a man among the ancients named Rufus of Ephesus. Now although this man has written a book in two chapters on this illness in which he has used his utmost intellectual endeavours and has conducted excellent investigations into the illness, its symptoms and the method of its treatment, he has nevertheless, despite all his ability, treated only one type of this illness, namely, hypochondria, and has omitted to mention the other types.

The Latin West became acquainted with De melancholia through Constantinus’ translation of Ishāq ibn Imrān’s work. Rufus asserted that hypochondriac melancholia was derived from black bile, later systematized in Galen’s On the Nature of Man:

when in the hypochondria or in the neighbourhood of the orifice of the stomach, following a disturbance of the digestion, a large amount of black bile collects, a black bile vapour rises from it into the brain, as the result of which, sadness, depression and hallucinations appear.

However, there is a second type of melancholia, ‘which causes the blood of the whole body to become black bile, and also a third, in which this black bile-blood is found only in the brain’. These three types correspond with Galen’s categories, where

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1 58 books of Rufus of Ephesus were translated into Arabic, but his work is not typical of the Greek medical tradition on eros. The concept of ʿishq is alien to this tradition except for the works of Oribasius and Paul of Aegina and a late Alexandrian text in Arabic called the Problemata physica. Haly Abbas cites both of these writers in his preface to Kitāb al-māliki, but they are excised from Constantinus, along with all of the Arabic names; cf. Jacquart and Micheau, Le médecine arabe, p. 104.


4 Ullmann, Islamic Medicine, pp. 37-8.
hypochondria is defined as melancholia together with ‘encephalic melancholy (affecting primarily the brain)’, and ‘general melancholy, in which corrupt black bile pervades the whole of the body’.1

It seems likely that Galen derived his categories from Rufus.2 In Galenic humoral pathology, the four humours constitute the body: bile, black bile, blood and phlegm. The body feels healthy when all four of these are equalised, therefore, when the product of one of these humours is deficient or excessive, the body and mind feels pain. The humours correspond to the four elements and together these affect a person’s health and complexion: fire is hot and dry and corresponds to choler or bile, making one choleric; water is cold and wet and corresponds to phlegm, making one phlegmatic; earth is cold and dry and corresponds to black bile, making one melancholic, and air is hot and wet and corresponds to blood making one sanguine.3 Rufus of Ephesus is also credited with systematizing the two categories of melancholia, ‘melancholy as a mental disease having physiological origins, and melancholy as a disposition leading to both despair and creativity’.4 Melancholia is either a disposition to which one is innately susceptible or it is acquired, made manifest through physiological and psychological symptoms. Before Rufus of Ephesus, the melancholic disposition was associated with Platonic frenzy. For Plato, melancholia was a clouding of the senses, ‘at least moral insanity, clouding and weakening will and reason; for he regarded it as a symptom of what he describes in the Phaedrus as the worst soul of all – that of the tyrant’.5 This clouding of the senses was further systematized in Aristotelian natural philosophy; the medical aetiology of the ‘humour of malencolie’ (VII. 2933, p. 255) is found in Aristotle’s Problem XXX I. Just as Rufus had associated melancholy with ‘despair and creativity’, Aristotle poses the question as to ‘Why is it that all those who have become eminent in philosophy or politics or poetry or the arts are clearly melancholics, and some of them

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3 For a full discussion of the Greek roots of humoral pathology see Raymond Klibansky et al., Saturn and Melancholy (London, 1964), pp. 3-17. On the transmission of Galenic works on melancholy into Arabic see Dols, Majnum, pp. 18-19 and 38-47.
4 Pormann, ‘Introduction’, p. 3.
5 Klibansky, Saturn and Melancholy, pp. 16-17.
to such an extent as to be affected by disease caused by black bile?’1 This disease can affect everyone, both natural melancholics and people who are afflicted with an inherent excess of black bile. Moreover, Rufus of Ephesus is credited with developing ‘the link made in Problem XXX I, between melancholy and intellect’, whereby melancholia was defined as a disease caused by black bile which particularly affected the brain, the seat of the intellect2

Drawing on translations of *De melancholia* and the Galenic treatises, the Arabic medical tradition collectively endorsed the idea that black bile was the cause of melancholia. In the *Kitāb kāmil al-sinā’ah al-tibbiyya*, Haly Abbas describes the imbalance in the humours which causes melancholia, ‘the black bile vapours which rise from the stomach to the brain, or it is the burnt-up humours of the whole body that affect the brain’.3 This is the physical effect of melancholia, which particularly affects the brain, the seat of both physical and emotional pain. Constantinus’ translation of Haly Abbas’ text reiterates this point, ‘the discussion of love in the ninth book of the *Theorica Pantegni*, which covers internal diseases from head to toe, is embedded in a chapter on melancholy’.4 Once again, ‘internal diseases’ reflect both the physical and emotional manifestations of lovesickness. Haly Abbas is not the only one to advocate this theory, Avicenna’s *Canon of Medicine* has a ‘section devoted to love, which is classed under cerebral or mental diseases, together with somnolence, insomnia, amnesia, mania, hydrophobia, melancholia and the like’.5 Once again, the aetiology of lovesickness is located in the brain, with particular emphasis on its mental manifestations. Constantinus’ *Viaticum peregrinantis* and its Latin commentaries define love as a melancholic disease of the brain and indicate that both the symptoms and cures of the disease are physical and mental, affecting the body, soul and mind:

Since this illness has more serious consequences for the soul, that is, excessive thoughts, their eyes always become hollow [and] move quickly because of the soul’s thoughts [and] worries to find and possess what they desire. Their eyelids are heavy [and] their colour yellowish; this is from the motion of heat which follows upon

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1 Klibansky, *Saturn and Melancholy*, p. 18.
2 Klibansky, *Saturn and Melancholy*, p. 49.
sleeplessness. Their pulse grows hard and does not dilate naturally, nor does it keep the beat it should. If the patient sinks into thoughts, the action of the soul and body is damaged, since the body follows the soul in its actions, and the soul accompanies the body in its passion.¹

In his Kitāb al-Hāwi fī al-tibb, al-Rāzī also notes that melancholia arises in the brain, particularly during the spring, when it ‘is provoked, if the blood is melancholic’.² Indeed, the humours were intrinsically linked to the four seasons and the four ages of man, as described in Hunāyn ibn Ishāq’s Isagoge:

There are four ages; namely, youth, prime of life, maturity, and old age. Adolescence is of a hot and moist complexion; in adolescence the body increases and grows up to the twenty-fifth or thirtieth year. The prime of life follows, which is hot and dry, preserving the body in a perfect state, with no diminution of its powers, and it ends at age thirty-five or forty. After this comes maturity, which is cold and dry, in which the body begins to decline and decrease, although its power is not ablated, and it lasts to the fiftieth or sixtieth year. After this comes old age, abounding in phlegmatic humour, cold and wet, in which it is apparent that there is a decline of power, and it ends with the end of life.³

Here, it is worth noting that the third age, senectus, is ‘cold and dry’, much like the cause of black bile melancholia.

Both the Viaticum peregrinantis and the Pantegni contain sections on the malady of love; thus, its causes, symptoms and treatments became part of the Western medical curriculum during the Middle Ages. Moreover, those who were perceived to be

particularly susceptible to lovesickness, that is, members of the nobility, were also most able to afford the services of a university educated physician, who would be expected to treat the patient efficiently with the treatments described in the *Viaticum peregrinantis*, or the *Pantegni*, or Avicenna’s *Canon of Medicine*. Although the chapter on lovesickness in the *Viaticum peregrinantis* had been ‘the most widely read text on the subject’, and the work as a whole retained its popularity throughout the Middle Ages, the *Canon of Medicine* became the principal medical handbook on love when it ‘entered medical curricula in the late thirteenth-century’.\(^1\) However, medical reference books known as *concordantiae* in the thirteenth and fourteenth centuries contained a section headed *amor hereos* which referred to this chapter in the *Viaticum peregrinantis*, as well as Avicenna’s discussion in the *Canon of Medicine*. We may note the example of a *concordantia* compiled by Johannes de Sancto Amando, professor of medicine at Paris, which included a section on *amor hereos*:

The reader of this entry in Jean’s concordance, after learning of Galen’s famous diagnosis of lovesickness by alterations of the pulse, is referred to Constantine and Avicenna: “De ista material habes I (primo) viatici et III (tertio) Avicennae” (Concerning this material see the first book of the *Viaticum* and the third book of Avicenna). Jean’s concordance was revised by Pierre de St Flour (Petrus de Sancto Floro), who received his degree as bachelor of medicine at Paris in 1349. Under the entry *amor hereos* Pierre lists al-Razi, Averroes and Constantine as authorities, and he also quotes Avicenna’s definition of *ilisci* (‘ishk) from the *Canon*. These concordances testify that Constantine and Avicenna were considered the standard authorities on the subject of lovesickness in the thirteenth and fourteenth centuries.\(^2\)

That Chaucer was most probably influenced by the first book of the *Viaticum peregrinantis* and the third book of the *Canon of Medicine* in developing his concept of *amor hereos* was originally suggested by Lowes, and reaffirmed by Wack. However, it seems likely that Chaucer not only drew on these sources, but other physiological causes and symptoms of lovesickness embedded in various sections of the *Canon of

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Medicine, involving the humours, temperament, organs and spirits, as described above. It is worth noting that Avicenna stressed that symptoms vary according to their physiological basis, and this influenced Chaucer’s complex, detailed treatment of amor hereos. Certainly, Chaucer is aware that the Galenic, humoural pathology we find in Avicenna also encompassed astrological features. By the fourteenth century, medical astrology of this kind had gained precedence in the Italian universities in particular. As we have seen, Chaucer’s ‘astronomye’, which encompassed astronomy and astrology, was taught as part of the Aristotelian arts curriculum at Bologna. The Physician is ‘grounded in astronomye’ (I. 414, p. 30), and Chaucer draws on the idea that the planets influenced one’s appearance and temperament on numerous occasions. In the General Prologue, the effect of the humours on an individual’s disposition is clearly delineated in some of the portraits. The Franklin is described as ‘sangwyn’ (I. 333, p. 28), while the Reeve is a ‘sclendre colerik man’ (I. 587, p. 32). In the Nun’s Priest’s Tale Pertelote explains to Chantecleer that his dreams are based on the excess of bodily humours:

Swevenes engendren of replleckions,

And ofte of fume and of compleckions,

Whan humours been to habundant in a wight. (VII. 2923-5, p. 254)

That Chaucer was aware of the effect of the humours on one’s appearance and temperament, particularly due to such an external influence as love, is attested in the Knight’s Tale, where Arcite’s illness is caused by ‘the humour malencolik’ (I. 1375, p. 44), which stems from black bile. An excess of black bile transforms one’s disposition in a particularly malign manner. According to Avicenna, those suffering from such an excess are ‘hard to please, obstinate, suspicious, sorrowful and given to fearful thoughts’.¹ In the Nun’s Priest’s Tale, melancholy is directly associated with sorrow, ‘Right as the humour of malencolie / Causeth ful many a man in sleep to crie’ (VII. 2933-4, p. 255).

These features dominate the depiction of melancholy in Troilus and Criseyde and the Knight’s Tale. Arcite is full of sorrow, ‘waillynge al the nyght, makynge his mone’ (I. 1366, p. 44). Troilus also finds himself wailing alone in his chamber, to the point

where he contracts ‘a blaunche fevere’ (I. 916, p. 486), which is the white fever classified as a symptom of lovesickness by Avicenna. Fearful thoughts take hold of the lovesick Troilus, which is indicative of an excessive amount of black bile in his body, causing him to suffer from melancholia. He proclaims to Pandarus, ‘Nor other cure kanstow non for me; / Ek I nyl nat ben cured; I wol deye’ (I. 757-8, p. 483). Avicenna notes how the production of black bile is exacerbated by ‘heating agents’ and ‘repose’, and Troilus’ melancholia is exacerbated by his slumber once he has succumbed to love.\(^1\)

Initially, it might appear that Troilus is so weakened by the malady of love he has to rest, but ‘Liggyng abedde’ (I. 915, p. 486) only serves to increase the excess of black bile coursing through his system, causing him to fall into a deeper melancholy because his internal organs are affected. According to Galenic and Arabic medicine, there are three principal organs in the body, the heart, the liver and the brain. Avicenna defines these three organs in terms of their elements, in Book Three, Fen Two, of the *Canon of Medicine*:

> the brain is cold, but its coldness does not modify the heat of the heart and the liver. The heart is dry, or nearly so, yet its dryness does not alter the moisture of the brain or liver. Neither is the brain absolutely and entirely dry. The heart is dry compared with the other two and the brain is ‘cold’ compared with the other two.\(^2\)

Thus the three organs vary in degrees of coldness and dryness, being divided into varying degrees of heat: the hot organs, the moist organs, and the dry organs. In common with the *virtus vitalis* or breath, called *rūḥ* in Arabic, the heart is a hot organ. Indeed, the heart houses the *virtus spiritus*, which is the source of life; the brain houses the *virtus spiritus*, while the liver houses the *virtus naturalis*:

> The vital spirit, hot and dry, has its centre in the left ventricle of the heart, preserves life, causes the body to grow, move and reproduce, and travels through the arteries. (2) The psychic spirit, cold and wet, has its centre in the brain, causes sensation and movement and moves through the nerves and is the source

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2 Gruner, *Treatise on the Canon*, p. 60.
of movement and reason. (3) The natural spirit, hot and wet, has its centre in the liver, is concerned with the reception of food, growth and reproduction and travels through the veins.\footnote{Gruner, Treatise on the Canon, p. 98.}

An excess of black bile occurs when the heat in one’s body is raised considerably, due to the heart and the \textit{virtus vitalis}, which are both innately hot. In \textit{Troilus and Criseyde}, Chaucer refers to this Avicennian concept of the heart as a hot organ in describing Troilus’s condition, ‘Ayeyns his wille that shuld his herte stere, / Yet with a look his herte wex a-fere’ (I. 228-9, p. 476). Metaphorically, Troilus’s heart is on fire with love; however, from a medical perspective we may note the rising heat of the hot organ. The Black Knight in the \textit{Book of the Duchess} suffers from a similar condition:

\begin{verbatim}
 Whan he had mad thus his complaynte,
  Hys sorwful hert gan faste faynte
  And his spirites wexen dede:
  The blood was fled for pure drede
  Doun to hys herte, to make hym warm-
  For wel hyt feled the herte had harm-
  To wite eke why hyt was adrad
  By kynde, and for to make hyt glad.
  For hit ys membre principal
  Of the body; and that made al
  Hys hewe chaunge and wexe grene
  And pale, for ther noo blood ys sene
  In no maner lym of hys.  (ll. 487-99, p. 336)
\end{verbatim}

Here, Chaucer’s use of medical terminology is extremely precise; he weaves a symptomatic aetiology of the Man in Black’s melancholia into a courtly, essentially literary description of his suffering in the \textit{fin’ amors} tradition. Chaucer notes that the Black Knight’s blood has travelled to his heart to make him warm, indicative of the rising heat of the organ, which is the source of his melancholia. Once the ‘membre
principal’, that is, the vital organ of his heart, is affected by black bile, his entire complexion is affected, which is a paradigmatic symptom of black bile melancholia.

As we might expect, the Latin commentators on the Viaticum peregrinantis follow Constantinus and Avicenna in pairing melancholy with lovesickness. In his Glosule super Viaticum Gerard of Berry states, ‘This disease is called a melancholic worry by medical authors. It is indeed very similar to melancholy, because the entire attention and thought, aided by desire, is fixed on the beauty of some form of figure’.¹ In his Questiones super Viaticum, written c. 1246-50, Peter of Spain, who has been identified with the physician and pope, Pedro Julião (later John XXI), discusses the generation and symptoms of lovesickness, ‘it seems to be a suffering of the brain, since lovesickness is a suffering similar to melancholy… melancholy is a suffering of the brain. Therefore so is lovesickness’.² Moreover, the connection between lovesickness and melancholy is developed in Version B of the commentary:

Concerning the first we proceed thus, and this definition can be drawn from Avicenna: Love is a melancholic worry of the mind with a depression of thought in which the mind is transfixed because of beauty and an inclination toward the beloved. And it is called ‘melancholic’ because of the symptoms that associate it with melancholy. Or it could also be defined thus: Love is a sickness of the mind in which the spirit wanders through emptiness, mixing joy with frequent sorrows. Constantine, however, defines it thus in chapter 20 on melancholy in the Pantegni: Love is a hopeful belief of the fearful soul in the beloved and a continual preoccupation with the same.³

For Peter of Spain, love has both physiological and psychological symptoms. In common with most Latin commentators on lovesickness, he draws on Avicenna and Constantinus in connecting love with melancholia, which is a well-established association in the Arabic tradition.

The defining features of *amor hereos*, insomnia and melancholy, are described by Haly Abbas under the subset of sympathetic melancholia:

a) the first type arises from the blood; the confusion of the reason expresses itself in euphoria, in laughing and jollity; this form is tied up with a certain type of constitution: the patients are thinner, have very hairy chests, their skin colouring is brown to red, their veins are large, the pulse beats strongly but slowly. b) The second type arises because yellow bile is ‘burnt’ in the body; the patients have a wavering gaze, they make mischief, they scream, are prone to angry outbursts and are troubled with restlessness and sleeplessness. c) The third type is the result of black bile; the patients are given over to cares, broodings, anxieties and evil imaginings. Many love solitude.¹

By taking all these symptoms under the general heading of sympathetic melancholia, we can apply them to Chaucer’s concept of *amor hereos*. We may note in particular the description of Troilus once he has been struck by the disease:

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And fro thi forth tho refte hym love his slep
And made his mete his foo, and ek his sorwe
Gan multiplie, that. Whoso tok kep,
It shewed in his hewe both eve and morwe (I. 484-7, p. 480)
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Troilus is suffering from insomnia and loss of appetite, but his lovesickness also manifests itself in his complexion, which is radically transformed by his humoural imbalance.

Arcite’s plight is described in a similar fashion in the Knight’s Tale, except Chaucer’s description of being struck by *amor hereos* amounts to a compendium of symptoms drawn from the Arabic medical tradition:

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His slep, his mete, his drynke, is hym biraft,
That lene he wex and drye as is a shaft;
His eyen holwe and grisly to biholde,
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Here, we may note that Arcite’s desire to isolate himself from human company is one of the defining symptoms of black bile melancholia, while his nocturnal outbursts recall Avicenna’s description of the lover’s emotional trajectory from joy to weeping. However, most of Arcite’s symptoms are found in the *Viaticum peregrinantis*, which emphasizes the toll the disease takes on the body, how the eyes become hollow due to excessive meditation on the image of the beloved; the yellowing of the complexion due to insomnia, and the irregular beat of the heart. In his commentary on the *Viaticum*, Gerard of Berry also concentrates on the physiological symptoms, which include ‘sunken eyes’, and ‘dryness of the eyes and lack of tears unless weeping occurs on account of the desired object’. Peter of Spain reiterates these symptoms, ‘The signs of the disease are these: depressed thoughts; a yellowed face; sadness without cause; sunken and mobile eyes; deep sighs’, while ‘the pulse is hard and quick and weak when thoughts are depressed’.  

The exact significance of the Galenic symptom of a racing pulse is much discussed in the Arabic medical tradition. Gradually, the practise of taking the patient’s pulse was adopted in the Latin West, and ‘the existence of a complicated body of theory must have strengthened the general perception among *medici* that pulse was a highly significant, albeit difficult to interpret, bodily sign’. Avicenna is said to have used the pulse test to determine lovesickness in a patient. His examination began with a series of simple questions concerning the patient’s life, leading to more focused questions, 

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particularly with regard to the beloved. If the pulse beats more rapidly at this point, it is an indication of lovesickness.\(^1\) He discusses the outcome in his *Canon*:

His pulse and his condition change at the mention of the beloved especially and when he meets the beloved suddenly. It is possible, therefore, to learn the identity of the beloved person if the patient will not reveal it, and the knowledge of the beloved is the best way of treating the patient. The way of doing this is to mention many names repeatedly while the finger is kept on his pulse, and when it becomes irregular and almost stops, you should then repeat the procedure. I have tried this method several times, and I have learned the names of the beloved.\(^2\)

Due to the influence of Prince of Physicians, this diagnostic tool remained popular in the Latin West, as evinced by Peter of Spain’s description of the stages of lovesickness, ‘Avicenna says that the pulse should be held and the suspected girls be called or named; and when they are named, the pulse will be elevated and strengthened and it will become an irregular and disordered pulse’.\(^3\) Moreover, ‘Avicenna calls this disease a melancholic worry because of the symptoms that follow, for unless they embrace the beloved object, they later become choleric. For the brain grows cold and becomes melancholic’.\(^4\)

Certainly, Pandarus is aware that a racing pulse is an indication of *amor hereos* in *Troilus and Criseyde*. In some respects, Pandarus acts as quasi-physician to the lovesick Troilus, particularly during his initial torment and suffering. He follows the course set by Avicenna in questioning Troilus when he finds him in a frenzy:

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“Or hastow som remors of conscience,
And art now falle in som devocioun,
And wailest for thi synne and thin offence,
And hast for ferde caught attricioun?
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\(^2\) *Kitāb al-Qan‘ān fī al-tibb* (*Canon of Medicine*), 2 vols (Cairo; 1877), II, 71-3, quoted in translation by Dols, *Majnun*, p. 484.


God save hem that besieged han oure town,
That so kan leye oure jolite on presse,
And bringe oure lusty folk to holynesse!” (I. 554-60, p. 481)

This barrage of questions directed at Troilus has the desired effect as far as Pandarus is concerned, ‘That with swich thing he myght hym angry maken, / And with angre don his wo to falle’ (I. 561-2, p. 481). Pandarus’ interrogation continues for another 300 lines, building to Troilus’ exclamation, ‘Thanne is my swete fo called Criseyde!’ (I. 874, p. 485). Here, Chaucer peppers the dialogue between the two knights with constant medical references, including such terms as ‘wo’, ‘curacioun’, and ‘bote’. Pandarus urges Troilus to discuss his affliction, echoing Avicenna’s diagnosis of the lover, ‘The beste is that thow telle me al thi wo;’ (I. 830, p. 485). Moreover, Avicenna’s palpatory technique is echoed in Pandarus’ final attempt to determine the cause of Troilus’s suffering:

‘Look up, I seye, and telle me what she is
Anon, that I may gon about thy nede
Knowe ich hire aught? For my love, telle me this.

Thanne wolde I hopen rather for to spede.’ (I. 862-5, p. 485)

This final question affects Troilus physically, and this is reflected in the change to his complexion, ‘Tho gan the veyne of Troilus to blede, / For he was hit, and wax al reed for shame’ (I. 866-7, p. 485). We are reminded of the symptoms of sympathetic melancholia, as described in Haly Abbas, whereby the patient’s complexion turns red. Although Troilus blushes for shame, it is also likely Chaucer chose the colour red because it is associated with an excess of blood in commentaries on *amor hereos*.

Pandarus’ role as quasi-physician to Troilus is once again apparent when he moves on from diagnosing his friend’s suffering to prescribing cures for him. In the *Viaticum peregrinantis*, Constantinus outlines several cures for *amor hereos*:

What better help erotic lovers so that they do not sink into excessive thoughts: temperate and fragrant wine is to be given; listening to music, conversing with dearest friends; recitation of poetry; looking at bright, sweet-smelling and
fruitful gardens having clear running water, walking or amusing themselves with good-looking women or men.\(^1\)

The cures listed are designed to lift the melancholic, sombre mood of the lover; drinking wine, for instance, was thought to restore the balance of the humours. The therapeutic pastimes in particular remind us of those prescribed for Dorigen in the Franklin’s Tale:

They leden hire by ryveres and by welles,
And eek in othere places delitables;
They dauncen and they pleyen at ches and tables. \(\text{V. 898-900, p. 180}\)

Dorigen’s companions suggest several activities to ease her mind as she pines for Arveragus, fixating on his safe return. They take her to such ‘places delitables’ as ‘ryveres and by welles’ just as Constantinus advises, as well as involving her in dancing, and playing chess and backgammon. However, her melancholy only lifts, albeit briefly, after her initial contact with Aurelius, which reminds us of the advice given in the *Viaticum peregrinantis* about the therapeutic effect of walking or distracting oneself with the company of a desirable companion. Chaucer consistently emphasizes the company of others as an effective therapy for *amor hereos*. This is exemplified by Pandarus’ attempt to ease Troilus’ pain through engaging in conversation:

‘Lat be thy wepyng and thi drerynesse,
And lat us lissen wo with oother speche;
So may thy woful tyme seme lesse.
Delyte nat in wo thi wo to seche,
As don thise foles that hire sorwes eche
With sorwe, whan thei han mysaventure,
And listen naught to seche hem other cure’. \(\text{I. 701-7, p. 483}\)

The talking cure is intended to ease the ‘sorwe’ of Troilus, and is ‘judged most perfect if good companions are gathered who are outstanding in beauty, wisdom, or morals’:

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For it is said that pleasure is greatest in drinking wine and talking with the wise. Galen says: ‘Speaking with friends casts out weariness from within.’ It is best and most joyous if it takes place in bright, fragrant, or fruit-bearing gardens. If not, let the rooms where they are to sit be clean and bright [and] let roses and myrtle, willow, basil, and similar things be placed there. Let them avoid drunkenness and when it is fitting let them sleep. After sleep let them take pleasure in a bath with bright and temperate water and air, and do not let anything befall them that the spirit might shrink from.¹

Thus Chaucer echoes Constantinus, and by extension Ibn al-Jazzar, in highlighting the therapeutic effect good company, especially talking with friends, has on melancholia. Moreover, these conversations should take place in verdant gardens if possible.

In addition to Constantinus’ emphasis on a course of such natural remedies as sleeping, bathing, and the avoidance of excessive indulgence in alcohol, which elicits thoughts that might harm the spirit, Peter of Spain, following Avicenna, recommends travel, ‘to leave one’s country is to see beautiful places. Therefore leaving one’s country is beneficial in lovesickness’.² However, it is important to note that Peter of Spain also explores the differences between some of the therapies in the Arabic medical texts, noting that according to al-Rāzī ‘fasting is beneficial in lovesickness’, while Avicenna maintains that ‘temperate food is beneficial in lovesickness. Thus they contradict each other’.³ Similarly, ‘Avicenna says that a better cure is to lie with the beloved object’, while al-Rāzī ‘instructs that wise words and stories be recited’, and to take regular baths. He also recommends that the patient ‘travel from his country, listen to songs, and be happy and drink good wine, and be purged of melancholic humour with a fitting medicine’.⁴ Peter of Spain goes on to ponder the benefits of therapeutic intercourse,

It is inquired whether baths are useful, and it is shown that they are not. The reason is this. Nothing that increases intercourse is useful. But baths and good food do this, because they soothe and delight the flesh. Therefore baths do not help.¹

Thus, although Avicenna recommends therapeutic intercourse, Arabic medical authorities are ambivalent about it, as indeed are Latin commentators and physicians, with the exception of Constantinus. That Chaucer is aware of this ambivalence is borne out by the dismissal of Constantinus as cursed in the Merchant’s Tale, as noted above. However, Constantinus’ *De coitu* was one of the first works to address the relationship between sexuality and medicine in the Latin West, ‘it was at the origin of the Western tradition; several other works called *De coitu* were more or less revised and enlarged paraphrases of the model’.² One notable example is a treatise by the Jewish Andalusian philosopher, Abū Imrān Mūsā ibn Maymūn al-Qurtūbī (al-Isra’īlī al-Andalūsī) or Maimonides (1135-1204), also called *De coitu* translated into Latin by John of Capua in the thirteenth century. It is similar to Constantinus’ treatise, except it also ‘establishes a link between the mind and the mechanism of the body’.³ It is a comprehensive outline of the medical aspects of sex and the largest and final section of the treatise concerns itself with aphrodisiacs, of the kind Januarie must resort to in the Merchant’s Tale. This dirty old man drinks ‘ypocras’, the same medicinal drink which the Host mentions in the Introduction to the Pardoner’s Tale alongside ‘urynals’ (VI. 305, p. 194). Moreover, the ‘spices’ he is encouraged to consume are ‘hoote t’encressen his corage’ (IV. 1808, p. 161), which will not only increase his virility, but also produce excess heat in the heart and breath, producing an excess of black bile, which can only lead to lovesickness and sorrow.

Moreover, it is important to note that while therapeutic intercourse is recommended in Constantinus’ *Viaticum peregrinantis*, this is not the case in the *Pantegni*. The section on lovesickness in the *Practica Pantegni*, as already noted, is composed of both Haly Abbas’ original Arabic text and the *Viaticum peregrinantis*:

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³ Jacquart and Thomasset, *Sexuality and Medicine*, p. 120.
The compiler begins his excerpting from the *Viaticum* at the second of its recommendations for curing love, that is, at therapies designed to help *eriosis* so that they do not fall into excessively depressive thoughts (‘ne in cogitationes profundenter nimias’). He thereby omits the foregoing recommendation of therapeutic intercourse (which is advanced in Stephen of Antioch’s version and by ‘Ali ibn al-Abbas), a cure useful, according to Rufus, for those subjected to black bile, and according to Constantine in *Viaticum* 1.20 for those plagued by excess humour and by *eros*. Why the compiler dropped coitus from the cures for love in the *Practica* is not entirely clear. Had that therapy become controversial, as readers of Constantine’s works gradually realised the challenge to Christian doctrine and Church authority that it posed?\(^1\)

It may be that the final form of the *Practica* reflects a condemnatory attitude toward Constantinus’ medical texts and this aspect of the Arabic medical tradition. Certainly, the use of therapeutic intercourse as a remedy in *Troilus and Criseyde* is presented in a questionable light. Pandarus emphasizes the efficacy of this therapy in the latter half of Book Three, couching his argument in medical parlance, which echoes the Arabic medical tradition. Once again acting as quasi-physician, Pandarus urges Troilus and Criseyde to acquiesce to this therapy on the basis it will relieve each other’s pain, ‘And ech of yow ese otheres sorwes smerte’ (III. 950, p. 526). This argument is invested with a coercive edge when Pandarus comes to the conclusion, apparently on medical grounds that Troilus may well pass from the world if Criseyde does not comply with his diagnosis:

> And seyde, “Nece, but ye helpe us now,  
> Allas, youre owen Troilus is lorn! (III. 1100-1, p. 528)

Here, Criseyde is cast as Troilus’ therapy; she must sleep with him in order to cure him, or else he is lost:

> “Yee, nece, wol ye pullen out the thorn

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1 Wack, ‘ʿAli-ibn Al-ʿAbbas Al-Maḡusi’, p. 174, who notes the ‘compiler’ may or may not have been Johannes Afflacius.
That stiketh in his herte? quod Pandare. (III. 1104-5, p. 528)

That Criseyde is the only remedy for Troilus is reiterated at a later point in the narrative, ‘My lady right, and of my wele or wo / The welle and roote, O goodly myn Criseyde’ (III. 1472-3, p. 533).

Many Arabic medical texts were incorporated into later Latin texts by scholars who appropriated sections of them in their own compendia and encyclopaedias. In spite of his dichotomous treatment of therapeutic intercourse, Constantinus continued to be prevalent in the Western medical tradition, for instance, he is ‘paraphrased in Bartholomaeus Anglicus’ and ‘quoted in Vincent of Beauvais’s Speculum naturale’, in addition to ‘a host of other medical authorities, including elements of the articella, William of Conches, and Stephen of Antioch’s Regalis disposition’.\(^1\) Bartholomaeus cites both Avicenna and Constantinus in his De proprietatibus rerum (‘On the Properties of Things’). His discussion of the humours and melancholy in particular follows the tradition stemming from Galen and Rufus of Ephesus, but originally classified by the Arabic translators in their own compendia. Bartholomaeus describes melancholia in a manner reminiscent of Avicenna:

Melancolia is a gret humour, boistous and picke, and ibred of þe troublly drastick of blood; and haþ his name of melon þat is ‘blak’ and colon þat ‘humour’ is, and so is iseyde as it were a blak humour, and so phisiciens cleipþ it colera nigra ‘blake colera’, for þe colour þerof leneþ towards blaknes. Som melencolye is kyndeliche and some vnkindelich. Þe kyndeliche malencolie is cool[d]e and drye, þat is ibred in blood as drastes in wyne, þe substance þicke and erþi, þe sauor þerof is bytwene swetnes and somwhat sournes.\(^2\)

Vincent of Beauvais not only draws on Constantinus, but also the literal translation of Haly Abbas’ Kitāb al-Mālikī by Stephen of Antioch. Moreover, Vincent employs the

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work of Avicenna in his examination of the vital spirits, medical astrology and alchemy, as we shall see, and we may note the influence of Vincent’s two great works, the *Speculum doctrinale* and the *Speculum naturale* on Chaucer’s oeuvre, which also points to Chaucer’s knowledge of the work of Avicenna.

Certainly, Chaucer makes it abundantly clear that Arcite is suffering from a medical condition, in a manner which recalls the work of Avicenna:

> Nat oonly lik the loveris maladye  
> Of Hereos, but rather lyk manye,  
> Engendred of humour malencolik  
> Biforen, in his celle fantastik. (I. 1373-6, p. 44)

Here, Chaucer states that Arcite is afflicted by lovesickness caused by a humoural imbalance, centred in the three cells thought to constitute the brain. For Chaucer, *amor hereos* is the product of the melancholic humour, but he places a particular stress on the fact it is engendered in the eyes, and the effect the eyes have on the brain. Thus it becomes necessary to consider the relationship between the gaze and the soul, and the importance of the estimative and imaginative faculties in forming his concept of *amor hereos*. Thus we must turn to Arabic natural philosophy, itself the product of Aristotelian and Neoplatonic translations, which may have influenced Chaucer’s description of this condition.
CHAPTER TWO

*Fin’ amors*, the Condemnation of Philosophy, and Chaucer

Although it was Ernest Renan who originally coined the term, ‘Latin Averroism’ in *Averroès et l’Averroïsme*, published in 1852, Alexander Denomy was the first critic to associate the theory of Arabic philosophy, specifically Averroism, and *fin’ amors*.¹ Previous generations of scholars had investigated the Arabic origins of *fin’ amors*, focusing on the possible links between Hispano-Arabic poetry and the Provençal troubadours. However, Denomy also considered the possible influence of Arabic philosophical works, particularly those by Avicenna and Averroes translated into Latin in the twelfth-century. If, as Denomy states, ‘the form of their verse, the vehicle of the lyrics that celebrated *fin’ amors*, was influenced by Andalusian Arabic poetry, why not, then, the content of their lyrics-their conception of pure love?’² For Denomy, the ‘three basic elements’ of *fin’ amors*: the conception of love as desire, the ennobling force of love, and the cult of the beloved, are incompatible with Christian morality.³ He focuses particularly on the fact that the ‘ennobling force of love’ did not originate in classical poetry, ‘Ovid never claimed that such love was ennobling; he would admit that it was shameful and debasing’.⁴ Neither does it feature in Cathar thought, as some critics claimed, because ‘the double principle of good and evil, of spirit and matter, would preclude the possibility that their heresy could provide a basis’ for *fin’ amors*.⁵

Rather, the key lies in the 1277 Condemnation of Étienne Tempier, promulgated at the University of Paris, which included a proposition against Andreas Capellanus’ *De amore*, often described as the handbook of *fin’ amors*:

¹ See in particular, ‘*Fin’ Amors*’; ‘The *De Amore* of Andreas Capellanus and the Condemnation of 1277’, *MS* 8 (1946), 107-4.
² ‘*Fin’ Amors*’, p. 207.
³ Heresy, pp. 20-21.
⁴ ‘*Fin’ Amors*’, p. 184.
⁵ Denomy, ‘*Fin’Amors*’, pp. 184-85.
By this same sentence of ours we also condemn the book *De Amore*, or *De Deo Amoris*, which begins with the words, *Cogit me multum*, and so on, and ends with the words, *Cave, Igitur, Galtere, amoris exercere mandata*, and so on.¹

In addition to the condemnation of *De amore*, several propositions were directed against certain ideas on the active intellect and the essence and existence of the soul stemming from the Latin translations of a range of Aristotelian philosophical works by Avicenna and Averroes. Moreover, the idea of pure love and the ennobling force of love, as explicated in Andreas Capellanus, point to ‘definite Arabian and Averroistic tendencies’.² According to Denomy, the inclusion of *De amore* in the 1277 Condemnation attests to this influence, as do ‘several Averroistic doctrines that are definitely linked to the *De amore’*, which point ‘the direction to which we may look for a possible source of the troubadour conception of fin ‘amors. It is to the Arabs’.³ Denomy grounds his argument in a wide variety of examples from the Islamic world, including the poetry of the Banū Udhrūh tribe; Islamic marriage laws and the position of women in the classical Islamic period; the Sūfī al-Hallāj and the oldest Sūfī text written in Persian, the *Kashf al-mahjūb* (‘Uncovering the Veiled’).⁴ He also briefly discusses the Sūfī doctrine of love, Ibn Dawūd of the Zahirite sect and his *Kitāb al-Zahra* (‘Book of the Flower’).⁵ Denomy highlights the importance of Avicenna’s *Risāla fī al-ʿishq* (‘Treatise on Love’) in particular, which crystallizes the ‘conception of pure love’, allied to ‘the ennobling power’ of that love.⁶


² Denomy, ‘Fin’Amors’, p. 185.

³ ‘Fin’Amors’, p. 186.


⁶ ‘Fin’Amors’, p. 188.
There are several limitations to Denomy’s argument, which he acknowledges; for instance, the *Risāla fī al-‘ishq* was never translated into Latin and neither were two other treatises he discusses, the *Risāla al-Tayr* also known as *Risāla marmūzah* (‘Treatise on the Bird’) and *Hayy ibn Yaqzan* (‘The Living One, Son of Alive’), representative of Avicenna’s allegorical *qisas* (‘stories’). Denomy associates the metaphysical ascent of the soul in these texts with the central motifs of *fin’ amors*, however, these tales were not translated into Latin, although Hebrew versions do exist. Moreover, the Arabic philosophical texts condemned at the University of Paris in 1177 were translated much later than William IX’s troubadour lyrics. There is almost no documentary evidence to suggest the early troubadours were influenced by Arabic philosophical works circulating in the Iberian Peninsula. Denomy’s thesis has been criticised, most notably by Samuel Miklos Stern, who remarks it is extremely unlikely that Avicenna’s *Risāla fī al-‘ishq* influenced the troubadours because it was never translated into Latin. However, Denomy also raises several plausible routes of transmission, which demonstrate the interaction between East and West in the eleventh and twelfth centuries, albeit very briefly. For instance, he mentions in passing the commercial links between the South of France and Muslim Spain, ‘Mozarabs, Mudejars, Jews, Christian slaves, and through armed incursions on both sides’. Yet aside from his comments on the *Risāla fī al-‘ishq*, *Risāla al-Tayr* and *Hayy ibn Yaqzan*, Denomy does not examine in detail the routes of transmission outlined above, or the Arabic philosophical texts which were evidently translated and disseminated in the Latin West.

This study aims to demonstrate another route of transmission, the Latin translations of Avicenna and Averroes’ philosophical treatises, which contain similar ideas to the *Risāla fī al-‘ishq*, as discernible in the work of Chaucer, who remained acutely engaged with Arabic philosophy and science throughout his writing career. When we examine

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5 Cf. Denomy, ‘*Accessibility*,’ p. 54.
Avicenna’s *Kitāb al-shifā* and Averroes’ Long Commentary on Aristotle’s *De anima* alongside their medical works, it seems likely that Aristotelian natural philosophy, particularly metaphysics and faculty psychology, influenced Chaucer’s conception of *fin’amors* and his attitude towards love and loss. Chaucer is particularly interested in the metaphysical and psychological processes of *fin’amors*, which he describes in technical language, drawing on the philosophical traditions of Latin scholasticism. In this context it is important to remember that the technical process of falling in love is intimately connected with the theory of the soul in Arabic philosophy and its reception in Western Christendom, which gives rise to Latin Averroism. Moreover, the parallels with *fin’amors* which Denomy points to in his explication of the *Risāla fī al-ʾishq* encapsulate Avicenna’s ideas on faculty psychology, and similar ideas were expressed in the Latin translations of the *Kitāb al-shifā*. The concept of the soul found in Avicenna and Averroes is considered briefly in Peter Dronke’s seminal study of the medieval love lyric. Dronke expands on Denomy’s thesis, emphasizing the role of Platonic and Aristotelian philosophy, including metaphysics, in charting the development of *fin’amors* in the Latin West:

I have confined myself to a brief characterisation of three kinds of language, which I call mystical, noetic (deriving from Platonic and Aristotelian theories of knowledge), and Sapiential (deriving from the ‘Solomonic’ books of the Old Testament); all these, I believe, play a part in the increasing elaboration by the poets of a ‘metaphysical’ language of love.¹

It would appear that this ‘noetic’ language, particularly that which characterized Latin Averroism, influenced Chaucer’s depiction of *fin’amors*. Certainly, Chaucer’s interest in Arabic science and philosophy, as demonstrated in his use of Arabic medical writings, informs the forensic precision of his description of *fin’amors*, which sets him apart from his contemporaries.² Moreover, Chaucer’s use of Arabic medicine is closely related to his engagement with philosophy. As J.D. Burnley notes, ‘he can quote the

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¹ *Medieval Latin*, I, ix.
view of the physicians, but more commonly follows the philosophers’, and his philosophical sources are exceptionally eclectic, as we shall see.¹

By the fourteenth-century Arabic philosophical texts, albeit in their Latin translations, were widely disseminated in the Latin West and embedded in the scholastic tradition. Chaucer’s reference to ‘Averrois’ in the General Prologue (I. 433, p. 30) carries the same auctorional weight as Dante’s reference to the Arabic philosopher, where his place in scholastic history is encapsulated in a simple line, ‘che’ la gran commento feo’.² At the very least, Chaucer was familiar with Averroes’ reputation as the Great Commentator on Aristotle, but there has been little critical comment on Chaucer’s engagement with the content of Avicenna and Averroes’ writings. Michaela Paasche Grudin has commented in passing on the influence of the so-called Averroistic Controversy on the discourse of heterodoxy and religious conservatism in the Canterbury Tales. She asserts that ‘Chaucer partook of a deep current of heterodoxy – more likely a reflex of his artistic curiosity, rather than a philosophical or theological position – that has its beginnings in an Arabo-Latin tradition centred in Paris’.³ However that might be, Grudin is correct in stating that Chaucer was aware of the influence of Averroism on Marsilius of Padua, William of Ockham, and even John Wyclif. She also points to what she describes as the ‘supreme paradox of the European Middle Ages’, that the ‘scholastic revolution, however one pretends to define it, began with the Arabs: scholastic reasoning is itself Arab in origin.⁴ Certainly, scholasticism was rooted in Arabic Aristotelian translations and commentaries in their Latin translations, fuelled by the desire to recover Aristotelian works on natural philosophy.

Prior to the influx of Arabic translations, the Latin West was familiar with Aristotelian natural philosophy through the translations of Boethius (c. 480-524/5), and the twelfth-century scholars, James of Venice, Henricus Aristippus, and Burgundio of Pisa (c. 1110-93).⁵ William of Moerbeke (c. 1215-86) was responsible for a number of

Aristotelian and Neoplatonic translations, directly from the Greek, during the latter half of the thirteenth-century. William made these translations at the request of his fellow Dominican, Thomas Aquinas, and they ‘quickly established themselves as the most popular, except in the case of the logical works’. According to Charles Burnett, the earlier translations from Greek into Latin, particularly those undertaken by James of Venice and Burgundio of Pisa, were ‘rather haphazard’. However, the translations made directly from Arabic into Latin, made in twelfth-century Toledo, were much more systematic and reliable.

The prevalence of Arabic Aristotelian manuscripts in Toledo was due to the city’s pivotal position under the ‘Umayyad caliphate, established in the Iberian Peninsula during the late eighth-century with Cordova as its capital. By 1085, Toledo was reconquered in a relatively peaceful manner by Alfonso VI of Castile, who declared himself ‘king of the two religions’. However, many of the Arab population of Toledo converted to Christianity converted to Christianity, while many more chose to emigrate. Yet Arabic remained the lingua franca alongside the Ibero-Romance dialect of the city, as attested by the emergence of the Mozarabs, those Arabized Christians ‘who had preserved the liturgy of the Visigothic church and whose numbers were augmented by Islamic converts’. Toledo became an important centre for the translation and dissemination of Graeco-Arabic philosophy into Latin, in part due to the demographic of the city, which included Mozarabs, Latin clergy and a sizeable Jewish population.

The works of Aristotle, ‘accompanied by both Greek and Arabic commentaries’, also


2 Dod, ‘Aristoteles Latinus’, p. 49.
5 Burnett, ‘Coherence’, p. 249.
had an impact on the native Jewish philosophers, who translated Aristotelian works into ‘a Spanish dialect, and a Christian scholar turned the Spanish into Latin’. Indeed, one of the most important members of the Toledo School of Translators, Johannes Hispalensis or John of Seville, had converted from Judaism, translating into Latin such works as *De differentia spiritus et animae* (*c.* 1130) by the ninth-century Melkite physician and philosopher, Qustā ibn Lūqā al-Ba’labakkī, while attached to Seville cathedral. According to Burnett, it is possible that many Arabic scientific texts were in circulation in Toledo as early as the first half of the twelfth century, as Gerard of Cremona (*c.* 1114-87), ‘at the beginning of his career (and therefore perhaps already in the late 1130s) was attracted to Toledo because he knew that he would find there Ptolemy’s *Almagest* (in Arabic).  

Certainly, Chaucer was familiar with the culture and politics of fourteenth-century Spain due to his long association with John of Gaunt and the English court. John of Gaunt married Constanza, the eldest daughter of Pedro I of Castile and Leon, in 1371. A year later, ‘Gaunt was granted permission to change his arms to include those of the kings of Castile and Leon and to use royal titles for himself’. As both R.F. Yeager and Sylvia Federico have observed, Castilian and Portuguese were spoken in the Ricardian court, while ‘Spanish style foods, housewares, clothes and jewelry design’ proved popular. Furthermore, Chaucer’s firsthand knowledge of Iberian culture would have been informed by his wife’s position ‘as lady-in-waiting to Constanza from *c.* 1372 to *c.*1382’. The Spanish influence on Chaucer’s poetry has received very little attention, but that Chaucer was acutely aware of the contemporary political situation is borne out by the tragedy of ‘O noble, O worthy Petro, glorie of Spayne’ (VII. 2375, p. 246), murdered by his half-brother Enrique in 1369. In 1366, Chaucer travelled to Navarre on a diplomatic mission, tasked with dissuading ‘a number of English and Gascon

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1 Sirat, *History of Jewish Philosophy in the Middle Ages*, p. 142.
3 ‘Coherence’, p. 250.
knights from joining in Enrique’s actions’ against Pedro. However, a number of Englishmen did fight against Pedro in the 1367 battle of Nàjera, as did the Eagle of Brittany, Bertrand du Guesclin, described in the Monk’s Tale as the one who ‘brew this cursednesse and al this synne’ (VII. 2385, p. 246). According to both Federico and Yeager, Chaucer may have had access to manuscripts illuminated in the Islamic style, which contained poems on the Castilian kings, in particular, Poema de Alfonso Onceno and La Crònica Troyana de Alfonso XI, where ‘the Trojan women sit in niches framed by horseshoe arches, and the Greeks hold council in their tents while sitting cross-legged on Berber textiles’. These manuscript illuminations reflect the ‘Christian attraction for the luxurious way of life of the Muslim kings: a fascination with their costumes, their courtly paraphernalia and their social habits’: a legacy rooted in the Islamic East. Given his fascination with taking measurements from the stars, and all aspects of Aristotelian-Ptolemaic cosmology, allied to his interest in Aristotelian natural philosophy, it seems likely that Chaucer would have taken an even greater interest in Arabic scientific manuscripts, and the fruits of the Toledo Translation Movement in particular.

Indeed, the Arabic works available to translators in Toledo from at least the twelfth century onward are ultimately the fruit of Persia’s intellectual fascination with Aristotelian philosophy, fostered during the Great Translation Movement in Baghdad under the ’Abbāsid caliphate during the eighth and tenth centuries. Islamic Spain continued to look to the East for cultural and scholarly guidance, notwithstanding the ‘political rivalry that existed between it and the East’. A plethora of Aristotelian philosophical works were translated from Syriac into Arabic, including commentaries by Alexander of Aphrodisius and Themistius, and Neoplatonic treatises by Proclus,

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1 Federico, ‘Chaucer and the Matter of Spain’, p. 316; cf. also Chaucer Life-Records, pp. 64-5.
Porphyry and the Syrian Iamblichus. It was these treatises that filled the libraries of Toledo and Cordova. In Toledo the translation process followed ‘a double trajectory’, Gerard of Cremona translated treatises on Aristotelian natural philosophy, while Dominicus Gundissalinus and his circle translated works by Avicenna. As noted above, Gerard of Cremona travelled to Toledo with the precise intention of translating Arabic texts into Latin and a comprehensive list of these translations was preserved posthumously by his pupils. He translated a number of texts concerned with falsafa (‘peripatetic philosophy’): one of the five genres of Arabic scholarly works translated into Latin, together with Aristotelian philosophy; the rasā’il (‘letters’ or ‘treatises’); the Commentary, and Greek doxography. The term falsafa is derived from the Greek, denoting an Arabic intellectual discipline which developed during the Great Translation Movement, and contributed greatly to the Latin understanding of the term ‘philosophy’. As Burnett notes, ‘whereas in earlier Latin works, philosophia was the subject of the seven liberal arts’, as in Boethius, by the thirteenth century philosophia was equated with falsafa, thus ‘applied to natural philosophy, and metaphysics’.

The translations and commentaries of Aristotle’s Physica and Metaphysica were part of this first trajectory of the Toledo School of Translation, albeit outside of Gerard of Cremona’s circle. These works can be confidently ascribed to Averroes, who was writing his Aristotelian commentaries in Cordova while Gerard of Cremona was translating other Arabic works in Toledo. Averroes was part of a group of Spanish Aristotelian philosophers, which not only included the Andalusian polymath, Ibn

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Tufayl, but also Ibn Bajja or Avempace, Ibn Gabirol or Avicebron, and the Jewish scholar, Maimonides.\footnote{In addition to Shlomo Pines, ‘Ibn Bajja’, DSB, I, 408-10, cf. Ibn Bajja, ‘Tratado de Avempace sobre la unión del intelecto con el hombre’, trans. Miguel Asin Palacios, Al-Andalus 5 (1940), 259-299; El régimen del solitario, trans. Miguel Asin Palacios (Madrid and Granada, 1946), and ‘The Regimen of the Solitary’, trans. D.M. Dunlop, JRAS (1945), 61-8.} The Aristotelian commentaries of Averroes are divided into the earlier Short and Middle commentaries, and the subsequent Long Commentaries, which are concerned with entire Aristotelian texts, including the *Analytica posteriora*, *De anima*, *Physica*, *De caelo* and *Metaphysica*.\footnote{See Averrois Cordubensis Commentarium Magnum in Aristotelis De Anima Libros, ed. F. Stuart Crawford, 2nd edn, 2 vols (Tunis, 1997), and Averrois Cordubensis Commentum Magnum Super Libros De Celo et Mundo Aristotelis, ed. Gerhard Endress, 2 vols (Louvain, 2003).} The Long Commentaries on *De anima*, *De caelo* and *Metaphysica* are thought to have been translated by Michael Scot while Hermann of Carinthia is responsible for translating the *Rhetoric*, *Ethica* and a summary of the *Ethica Nichomachea*, produced a mere twenty years after Averroes’ death.\footnote{In addition to Haskins, *History of Medieval Science*, pp. 43-66, 272-98, cf. also Lynn Thorndike, *Michael Scot* (London, 1965).} The second trajectory, as defined by Burnett, consists largely of works translated by Dominicus Gundissalinus and his circle, the most significant for this study being the translation of Avicenna’s *Kitāb al-shifā*: a work on natural philosophy, metaphysics, logic, medicine and mathematics, written in Hamadan, c. 1020-7.\footnote{See Gutas, *Avicenna*, pp. 103-04.} The section known as the *Kitāb al-nafs* (‘Book of the Soul’) was known in Latin as *De anima*, translated in Toledo c. 1152-66 by Abraham ibn Dawūd Halevi or Avendauth, and Dominicus Gundissalinus, under the patronage of John, Archbishop of Toledo.\footnote{See Hasse, *Avicenna’s De Anima*, p. 5.} It explicates the five inner senses, sight, hearing, smell, taste and touch, and the five outer senses, common sense, imagination, cogitative faculty, estimation and memory. The *Kitāb al-shifā* departs significantly from Aristotle, being a truly Avicennian composition; there was nothing of its kind in Greek, or indeed, hitherto in the Arabic tradition.\footnote{Cf. Gutas, *Avicenna*, p. 87.}

Thus, there was a wide range of Arabic philosophical works available in Latin from the twelfth century onwards. The extent to which these texts contributed to the rediscovery of Aristotle in the Latin West has been the subject of much debate, but whilst many translations from the Greek were available, Western scholarship was
significantly influenced by Arabic translations, not only because of the variety of the works translated, but also because of the different genres of Arabic philosophical commentary. The translations associated with Gerard of Cremona and Dominicus Gundissalinus ‘filled in the gaps in knowledge among the Latins’ and it was acknowledged that ‘through their translations and interpretation’, Arabic scholars ‘had recovered the ancient and perennial wisdom’. The translations contributed to the establishment of ‘a coherent curriculum of Aristotelian philosophy’, attested by the manuscripts of the Corpus vetustius and Corpus recentius, which were central to the Latin university syllabus. The Corpus vetustius contained works on physics and metaphysics, such as De generatione et corruptione; cosmology such as De caelo, and faculty psychology, such as De anima. It became ‘the standard edition of the works of Aristotle’, extant in a late thirteenth century manuscript (Admont, Stiftsbibliothek, MS 24).

It is clear from this standard edition that Latin scholastics garnered their knowledge from both Greek and Arabic translations. It is also clear that a variety of works were incorporated into the libri naturales, including Aristotelian, Neoplatonic, and original Arabic texts disseminated as Aristotelian texts. These include ‘De causis’ (Gerard of Cremona’s translation of the Neoplatonic Liber de causis), ‘De plantis’ (Nicholas Damascenus’ Liber de plantis), and ‘De differentia’ (Qustā ibn Lūqa’s De differentia spiritus et animae).

1 Burnett, ‘Arabic into Latin’, pp. 375-76.
When we turn to the question of how familiar Chaucer’s contemporaries would have been with the contents of the Corpus vetustius, it is worth considering a similar list, extant in the Oxford statutes of 1340, describing the lectures a bachelor had to hear before incepting:

on at least two logical books, one from the old logic and one from the new, or at least both from the new plus one of the libri naturales, namely either De caelo et mundo or De anima or Metheora or De generatione et corruptione or De sensu et sensato together with De memoria et reminscientia and De somno et vigilia or De motu animalium together with any two books of the Parva naturalia. ¹

Thus a bachelor would have been well-acquainted with the new writings of the libri naturales, which combined works on the physical composition of the universe and the heavens, such as De caelo et mundo, Meteorologia and De generatione et corruptione, as well as such works on the human soul as De anima, and on the nature of man, most notably, De sensu et sensato and De memoria et reminscientia. Moreover, Aristotelian libri naturales were incorporated into the curricula alongside such disciplines as logic, grammar, and astronomy, and even medicine in Italian universities from the thirteenth century onward. At Bologna, Aristotelian natural philosophy, as interpreted by Averroes and Avicenna, was applied to medical theory, largely through the efforts of the celebrated Florentine master, Taddeo Alderotti (c. 1210-95). ² The contribution of Arabic scholarly writings to Latin scholasticism, especially these new developments, whereby the discipline of philosophy came to encompass the study of metaphysics, natural philosophy and psychology from both the Greek and Arabic translations, was generally accepted by the late fourteenth century. Indeed, Chaucer alludes to this process of transmission at several points in his writing. The combination of old and new works on logic, as evinced by the fourteenth-century Oxford statutes, is recalled in the Parliament of Fowls, ‘And out of olde bokes, in good feyth, / Cometh al this newe

science that men lere’ (ll. 24-5, p. 385). Indeed, this expansion of the *artes liberales* to encompass Aristotelian sciences is depicted in the portraits of the Clerk in the General Prologue and Nicholas in the Miller’s Tale.

As a student of ‘Oxenford’ (I. 285, p. 28), the Clerk is well-versed in logic, ‘which occupied about half of the actual curriculum’.¹ He has completed the required training as a bachelor, ‘That unto logyk hadde longe ygo’ (I. 286, p. 28). A bachelor at Oxford had to study both the *logica vetus*, which contained Porphyry’s *Isagoge* and Aristotle’s *Praedicamenta* and *Perihermeneais*, and the *logica nevus*, which contained Aristotle’s *Analytica priora*, *Analytica posteria*, *Topica* and *De sophisticis elenchi*.² Thus in order to acquit himself in the Trivium, the Clerk’s study of grammar, rhetoric and especially logic, would have been informed by the works of Aristotle. Moreover, he has persisted in his study of Aristotelian philosophy:

> For hym was levere have at his beddes heed  
> Twenty bookes, clad in blak or reed,  
> Of Aristotle and his philosophie. (I. 293-5, p. 28)

This entails knowledge of both the Greek and Arabic translations of the *libri naturales* and metaphysics. His profound interest in these texts is emphasized by their shelving at the top of his bed, and the sheer number of Aristotelian manuscripts in his possession, ‘Twenty bookes, clad in blak or reed’, which constitutes a considerable personal library in itself, notwithstanding the ‘sixty bokes olde and newe’ ascribed to Chaucer in the G Prologue to the *Legend of Good Women* (l. 274, p. 597).

By contrast, Nicholas in the Miller’s Tale ‘Hadde lerned art, but al his fantasye / Was turned for to lerne astrologye’ (I. 3191-2, p. 68). Like the Clerk, he has studied logic as part of the Trivium, but his attention is firmly fixed on the Quadrivium and the study of the stars in particular, as evinced by his use of Ptolemy’s *Almagest*, an astrolabe and abacus counters:

> His Almageste, and bookes grete and smale,  
> His astrelabie, longynge for his art,

As we have seen above, Ptolemy’s *Almagest* was known to the Latin West primarily through the Arabic translations and commentaries circulating in Toledo since the time of Gerard of Cremona and commentaries, as were the ‘astrelabie’ and the ‘augrym stones’, the requisite instruments for taking measurements from the stars, discussed below. Just as the Aristotelian corpus is given pride of place over the Clerk’s bed, Nicholas’ copy of the *Almagest* and his mathematical instruments are also arranged on shelves ‘at his beddes heed’, which signifies their value to scholars of the Quadrivium in particular. We may also note that the demarcation between the Trivium and the Quadrivium is underscored in the Miller’s Tale. Nicholas ‘Hadde lerned art’, but given that ‘al his fantasye. / Was turned for to lerne astrologye’ (I. 3191-2, p. 68), he has moved on to Ptolemy’s *Almagest*. This mirrors the progression of a bachelor at Oxford, who would initially receive a thorough grounding in the Trivium, including Aristotelian dialectic which was particularly prominent in the fourteenth century, before moving on to master the Quadrivium.

Aristotelian texts were incorporated into the Arts curriculum at Paris in the early thirteenth-century and Oxford followed suit with alacrity, between 1206 and 1209.¹ D.A. Callus has demonstrated that Aristotelian works in the Latin translations of Avicenna, followed by those of Averroes, were introduced to Oxford at more or less the same time as they were to Paris.² While the statutes of Oxford are not as extensive as those of the Continental universities, ‘it is safe enough to assume that the general practice at Oxford in the Thirteenth Century resembled that of Paris’.³ Moreover, many English theologians and philosophers in the twelfth and thirteenth centuries ‘studied or taught for a time at Paris and were thus part of the Parisian academic world’.⁴

In 1210, the first interdiction ‘forbidding any lectures (public or private) in Paris on Aristotle’s works of natural philosophy’, was issued in tandem with a condemnation of

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¹ Rashdall, *Universities*, III, p. 49.
‘the heretics Amaury of Bène and David of Dinant’. This proscription was spearheaded by the theology faculty, who regarded Aristotelian natural philosophy as a legitimate threat to Christian orthodoxy, and the ban was renewed in 1215 by the papal legate, Robert of Courçon. The study of Aristotelian works on logic and ethics was allowed, but reading or lecturing on Aristotelian commentaries on metaphysics and natural philosophy, most likely those by Avicenna and al-Farābī, was firmly condemned. This ban was reaffirmed in 1231 by Pope Gregory IX, but was generally ignored by the time of his death in 1241. Indeed, by the middle of the thirteenth century, Aristotelianism was firmly established at the University of Paris, and on 19 March 1255, ‘the arts faculty proclaimed a new syllabus which imposed the study of all the known works of Aristotle’. This new syllabus included the Corpus vetustius and such texts as ‘Metaphysics, De animalibus, De caelo, Meteorologica (Books I and IV), De anima’. However, by 1270 the teaching of Aristotle in the University of Paris was once again subject to an official condemnation. An inquiry, established at the behest of Pedro Julião (later John XXI) by the current bishop of Paris, Étienne Tempier, led to thirteen propositions denouncing a number of Aristotelian concepts concerning the ‘eternity of the world, divine providence, free will, and the unity of the intellectual soul’. Once again, the Aristotelian masters chose to ignore this interdiction, while the animosity between the faculty of arts and theology continued to increase. A fuller condemnation was issued on 7 March 1277, which contained two hundred and nineteen propositions denouncing errors concerning the study of philosophy and theology. These propositions indicate the deep division between the arts and theology faculties at Paris,

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4 Dod, ‘Aristoteles Latinus’, p. 73.
characterized by consistent attempts on the part of the theology faculty to curtail the influence of Aristotelian metaphysics and cosmology in particular.¹

The effects of the 1277 Condemnation reverberated throughout Northern Europe. The University of Oxford proposed thirty condemnations set out by its chancellor, Robert Kilwardby, only eleven days after those issued at Paris, and reiterated on 29 October 1284 by John Pecham, on succeeding Kilwardby as Chancellor. These propositions were less wide ranging than Tempier’s, being directed particularly towards the thesis of the unicity of the soul, epitomized by the works of Thomas Aquinas.² However, Oxford scholars continued to enjoy greater freedom of thought and expression than their Parisian counterparts, exemplified by the conflicting philosophical schools of thought which characterized fourteenth-century Oxford: Thomism, nominalism and Wycliffism. Certainly, between 1315 and 1340, during the period considered ‘the high point of intellectual activity at medieval Oxford’, English masters, educated at Oxford, dominated the fields of theology and philosophy throughout the Latin West.³ Paris began looking toward Oxford, and the ‘works of these new English authors began to be recognised and assimilated by Parisian theologians’. Indeed, ‘the impact on Paris was immediate, widespread, highly controversial and long-lasting’.⁴ However, the spectre of the 1277 Condemnation continued to cast a shadow over university education in England, as well as the rest of Western Christendom.

There is no direct association between Chaucer and Oxford, and whilst there is a distinct possibility that he studied at the Inns of Court, first suggested by Speight in his edition of the Canterbury Tales of 1598, it is unlikely that he had a formal university


That Chaucer had an affiliation with Merton College has been suggested in the light of his citation of two prominent Mertonians, who were members of a group of scholars known as the Oxford Calculators: Thomas Bradwardine, Archbishop of Canterbury, and Ralph Strode. In the Nun’s Priest’s Tale, the Doctor Profundus is mentioned alongside those twin pillars of patrician authority, Augustine and Boethius, ‘As kan the hooly docto Augustyn, / Or Boece, or the Bisshop Bradwardyn’ (VII. 3241-4, p. 258), which reminds us of the prominence of Augustinian thought at Oxford. Although he was not of the same generation as that group of Mertonians who devoted themselves to the natural sciences, the Oxford Calculators, Ralph Strode may have been Chaucer’s direct source for much of his philosophical and astrological knowledge. Chaucer dedicates his ‘litel bok’ (V. 1786, p. 584) concerning the tragic love between Troilus and Criseyde to his contemporaries, John Gower and Ralph Strode: ‘O moral Gower, this book I directe / To the and to the, philosophical Strode’ (V. 1856-7, pp. 584-5). Here, the epithet ‘philosophical Strode’ reminds us of the schools of philosophy Chaucer may have encountered in contemporary Oxford through his friendship with Strode: Thomism, nominalism, and the extreme realism of Wycliffe. The dedication is indicative of the variety of philosophical ideas Chaucer explores in his work:


He does not, however, subscribe to any particular philosophical system … he was no philosopher, but a ‘philosophicall poete’, and preferred that philosophical teaching which had become thoroughly poetisised and absorbed by literary tradition.¹

As a ‘philosophicall poete’, Chaucer has been associated with nominalism in particular, and somewhat less convincingly with Wyclifism.² However, scant attention has been paid to his engagement with how Arabic philosophy informs Aristotelianism in the Latin West, particularly the reception of Avicenna and Averroes, which did not diminish after the 1277 Condemnation, but continued to affect English scholasticism into the fourteenth century.

One of the principal aspects of the 1277 Condemnation addresses the meaning of the term *philosophus*, and the idea that philosophy was a higher truth than theology, with Aristotle considered the highest philosopher. Proposition 40 condemned the idea ‘that there is no more excellent way of life than the philosophical way’, further enforced in

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¹ *Chaucer’s Language*, p. 104.

Proposition 154, which condemned the idea ‘that the philosophers are the wisest men of this world’.\footnote{CUP, I, pp. 545, 552; cf. Flotin and O’Neill, ‘Condemnations’, pp. 338-9; Lohr, ‘Medieval Interpretations’, p. 88.} The position accorded to Aristotle as the highest philosopher is echoed in Chaucer’s use of the term philosophy in the \textit{Canterbury Tales}, where the Stagirite is invoked in the Parson’s Tale as ‘the Philosopher’ (X. 657, p. 310), and in the Pardoner’s Tale as ‘This wise philosophre, thus seyde hee’ (VI. 620, p. 198). This lofty idea of the \textit{philosophus} was linked to the concept of double-truth, whereby philosophy could be considered to contain higher truths than theology:

\begin{quote}
For they say that these things are true according to philosophy but not according to the Catholic faith, as if there were two contrary truths and as if the truth of the Sacred Scripture were contradicted by the truth in the sayings of the accursed pagans.\footnote{CUP, I, p. 543; cf. Flotin and O’Neill, ‘Condemnations’, p. 337.}
\end{quote}

The concept of double-truth was first associated with Averroes by Renan, who also put forward the idea that the study of philosophy in the later thirteenth century was dominated by Latin Averroism, despite evidence to the contrary. Ruedi Imbach points out that ‘without knowing a single text that corresponds to this current, without even being able to name a single author’, Renan ‘created from almost nothing thirteenth century Averroism’.\footnote{‘L’Averroisme latin du XIIIe siècle’, in \textit{Gli studi di filosofia medievale fra Otto e Novocento}, ed. Ruedi Imbach and Alfonso Maierù (Rome, 1991), pp. 191-208 (p. 195), quoted in translation by J. Marenbon, ‘Ernst Renan and Averroism: The Story of a Misinterpretation’, in \textit{Renaissance Averroism and its Aftermath: Arabic Philosophy in Early Modern Europe}, ed. Anna Akasoy and Guido Giglioni (Heidelberg, 2013), pp. 273-85 (p. 281).} Averroes was not named explicitly in the 1277 Condemnation and the vague nature of many of the propositions makes it difficult to deduce the precise extent of his influence:

\begin{quote}
One cannot say whether the propositions were extracted textually from the writings of the Aristotelians. No ostensible effort was made to introduce a logical order among them. Moreover, their precise meaning remains in some instances obscure, due to the lack of any immediate context. Although visibly
\end{quote}
influenced by Averroism, many of the propositions represent at best a crude version of the genuine Averroistic teaching.¹

Siger of Brabant and Boethius of Dacia, both of whom were condemned by Étienne Tempier for promulgating the concept of double-truth, were defined by Renan and Pierre Mandonnet as Latin Averroists.² Mandonnet, in particular, notes that Siger of Brabant is ‘le célèbre chef de l’averroïsme parisienne’.³ Certainly, Siger of Brabant and Boethius of Dacia were drawn to the new translations of Aristotelian philosophy. They began to interpret philosophical texts without recourse to theology, as opposed to theologians who tried to reconcile Aristotelian principles with Christian theology. C.H. Lohr explains that Siger of Brabant ‘Could explain Aristotle’s words by reducing them to their principles, confident that even where Aristotle’s conclusions might conflict with the faith, Aristotle’s spirit would be an invitation to go beyond himself in a search for new truths’.⁴ The notion that Aristotle’s ideas conflicted with the teachings of the faith was itself a cause for deep concern, but even more troubling was the belief it was possible to discover new truths. Close textual analysis of the works of Boethius of Dacia and Siger of Brabant have revealed that the concept of double-truth, whereby faith is pitted against reason, is not as clear-cut as previous generations of scholarship has led us to believe. Indeed, Ferdinand Van Steenbergen redefined Siger and Boethius as ‘Radical Aristotelians’, in contradistinction to Latin Averroists.⁵ But as Richard C. Dales noted, in spite of a better understanding of Boethius of Dacia’s work, the idea persisted ‘that there was a theory of double truth held at Paris in the second half of the thirteenth-century’.⁶ Instead, the evidence suggests that no such theory originated at the University of Paris, ‘but the propositions which were understood as such have their origin in unsuspecting places, and they underwent an interesting migration in the

² See Pierre Mandonnet, Siger de Brabant et l’Averroïsme Latin au XIIIe Siècle (Louvain, 1908-11).
³ Mandonnet, Siger de Brabant, p. 60.
⁴ ‘Medieval Interpretations’, p. 91.
Denomy maintained that the concept of double-truth originated in the Arabic world, from whence it came to influence the troubadours of Provençé:

The troubadours took their morality of love from the Arabs and were able to maintain it alongside the norms of Christian morality on the foundation of the so-called ‘double-truth’, itself, in final analysis, a product of the opposition of Muslim theology and philosophy.  

As we have seen, Denomy’s contention that the troubadours were influenced by Arabic philosophy is difficult to prove and has been fiercely criticised. However, Denomy highlights the significance of the 1277 Condemnation for the development of metaphysical motifs in medieval love poetry, which is intimately connected with the condemnations against the rational soul and active intellect, stemming from Avicenna and Averroes’ philosophical treatises. For instance, proposition 11 states: ‘That a man is a man independent of the rational soul’ and proposition 123:

That the agent intellect is a certain separated substance superior to the possible intellect, and that it is separated from the body according to its substance, power and operation and is not the form of the human body.

The ultimate source of this proposition is found in Avicenna’s *De anima* and the Middle and Long Commentaries of Averroes.

In fact, Avicenna and Averroes did not hold similar views on the soul. For Averroes, Avicenna’s idea of the soul was the consolation of a Neoplatonic concept that had betrayed true Aristotelianism. Averroes challenged three of Avicenna’s concepts in particular: the theory of emanation, the essence and existence of the active intellect in the soul and the function of the estimative faculty in the rational soul.  

Majid Fakhry notes that Étienne Tempier’s propositions against the soul ‘rested to some extent on a

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2 ‘Courtly Love and Courtliness’, *Speculum* 28 (1953) 44-53 (p. 45).
misunderstanding of Averroes’ intent’, which sought only to qualify Avicenna’s position.¹ In spite of his original intention, by the thirteenth century, it was Avicenna’s De anima which held greater currency in Latin scholasticism. There are currently fifty extant manuscripts of the De anima: thirty-five from the thirteenth-century, fourteen from the fourteenth-century and one from the fifteenth.² It became Avicenna’s most famous work after his Metaphysics, of which there are currently only twenty-five extant manuscripts.³ Avicenna’s De anima was translated in the Latin West in around 1220, appearing around the same time as translations made directly from the Greek, particularly, Aristotle’s Pēri Psyche, initially translated into Latin by James of Venice and again by William of Moerbeke.⁴ Yet, in spite of this, Avicenna’s De anima has been eclipsed by Averroes and Latin Averroism, initially due to the influence of Renan. According to Dag Nikolaus Hasse, modern scholarship has ‘underestimated the influence of Avicenna. This is largely due to the fact he was not associated directly with the 1277 Condemnation, allied to the fact that it seemed ‘unlikely that an Arabic philosopher could dominate the theological and philosophical discussion of the soul for decades without provoking fierce opposition. But Avicenna did’.⁵ As we shall see, Avicenna’s work on the faculties of the soul continued to influence Latin scholasticism, informing Chaucer’s understanding of faculty psychology and the genesis of love in the brain and heart.

By contrast, Averroes interpretations of Aristotle were the source of considerable controversy in the later middle ages, if not in the 1277 Condemnation itself. While he was hailed as the Great Commentator by Dante, he was also seen as a purveyor of heresy. Treatises were written against Averroes’ doctrine of a separate or possible intellect, such as Giles of Rome’s De plurificatione intellectus possibilis (‘On the Multiplication of the Possible Intellect’), written around 1275, and in his Errores philosophorum he ‘devotes a special chapter to the errors of Averroes’.⁶ Moreover, Giles also refutes Aquinas’ refutation of this concept, On the Unity of the Intellect.

¹ Averroes, p. 72.
³ Cf. Hasse, Avicenna’s De Anima, pp. 7-8.
⁵ Avicenna’s De Anima, p. 228.
Against the Averroists, written around 1270. It is possible that Aquinas wrote this treatise in response to the 1270 Condemnation, but it remains unclear as to whom the treatise is directed. Pierre Mandonnet suggests Siger of Brabant was the target, ‘c’est à la dernière date que Thomas à écrit contre les averroistes et spécialement contre’, but Siger only composed his *De Tractatus de Anima Intellectiva* after 1270. Yet in spite of Thomas’ arguments against Latin Averroism, he was also influenced by Avicenna and Averroes’ philosophy in his discussion of metaphysics and the essence and existence of the soul. Similarly, Dante’s attitude towards radical Aristotelianism has also divided scholars. On the one hand, he consigns Averroes to Limbo, while Siger of Brabant lights up the fourth sphere of paradise, reserved for the wise:

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Questi onde a me ritorna il tuo riguarda,
è ‘l lume d’uno spirto che’ n pensieri
gravi a morir il parve venir tardo:
essa è la luce eterna di Sigieri,
che, leggendo nel vico delli strami,
sillogizzò invidiösi veri.
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Here, the eternal light of Siger’s intellect shines in the company of Albertus Magnus, Thomas Aquinas, Augustine, Isidore and Bede, all of whom represent the spirit of divine truth. Moreover, it has been suggested that *De Monarchia* is influenced by Averroes, particularly the notion of the possible intellect, ‘Dante argues along Averroist lines that man’s essence consists “in the capacity to apprehend by means of the possible

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4 Dante, *Paradiso*, X, 132-8, *Divine Comedy III*, p. 152: ‘This one from whom thy look returns to me is the light of a spirit to whom, in his grave thoughts, death seemed slow in coming; it is the eternal light of Siger, who, lecturing in the Street of Straw, demonstrated invidious truths’.
intellect; and it is this which sets him apart from inferior and superior beings”.

De Monarchia was publicly burned in Bologna in 1327 by Cardinal Bertrand de Poyet, Papal Legate of Lombardy under the order of Pope John XXII, and Dante was also accused of Averroism by the Dominican Guido Vernani.

Scholars in Padua were particularly influenced by Averroes, particularly those working in the disciplines of medicine and philosophy, such as Taddeo Alderotti, Peter of Abano, Gregory of Rimini, Jerome Ferrari, Marsilius of Padua, John of Jandun, and Fra Urbano of Bologna.

Indeed, John of Jandun called Averroes ‘the most perfect and glorious physician, friend and fearless defender of the truth’. It is possible that John of Jandun upheld concepts which went to the heart of the 1277 Condemnation such as ‘the eternity of the world, the unity of the intellect and the impossibility of personal immortality’, and in particular the notion of creation ex nihilo.

Certainly, Marsilius of Padua’s Defensor pacis (‘Defender of Peace’), completed on June 24th 1324 and directed against John XXII’s crusade against the Ghibellines, employed Averroistic concepts to defend the separation of faith and reason.

Chaucer’s engagement with Averroes suggests that his precise understanding of fin’amors can be better understood in the light of Arabic faculty psychology and the work of Avicenna and Averroes. The impact of metaphysics and faculty psychology on medieval love poetry has been considered by Dronke who associates it with Latin Averroism. The language of metaphysics is akin to the language of love. Specifically, it lies within the formation of the human or rational soul, ‘There is a more than human, or divine principles of knowledge, which illuminates us and operates in us, and in which


2 In addition to Fakhry, Averroës, p. 135, see Edward Moore, Dante and his Early Biographers (London, 1890), p. 34.


4 Fakhry, Averroës, p. 136.

5 Fakhry, Averroës, p. 137.

we share in so far as we know anything beyond our sense-experience’. These divine principles of knowledge lie in the possible intellect and active intellect in man’s rational soul, as distinct from the animal or vegetable souls. Both Avicenna and Averroes adhere to Aristotle’s belief that the soul is the *entelecheia*, the ‘first perfection of a natural body’ that can generate life. It is divided into three souls: vegetable or nutritive, animal or sensitive, and human or rational. As these classifications suggest, each soul is inherent in certain entities: the nutritive in organic, vegetative beings, the sensitive in the animal, and the rational in the human. Moreover, each soul is possessed of a hierarchy descending from the rational soul which consists of all three faculties, sometimes discussed as three souls because it contains the nutritive, animal and rational faculty. The animal contains both its soul and the nutritive and the nutritive stands alone. The nutritive soul however holds the most important position as it is the foundation of all the souls. The philosophers did not state three souls exist in man, rather that there is a unity of the rational soul with the animal and nutritive, therefore, only one soul exists. Moreover, for Avicenna the soul has two functions, one controlling the intellect and one controlling the body. Avicenna uses the same categorisation and explanation of the soul in *De anima* and *Risāla fi al-‘ishq*, where the soul is divided into its nutritive, sensitive and rational parts and discussed in accordance with their movement towards perfection and their Creator. Avicenna’s application of faculty psychology to love belongs to a tradition of Arabic philosophical writings, such as the thirty-sixth chapter of the Ḥkwān al-Safā’s *Rasā‘il* (‘Epistles’), entitled *On the Essence of Love*. This has been regarded as ‘the most explicit and important treatise of love to be found in Arabic philosophy prior to Ibn Sina’, ‘which deals exclusively with love as a quality of the human soul’, concentrating on ‘the Platonic division of the soul into (i) nutritive-appetitive, (ii) emotional-animal and (iii) rational parts’.

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1 Dronke, *Medieval Latin*, p. 70.
4 Avicenna, *De anima*, ed. Van Riet, II, p. 64.
Avicenna’s classification of the vegetative and animal soul in *De anima* exerted a profound influence on the scholastic tradition in the Latin West. In his examination of the topic, the thirteenth-century Franciscan theologian, Jean de la Rochelle, cites *De anima* because ‘Avicenna’s book offers both highly developed Peripatetic philosophy and medical psychology’.¹ Even Thomas Aquinas continued to rely on many Avicennian concepts still in circulation. Aquinas divides the soul into the vegetative, animal and rational soul, and the cognitive and appetitive faculty, inherent in both the animal and rational soul. It is through these faculties that judgment, reason, intellect, and will are formed. In particular, the movement of the sensitive soul is essential for distinguishing between natural and rational love, because this movement is informed by the rational soul.² The rational creature can decide whether or not to act upon an emotional response sent by the sensitive soul and this process of judgment is reflected in the poetry of Dante and Chaucer.³ Certainly, Chaucer is acquainted with the philosophical terminology used by Aquinas and the Latin scholastics when discussing the faculties and function of the soul. In the Second Nun’s Tale, Cecilia draws an analogy between the Trinity and the manner in which Tiburce is mentally capable of comprehending this most profound Christian mystery:

‘That shal I telle,’ quod she, ‘er I go.
Right as a man hath sapiences three-
Memorie, engyn, and intellect also-
So in o beynge of divinitee,
Thre persones may ther right wel bee’. (VIII. 337-41, p. 266)

Mankind is capable of apprehending knowledge through the ‘sapiences three’: the three mental faculties of ‘memorie’ (‘memory’), ‘engyn’ (‘imagination’), and ‘intellect’ (‘judgment’). This terminology is grounded in Augustine, who distinguishes between memory, will, and reason, and Boethius who employs the terms, *ratio*, *imaginatio*, and

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² Cf. Thomas Aquinas, *ST* 1a 78.1; 2ae 10.2.
sensus, as Klassen pointed out. However, Cecilia is also familiar with the Aristotelian concept that mankind is imbued with the rational soul, and the mental faculties, reason and will.

The rational faculty, the seat of intellect and reason, ‘marked, for both Aristotle and Averroes, the capstone of the science of psychology’. For Averroes, the rational soul completes the perfection of the faculties and therefore, man’s perfection. Through reason and intellect man is allowed to access the theoretical and practical sciences, and the arts. The theoretical sciences are known to mankind through the faculties of sensation and imagination, and allow us to create objects which animals are unable to do so, for instance, ‘bees which build their beehives and spiders which build their cobwebs, do so without reflection or deliberation; their artistic skills are purely instinctive’. The faculties of reason and will are resident in the brain, but are also inherent in the sensitive and rational souls. According to Avicenna, the soul, which is one, is the substance from which the faculties of the vegetative, sensitive and rational soul flow into the organs.

Therefore, Chaucer’s ‘sapiences three’ move from the sensitive and rational souls into the organ of the brain. That Chaucer is aware that their initial genesis is in the soul is demonstrated in the Parson’s Tale, where he states, ‘Goode of nature of the soule been good wit, sharp understondyng, subtil engyn, vertu natureel, good memorie’ (X. 452, p. 302). Both Cecilia and the Parson refer to ‘subtil engyn’ or imagination, defined by the MED as ‘an understanding’, or the ‘innate ability of intelligence’. According to Avicenna’s De anima, the imaginative/cogitative faculty is one of the five internal senses alongside estimation (known in Arabic as wahm or ‘instinct’), judgment, reason, intellect, and memory. In Book One of the Canon of Medicine, Avicenna reminds us that medical writers consider three internal senses to exist whereas philosophers define five. In medical theory, the three internal senses are the cause of three types of mental damage which relate to the three ventricles of the brain. The effects of this on amor hereos are described in precise detail in the Knight’s

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1 See Klassen, Chaucer on Love, pp. 4-10, 14-16; Hasse, Avicenna’s De Anima, p. 189.
2 See Burnley, Chaucer’s Language, p. 105.
3 Fakhry, Averroes, p. 66.
4 Fakhry, Averroes, p. 67.
6 MED, ‘engin (n)’, 1a.
7 Hasse, Avicenna’s De Anima, pp. 134-44.
Here, Arcite’s ‘loveris maladye / Of Hereos’ (I. 1373-4, p. 44) has been ‘Engendred of humour malencolik / Biforen, in his celle fantastik’ (I. 1375-6, p. 44). According to Avicenna’s De Anima, of the three cells which constitute the brain, the middle ventricle is the faculty of estimation, and the final ventricle is the faculty of imagination, or ‘celle fantastik’.\(^1\) Moreover, the description of the ventricles of the brain in the Canon of Medicine may have influenced Bartholomaeus Anglicus’ description of the three cells of the brain in the De proprietatibus rerum (‘On the Properties of Things’), which Burnley identifies as the source of Chaucer’s ‘celle fantastik’.\(^2\) Indeed, it would appear that these Avicennian distinctions are integral to the formation of Arcite’s ‘humour malencolik’ and its symptoms, as we shall see.

According to Avicenna, the basic function of the imagination is to store the sensible forms perceived by the external senses which common sense collects, along with sense-data commonly referred to as phantasia in medical texts. This was also the name given to the imaginative faculty and the distinction between the two is explained in Avicenna’s Canon of Medicine, ‘One of the internal faculties is common sense and phantasia, and for medical scholars they are one faculty, but the verifying people, who are among the philosophers, they are two’.\(^3\) However, Averroes has a different concept of the imagination, it is part of the rational soul that distinguishes human beings from animals. Imagination and the faculty of sensation bestow upon mankind the ability to create objects for their aesthetic value, not simply for their functional purpose.\(^4\) In the Summa Theologiae imagination is cognition, part of the animal and rational soul that receives impressions and sensations from the outside world, similar to Avicenna’s imaginative faculty.\(^5\) Moreover, in the rational soul cognition is associated with the intellect as defined by two characteristics, intelligentia, the understanding of the apprehension of the impressions, and ratio, the discursive process needed to rationally judge the impressions received. This brings us to Cecilia’s third mental faculty: ‘intellect’ as ‘judgment’. According to the MED, it is ‘one of the faculties of the mind;

\(^1\) Avicenna, De anima, ed. Van Riet, II, p. 89.


\(^3\) Avicenna, Liber canonis, Liber 1, Fen 1 Tractatus 6.5, trans. Hasse, Avicenna’s De Anima, p. 40.


\(^5\) See ST 1a 79.8; cited in Morgan, ‘Natural and Rational Love’, p. 45.
the understanding (often distinguished from memory, imagination, reason, skill); the capacity of recognising truth’, as well as ‘the act or process of comprehending’. In Cecilia’s list, the intellect is distinguished from memory and imagination, and directed towards how one judges the impression or sensations received by the imaginative faculty, Cecilia’s ‘engyn’. Thomas Aquinas defines the ‘intellect’ as the appetitive faculty in the sensitive soul and part of ratio in the rational soul. It is the faculty which judges and then acts upon knowledge acquired by the cognitive faculty. This is based largely on Avicenna’s theory of the intellect which exerted a greater influence over Aquinas than his explication of the vegetative and animal soul.

Avicenna’s theory of the intellect, described in Book Five of the *De anima*, continued to influence Latin scholasticism well into the fourteenth century, particularly his description of that part of the intellect known as the estimative faculty. This perceives the intentions of the sensible forms collected by the imagination and causes the movement of the soul to form a judgment. It can also stimulate desire or anger. Avicenna’s definition was ‘by far the most influential of all those put forward in *De anima*’, and a condensed version was also included in his *Canon of Medicine*:

Then follows the estimative faculty and this is the faculty which is located in the end of the middle ventricle of the brain and perceives non-sensible-perceptible ‘intentions’ which exist in the particular sense-perceptible objects; like the faculty existing in the sheep judging that this wolf is something to flee from and that this child is something to have affection for. It is likely that this faculty is also responsible for combining and separating the forms stored in the faculty of imagination.

This definition was used in many Latin treatises on the soul, which tended to focus on the example of the sheep and the wolf as identifiers of the intuitive faculty. This faculty is composed of the intention (known in Arabic as *ma’ani*), which is an ‘indicator pointing to the significance or meaning of an image with which the indicator is

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1 *MED*, ‘intellect (n.)’,
2 See *ST* I 78.1; cited in Morgan, ‘Natural and Rational Love’, p. 44.
In Avicenna’s example the sheep sees both the form of the wolf as well as its intention, or the connotational attribute, from which the sheep can make a judgment. The intention of the wolf, which the sheep witnesses, comes from the object, and not from the perceiver, the sheep. The example was used so frequently that by the middle of the thirteenth century it was no longer needed to cite Avicenna as the source. The connotational attributes, imagination and intellect, are stored in the first of Cecilia’s mental faculties, ‘memorie’, which also recalls the information received by the ‘engyn’ (‘imagination’). Memory is found in both the animal and rational souls, but the act of remembrance is only found in the rational soul. Its specific function is storing the connotational attributes of the object perceived by the animal or human. It is also linked to the retentive faculties of which there are two in the soul, ‘The first is the representative faculty which relates to the stored images in the brain and the second is the faculty of conservation relating to the stored meanings and intentions’.

Cecilia’s ‘sapiences three’ are integral to the understanding of Chaucer’s depiction of the processes of falling in love in the Knight’s Tale and Troilus and Criseyde, especially the defining feature of amor hereos: ‘the generation of love and desire through contemplation of an image fixed in the memory’. It is my contention this process is informed by Avicenna’s discussions on the soul, especially in relation to the physiological characteristics of amor hereos. It has been suggested, most notably by J.D. Burnley, that Chaucer was influenced by psychological and physiological treatises on the soul, but the possible influence of Avicenna’s De anima has been overlooked. Treatises on the soul were commonly studied by theologians, philosophers and medical writers. Avicenna’s De anima was used by Michael Scot, John Blund, Roland of Cremona, and Albertus Magnus, whose De homine, written around 1242-3, has been described as ‘one of the most valuable pieces of secondary literature on the Peripatetic psychological tradition’. De homine uses Avicenna’s explication of the vegetative and

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1 Hasse, Avicenna’s De Anima, p. 131.
4 Hasse, Avicenna’s De Anima, p. 146.
6 Cf. Chaucer’s Language, pp. 103-08.
animal soul in its extensive discussion of the existence, definition, origin, division and unity of the soul. In common with Jean de la Rochelle’s influential *Summa de anima*, *De homine* was extracted in Vincent of Beauvais’ *Speculum naturale*, which increased its influence in the later middle ages.\(^1\) However, Avicenna’s *De anima* also remained influential in its own right, due to the integration of psychological treatises in medical texts, which added ‘a philosophical dimension to the otherwise rather straightforward medical discussion of physiology’.\(^2\) From the thirteenth century onwards, English scholars integrated medicine and natural philosophy in their medical works. Alfred of Sareshel’s *De motu cordis* (‘On the Motion of the Heart’) drew on ‘Aristotle’s *libri naturales*, Galen’s *Tegni*, Hunayn, Isaac Israeli and the *Liber aphorismorum* of Hippocrates’.\(^3\) In compiling his *Tractatus de anima* (‘Treatise on the Soul’), the Oxford Aristotelian, John Blund, ‘used Aristotle’s *De anima*’, as well as other examples of the *libri naturales*, and the *Pantegni* and *Viaticum peregrinantis* of Constantinus Africanus.\(^4\) Similarly, Peter of Spain drew on Avicenna’s *De anima* in his *Quaestiones libri de anima*, especially Avicenna’s classification of the vegetative and animal soul.\(^5\) By contrast, Aquinas does not incorporate physiology into his discussion on the soul in the *Summa Theologiae*, but instead focuses on philosophy, ‘he hardly ever mentions Avicenna’s localization of the internal senses in the different ventricles of the brain’, which is integral to understanding Chaucer’s use of faculty psychology in depicting *amor hereos*.\(^6\)

The first stage of the physical and psychological process of falling in love is its effect on the eye, a familiar poetic motif, albeit qualified in Chaucer’s oeuvre by his familiarity with certain Graeco-Arabic philosophical concepts, rooted in Latin scholasticism. The foundation of these concepts is rooted in turn in Greek philosophy:

\(^1\) Cf. Alain Nadeau, ‘Le statut des extraits du *De homine* dans le *Speculum naturale* de Vincent de Beauvais’, *FZPT* 45 (1998), 84-95.
And Palladius the physician was asked about love and said: ‘Love is a disease which is generated in the brain, when the thoughts are allowed to dwell on one subject and the loved person is constantly brought to mind and the gaze continually fixed on him.’

Here, the physiological, diagnostic symptoms of amor hereos are firmly placed in the context of its initial genesis in the brain. Love is generated in the ‘sapiences three’, intellect, judgment, memory, and the imaginative and estimative faculties located in the brain, initially based in the animal and rational soul. It is the imaginative faculty that receives and stores sense data from the external senses, including sight, and the faculty of memory, which recalls the images that enables these thoughts. This poetic motif is also employed in the Roman de la Rose, which not only incorporates the idea of love as a cerebral illness, but also displays a number of striking correspondences to Peter of Spain’s Latin commentary on the Viaticum peregrinantis of Constantinus Africanus, the Questiones super Viaticum:

One of the staple conventions of vernacular love literature in Peter’s time is the entry of love through the eyes. The Lover in the Romance of the Rose is pierced through the eye with the arrow of Beauty, which lodges in his heart. The affliction of the eyes, whose radiant and fluxible substance interposed between the outer world containing the beloved and the inner world filled with appetitive desire, is possibly the most fitting symbol of the disease and its causes. The eyes, moreover, betray the patient in a manner unlike the other symptoms.

The eyes display the inner, psychological and physiological symptoms of amor hereos, intrinsically linked to the soul. We may note in particular the influence of Avicenna’s faculty psychology on amor hereos on the Latin commentaries on the Viaticum peregrinantis of Constantinus Africanus. In his Questiones super Viaticum, Peter of Spain discusses the symptoms of the eyes:

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2 Wack, Lovesickness, p. 102.
We proceed thus concerning the fifth question: it is inquired about symptoms, and it is inquired whether the eyes suffer more in love, and it is shown that they do, the first reason is this. The greater connection any member has with the brain, the more it suffers in the brain’s illnesses. But the eyes are of this sort, as the Philosopher says. Therefore the eyes ought to suffer more in love.¹

Similarly, in his *Glosule Super Viaticum*, Gerard of Berry discusses vision, the image of the beloved, imagination and estimative faculties. As a physician Gerard synthesised faculty psychology, combining the study of Avicenna’s *De anima* with the medical symptoms of *amor hereos*, ‘to relate mental and emotional conditions to physical states, that is, to specify their material basis’.² For Gerard, *amor hereos* is ‘very similar to melancholy, because the entire attention and thought, aided by desire, is fixed on the beauty of some form of figure’.³

That Chaucer intrinsically links *amor hereos* with the gaze is demonstrated in the Knight’s Tale, when Arcite is exiled from Athens he bemoans the fact he will no longer see his beloved:

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Oonly the sighte of hire whom that I serve,
Though that I nevere hir grace may deserve,
Wolde han suffised right ynough for me. (I. 1231-33, p. 42)
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That the sight of the beloved is the cause of lovesickness is emphasized at several points during Arcite’s leave-taking. He tells Palamon, ‘That hast the sighte of hire, and I th’absence’ (I. 1239, p. 42). It is the act of seeing Emelye that causes *amor hereos*, ‘Syn that I may nat seen you, Emelye, / I nam but deed; ther nys no remedye’ (I. 1273-4, p. 42). The relationship between visual perception, the gaze and *amor hereos* is once again demonstrated in *Troilus and Criseyde*, ‘Love hadde his dwellyng / Withinne the subtile stremes of hire yen’ (I. 304-5, p. 477). Here, Troilus’ love for Criseyde is generated by his first glimpse of her, as is the case with Palamon, whose first glimpse of Emelye causes him to fall in love. This process is described as a physical reaction mediated through the eye:

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He cast his eye upon Emelya,  
And therewithal he bleynte and cride, “A!”  
As though he stongen were unto the herte.  
And with that cry Arcite anon up sterte,  
And seyde, ‘Cosyn myn, what eyleth thee,  
That art so pale and deedly on to see?  
Why cridestow? Who hath thee doon offence?” (I. 1077-83, p. 40)

Palamon’s apprehension of Emelye’s beauty causes a physical reaction mediated through his eyes, which is linked with the heart, while an indirect link is made between Palamon’s physical affliction in falling in love and this vital organ. This association is reinforced in his own summation, ‘But I was hurt right now thurghout myn ye / Into myn herte, that wol my bane be’ (I. 1096-7, p. 40). This summation not only reminds us of the heart’s metaphorical connotations in the literary depiction of love, but also of the Aristotelian location of emotional and physical sensation.

Aristotle located emotional and physical sensation in the heart, in contradistinction to Galen’s location of the brain. Avicenna follows Aristotle, ‘The soul reigns over the body by means of the heart’, and ‘the sensibility of the heart (especially touch) is stronger than that of the brain’. Moreover, the heart is ‘the first principle from which the animal faculties emanate into the brain and the nutritive faculty into the liver’. Avicenna follows Aristotle in stating the brain is vital for the processing and recollection of an image; it is the centre of sensation, where the sensory nerves originate. The brain does play a vital role in sensory activity as ‘the faculties of sense-perception and movement are transmitted from the heart through the nerves to the brain’. Thus the initial sensation is located in the heart, but transmitted to the brain, which is vital for storing, locating and remembering images, and for the generation of love. According to Avicenna, the heart is the first organ formed in the body, from which the faculties flow to the liver. The heart, brain and the liver are the organs of the spiritus, the virtus spiritus, virtus animalis, virtus naturalis. It is fitting then that Arcite,

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4 Avicenna, De anima, ed. Van Riet, II, p. 179.
when he is thrown off his horse is afflicted close to his heart, ‘Swelleth the brest of Arcite, and the soore / Encreesseth at his herte moore and moore’ (I. 2743-4, p. 62). The swelling in Arcite’s breast increases the pain in his heart, while the swelling also spreads to the other organs, classified specifically as the virtues, ‘The vertu expulsif, or animal, / Fro thilke vertu cleped natural’ (I. 2749-50, p. 62). Here, Chaucer notes that the swelling has reached Arcite’s lungs, known as the ‘vertu expulsif’, associated with the *virtus animalis.*

Chaucer’s association of the heart with the virtues demonstrates a familiarity with medical writings and it is a metaphor for Arcite’s *amor hereos.* According to Aristotle and Avicenna, the heart is the very organ in which love is generated. Similarly, Palamon is affected to such an extent that when he sees Emelye, his complexion becomes pallid to the point of expiration, ‘That art so pale and deedly on to see?’ (I. 1082, p. 40). The sight of Emelye’s beauty is the cause of both knights’ lovesickness, as Arcite’s subsequent reaction makes evident:

And with that word Arcite gan espye  
Wher as this lady romed to and fro,  
And with that sighte hir beautee hurte hym so,  
That, if that Palamon was wounded sore,  
Arcite is hurt as much as he, or moore. (I. 1112-16, p. 40)

Here, Arcite is physically affected by the image of Emelye, which has affected his brain and his heart through the imaginative faculty. There is no explicit reference to either organ, but this effect is implied through the internal processes which enable him to perceive and comprehend beauty. Moreover, in *Troilus and Criseyde* love is connected with the gaze and the *virtus spiritus:*

That sodeynly hym thoughte he felte dyen,  
Right with hire look, the spirit in his herte:  
Blissed be Love, that kan thus folk converte! (I. 306-8, p. 477)

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The genesis of love lies in Troilus’ gaze and ‘hire look’, which has a profound physical effect on him. However, in this instance Chaucer explicitly states that it is the ‘spirit in his herte’, the *virtus spiritus*, that causes the generation of love. Chaucer stresses the power of the gaze:

> On this lady, and now on that, lokynge,  
> Wher so she were of town or of withoute;  
> And upon cas bifel that thorugh a route  
> His eyes percede, and so depe it wente,  
> Til on Criseyde it smot, and ther it stente. (I. 269-74, p. 477)

The act of vision is emphasised and, as is typical of Troilus, his gaze goes deeper that of either Arcite or Palamon, while the certain outcome of his fixation on Criseyde’s image is indicative of the estimative faculties and the faculty of judgment.

Significantly, Chaucer’s emphasis on sight incorporates a precise knowledge of optics, which was also included in the Aristotelian *libri naturales*. The leading Arabic authority on optics in the Latin West was Abū 'Alī al-Hasan ibn al-Hasan ibn al-Haytham, known in Latin as Alhazen, whose *Kitāb al-Manāzir* (‘Book of Optics’) was written between 1011 and 1021, and translated into Latin by an unknown scholar during late twelfth or early thirteenth century. This Latin translation was given the title *De aspectibus* (‘On Perspective’), but the work became known once more as the *Book of Optics*, from the title of Friedrich Risner’s edition of 1572.¹ Chaucer cites Alhazen as an authority in the Squire’s Tale, ‘They spoken of Alocen, and Vitulon, / And Aristotle, that writen in hir lyves’ (V. 232-3, p. 172). Here, Alhazen is cited alongside the Silesian Dominican scholar, Erasmus Witelo (c. 1230-75), who based much of his work on optics, the *Perspectiva*, on Alhazen’s *De aspectibus*, in addition to the Aristotelian corpus.² The pre-eminence of Alhazen’s name mirrors his reputation as a

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mathematician and validates his study ‘by composiciouns / Of anglis and of slye reflexiouns’ (V. 229-30, p. 172). This is a clear indication that Chaucer is familiar with Alhazen’s work, which took a mathematical approach to the theory of vision, based on gathering empirical evidence and conducting experiments with mirrors and dark chambers.\(^1\) Alhazen’s theory of vision is similar to Avicenna’s; images are carried to the brain through the optic nerve. Visual images are stored in the brain, but the nerves play an important function; when the nerves no longer function, the image is cut off.\(^2\)

Sight and the mental process of recognition fell into different disciplines, recognition being part of the field of psychology:

Our eyes move with the visual rays, scanning objects as if with antennae or feelers. Imagination is required, however, to integrate their separate properties into a ‘picture’. Only in the imagination is the ‘shape’ established that becomes fixed in the soul.\(^3\)

For Alhazen, images originate in the imagination, which then become fixed in the soul. This is also related to the heart as the faculty of sensation, as described in the Physician’s Tale:

And so bifel this juge his eyen caste  
Upon this mayde, avysynge hym ful faste,  
As she cam forby ther as this juge stood.  
Anon his herte chaunged and his mood,  
So was he caught with beautee of this mayde. (VI. 123-7, p. 191)

Here, it is the judge’s heart which is affected by the image of Virginia, and it causes such an impression that it affects his faculty of judgment. Not only is the process of sight emphasised, but the physical beauty of Virginia’s form causes the movement of his soul. This leads to the second process of love which is fixated on the gaze. As we have already seen, for Avicenna the soul has two functions, not only in the body, but also in

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the intellect. The function in the body relates to the sensory functions of any being: sensation, imagination, appetite, anger, fear, sorrow and pain. The soul is able to function in both the body and the intellect, but once it is engrossed ‘with the sensibles it is kept away from the intelligible without the organ of intellection or the faculty itself being in any way impaired’. Therefore, if the body is suffering, the mind does not stop working; instead, its thoughts are directed elsewhere. If someone is suffering from lovesickness then the mind and its thoughts are directed toward the contemplation of the beautiful image of the beloved. The fixation of the lover on the form of beauty stems from the estimative faculty, which has ‘malfunctioned’. According to Avicenna’s De anima, the estimative faculty is not only the mental function of the brain which remembers and recalls images, but also makes instinctive judgments. Thus, for Peter of Spain, amor hereos is not a melancholic disease, but rather a disease of the imaginative faculty, which is the genesis of the illness. He takes from Avicenna the definition and function of the estimative faculties as ‘one of the higher faculties to which the imagination transmits images’. It is the lovers’ inability to make a correct judgment on the form of the beauty that causes lovesickness; thus, when the lover sees his beloved, ‘the estimative faculty malfunctions because it is misled by an excessive pleasing sense-perception, so strong that it eclipses other sense impressions that might contradict it’.

If we turn back to the moment Troilus falls in love with Criseyde we can see that Chaucer is adopting a similar, psychological viewpoint:

And of hire look in him ther gan to quyken
So gret desir and such affeccioun,
That in his herte botme gan to stiken
Of hir his fixe and depe impressioun.
And though he erst hadde poured up and
down,
He was tho glad his hornes in to shrinke:
Unnethes wiste he how to loke or wynke. (I. 295-301, p. 477)

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1 Afnan, Avicenna, p. 146.
2 Wack, Lovesickness, p. 56.
3 Wack, Lovesickness, p. 90.
4 Wack, Lovesickness, p. 56.
The image of Criseyde is imprinted and stored in the brain, but the estimative faculty has malfunctioned and fixated upon the beauty of the beloved; the ‘excessively pleasing sense-perception’ which has overtaken all other sense-perceptions. Importantly, Criseyde’s image leaves such a ‘fixe and depe impressioun’ upon the brain that Troilus is unable to fully control his perception; he is unable to ‘loke or wynke’. As Burnley points out, the force of the gaze effects Troilus’ heart and his perception:

An image so forcefully impressed into the heart may lead to a disorder of the lover’s power of perception. It is a measure of the sensitivity of the heart, the force of the impression, or of both, that the impression is so fixed and deep that it alters perception of the world outside. ¹

The power of the gaze not only alters Troilus’ perception, but also affects the physiological movement of the humours which affects the emotional state. As Avicenna puts it in the Canon of Medicine:

Even imagination, emotional states and other agents cause the humours to move. Thus, if one were to gaze intently at something red, one would cause the sanguineous humour to move. That is why one must not let a person suffering from a nose-bleed see things of a brilliant red colour.²

If a person is suffering it is unwise to allow them to see a colour related to the illness as this will leave an impression in their imaginative faculty and will affect their emotional and physical state. Therefore, if the lover is suffering from melancholia, caused by the impression the beauty of the beloved has made on him, it is better not to allow him gaze upon other beautiful women as this will exacerbate his emotional distress. Instead, Avicenna suggests that the lover surround himself with ugly, old hags as this will ‘disparage the beloved in the patient’s presence’.³ This advice is endorsed by Peter of Spain, ‘Ugly women are contrary to the beloved of the lovesick patient, since she is beautiful in his estimation. Therefore the sight of ugly women is beneficial in

¹ Burnley, Chaucer’s Language, p. 108.
² Avicenna, Canon of Medicine, trans. Gruner, p. 44.
³ Wack, Lovesickness, p. 103.
lovesickness’.

However, as Peter of Spain goes on to point out, Constantinus Africanus advises the opposite to Avicenna, stressing the importance of beauty in effecting a cure:

To this it must be said that he ought not be shown an ugly woman, since he will burn in love so much the more for a beautiful woman who will seem most beautiful to him. But if a beautiful woman is shown to him, then his mind will be pleased and his disease will become milder and his desire will abate.

Therefore, the brain can cure melancholia, because it is also the generator of the disease. Gerard of Berry describes the workings of the brain in the genesis of melancholia, ‘The estimative faculty is working too hard, innate heat and spiritus rush to the middle cerebral ventricle where the faculty resides, leaving the first ventricle, the site of the imaginative faculty too cold and dry-melancholic’. As we have seen, according to Avicenna the middle ventricle of the brain is the estimative faculty, where the spiritus rushes once it has been affected by love, which affects the balance of the humour. This, in turn affects the imaginative faculty’s ability to perceive normally, thus the image of the beloved is fixated in the first ventricle, which causes Troilus to fixate on Criseyde, ‘Til on Criseyde it smot, and ther it stente’ (I. 274, p. 477). Significantly, this is also Arcite’s diagnosis, his fixation has been ‘Engendred of humour malencolik / Biforen in his celle fantastik’ (I. 1375-6, p. 44). Here, the ‘celle fantastik’ is the very same imaginative faculty that becomes dry and cold after the estimative faculty fixates on the image of the beloved. This process is emphasized in Criseyde’s association of her pain to phantasia, the medical term for the imaginative faculty:

And, for the love of God that us hath wrought,
Lat in youre brayn non other fantasie
So crepe that it cause me to dye! (III. 1503-05, p. 533)

Here, Criseyde refers to the image of another beautiful form that might impinge upon Troilus’ imaginative faculty, the ‘fantasie’ present in the third ventricle of his brain. This would cause Criseyde to suffer from melancholia to the point of death.

3 Wack, Lovesickness, p. 56.
It is clear that the influence of Avicenna’s *De anima*, particularly the medical diagnosis of *amor hereos*, is consistently discernible in Chaucer’s depiction of *fin’ amors*. Avicenna’s faculty psychology was also integrated into Michael Scot’s *Liber introductorius*, particularly his discussion on astrology, extant in MS Escorial f.III.8, which ‘is part of the otherwise lost fourth distinction of the first book of the *Liber introductorius*, and known as ‘Capitulum animo-as’.¹

Although the theory of the soul is difficult and dangerous for every researcher, nevertheless we shall say something here about the soul, as about something familiar to us and to everyone else, as far as God, the creator of every single thing, will grant us his grace, not to our own praise, but to the honour of God and for all the use of modern scholars in this art of astrology.²

Here, Michael Scot notes the dangers involved in discussing the soul even in scholastic circles, perhaps in light of the early condemnations of Aristotelianism and the growing disjuncture between the roles of the philosopher and the theologian. His integration of faculty psychology with the ‘art of astrology’ is not common among his contemporaries, but Michael was writing at a period when Aristotelian natural philosophy had begun to influence the conception of the cosmos and the development of the astronomical sciences, in Arabic translations. More than a century later, Chaucer’s depiction of the processes of falling in love is also informed by his engagement with technical, diagnostic Arabic texts, particularly in the discipline of astronomy and judicial astrology. This is demonstrated by the depiction of Palamon and Arcite’s melancholia, under Saturn, but in order to fully understand this aspect of Chaucer’s concept of *fin’ amors*, we must turn to his knowledge of astronomy, especially judicial astrology, informed by translations of Arabic mathematical and scientific works.

CHAPTER THREE

Chaucer’s Countries of the Stars

Chaucer’s singular interest in astronomy is attested most clearly in the *Treatise on the Astrolabe*, the first technical description of its kind written in English, and the integration of precise astronomical detail throughout his oeuvre. As Marijane Osborn has noted, ‘Chaucer’s interest specifically in celestial coordinates is unusual for this period, and unusual in any period for a poet’, apart from, of course, Dante.¹ The influence of Arabic sources on this aspect of Chaucer’s œuvre has long been acknowledged by Chaucerians, even though his engagement with the majority of Arabic learning has largely been ignored.² Most notably, J.D. North highlighted Chaucer’s meticulous application of mathematical astronomy, emphasizing the importance of the Latin translations of Arabic astronomical, astrological and divinatory works. It would appear that Chaucer was not only familiar with the work of the tenth-century astrologer, Abū al-Saqr ‘Abd al-ʿ Azīz bin Uthmān bin ‘Alī al-Qabīsī, known in Latin as Alcabitius, but also that of Abū Maʿshar Jāʾfar bin Muhammad bin ‘Umar al-Balkhī (c. 788-c. 888), known in Latin as Albumasar, and the Persian Jewish astrologer, Mashāʾallāh ibn Atharī (c. 740-815), known in Latin as Messahalla.³


In his introduction to the *Treatise on the Astrolabe* Chaucer himself points to the contribution of Arabic science in the development of the instrument from the classical period onward:

But natheles suffise to the these
trew conclusions in English as wel as suff-
ceth to these noble clerkes Grekes these
same conclusions in Grek; and to Arabiens
in Arabik, and to Jewes in Ebrew, and to
Latyn folk in Latyn; (ll. 28-33, p. 662)

Here, Chaucer informs little Lewis that the scientific truths he expounds in English, were previously acknowledged, in their ‘dyverse langages’ (l. 34, p. 662), by the Greeks, the Arabs, and the Jews. This mirrors the translation process whereby various strands of astronomical and astrological knowledge came down to the ‘Latyn folk in Latyn’. As Chauncey Wood notes, ‘by the fourteenth century there were a great number of astrological manuscripts available to Chaucer, and many of them borrowed from one another either openly or tacitly’.¹ The majority of these astrological writings were disseminated in such compilations as *encyclopaedia, centiloquia* and *florilegia*.² Many of these compilations obscured the names of the Arabic authors, while some did not mention them at all.³ Thus, it is unsurprising that although Chaucer acknowledges such cosmological pillars as ‘Boece’ (II. 972, p. 359), ‘Marcian’ (II. 985, p. 359), and Alan of Lille and his ‘Anteclaudian’ (II. 986, p. 359) in the *House of Fame*, Chaucer names relatively few Graeco-Arabic authorities in this sphere.

In the *Treatise on the Astrolabe*, only the Greek *magister*, ‘Ptholome’ (I. 17, p. 666) and the most celebrated Arabic astrologer in the Latin West, ‘Alkabucius’ (I. 8, p. 664), are named. Al-Qabīsī’s *Kitāb al-madkhal ilā sinā’at ahkām al-nujūm* (‘The Book of the Introduction to the Art of Judgement from the Stars’) became the customary astrological

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primer of the later Middle Ages.\textsuperscript{1} It was translated into Latin as the *Introductorius* by John of Seville in the mid-twelfth century, and this translation is extant in over two hundred manuscripts.\textsuperscript{2} In 1362, the *Introductorius* was in turn translated into French by Pelerin de Pousse, and this translation was printed eight times during the fifteenth and sixteenth centuries.\textsuperscript{3} Indeed, al-Qabīsī’s work ‘formed the basis of the curriculum in astrology for Western Christendom for centuries to come’.\textsuperscript{4} The text circulated widely in translation, and became prescribed reading in the University of Bologna’s medical astrology curriculum.\textsuperscript{5} Indeed, a scholar at the University, Cecco d’Ascoli (1269-1327), produced a commentary of al-Qabīsī, called *De principiis astrologiae* (‘On the Principles of Astrology’), c. 1324-6.\textsuperscript{6} Thus, in spite of the paucity of direct references to Arabic astrologers, their influence permeated the majority of Latin writings on mathematical astronomy and judicial astrology.

We must therefore consider the range of Arabic sources that Chaucer may have encountered in translation, in addition to those few authorities he names explicitly. Astronomy, known in Arabic as ‘*ʿilm al-hay’a* (‘science of heavenly configuration’), or ‘*ʿilm al-fulk* (‘science of motion’), focused on the mathematical position and movement of the stars. Studies falling into the category of ‘*ʿilm al-hay’a* included translations, commentaries and criticism of Ptolemy’s *Almagest*, together with ‘*ānwa* texts and *Zij* tables.\textsuperscript{7} The general heading in Arabic for astronomy and astrology, ‘*ʿilm al-nūjm* (‘the


\textsuperscript{3} See for instance, *Libellus Ysagogicus*, ed. Matheus Moretus de Brixia (Bologna, 1473); *Libellus Ysagogicus*, ed. E. Ratdolt (Venice, 1482); *Libellus Ysagogicus*, ed. I. de Forlivio and G. de Forlivio (Venice, 1491).

\textsuperscript{4} Burnett, ‘Hebrew and Latin Astrology’, p. 71.


\textsuperscript{6} In addition to Siraisi, *Taddeo Alderotti*, p. 61, see Cecco d’Ascoli, *Commento all’Alcabizzo*, ed. P.G. Boffitto (Florence, 1905). See also Lynn Thorndike, ‘More Light on Cecco d’Ascoli’, *RR* 27 (1946), 293-306, and *The Sphere of Sacrobosco and its Commentaries* (Chicago, 1949).

\textsuperscript{7} On *ānwa*’ see Donald Hill, *Islamic Science and Engineering* (Edinburgh, 1993), pp. 32-3. *Zij* is a Persian word, assimilated into Arabic, that refers to mathematical tables compiled from the eighth century
science of the stars’) found its equivalent in the Latin *scientia stellarum*, while astronomy, or ‘ilm al-hay’a, was translated as *scientia motuum* (‘science of the movements’); al-Battānī’s astronomical tables, *Kitāb al-Zij*, were known in Latin as *De scientia stellarum* or *De motu stellarum*. Moreover, it is likely that Chaucer was aware of ‘Zael’, the Jewish astrologer known as Abū ʿUthmān Sahl ibn Bishr al-Īsraʿīlī, and the celebrated Abū Maʿshār, who is thought to have ‘synthesized all the known astrological literature of his time’. Abū Maʿshār integrated Aristotelian natural philosophy, especially *De caelo* (‘On the Heavens’) and *De generatione et corruptione* (‘On Generation and Corruption’), into his astrological view of the cosmos. His *Kitāb al-maddkal al-kabīr ila ʿilm ahkām al-nujūm* (‘Great Introduction to the Science of Astrology’) was translated into Latin by Hermann of Carinthia and John of Seville as *Liber introductorii maioris ad scientiam iudiciorum astrorum*. Furthermore, Adelard of Bath made an abridged translation, which became known as the *Ysagoge minor*. As North notes, ‘If a doctrine is to be found in Ptolemy, Alcabucius, Zael and Albumasar, then we may use it to interpret a Chaucerian passage with much greater confidence than if, shall we say, the doctrine is to be found only in Ptolemy, to whom Chaucer on one or two occasions explicitly refers’.

Indeed, the Ptolemaic corpus reached the Latin West largely through the Graeco-Arabic translations and Arabic commentaries of the *Almagest*, which subsequently graced the curricula of the Latin universities. It is my contention that in addition to the depiction of astronomy and astrology, these Arabic writings also influenced Chaucer’s depiction of *amor hereos*, particularly the notion of saturnine melancholia, discussed onward, of which some were used for astronomical purposes. There are over two hundred extant Zijes from this period attesting to their popularity; cf. Hill, *Islamic Science*, p. 33.

below. At several points throughout Chaucer’s oeuvre, Ptolemy is cited, perhaps most notably by the Wife of Bath, ‘The same wordes writeth Ptholomee; / Rede in his Almageste, and take it there’ (III. 182-3, p. 107). The Ptolemaic proverbs she attributes to the Almagest are in fact ‘taken from a list of apothegms prefixed to an edition of Ptolemy by a twelfth-century translator’, attesting to the varied manner in which Ptolemaic and Arabic astrological lore was disseminated.\(^1\) The Latin West had been reacquainted with the fuller, detailed works of Ptolemy and commentaries on his work through the translations of Arabic mathematical and astronomical works. Prior to these translations, Western scholars were familiar with some of the Ptolemaic corpus, however scant compared to the plethora of information available after the twelfth century. We may note the excerpts in Boethius’ *De consolatione philosophiae*:

> Of the which litel regioun of this world, the ferthe partye is enhabited with lyvynge beestes that we knowen, as thou hast thyselve leerned by Tholome that proveth it. (II. pr. 7, p. 418)

However, as Campion notes, whilst Boethius mentions Ptolemy, ‘it is quite clear that he had never read him in the original’.\(^2\)

In the Arabic world, Ptolemy’s *Almagest* was the pinnacle of astronomical and mathematical sciences, as Carmody notes, Arabic scholars ‘admired Greek thinking, such as the *Almagest* and Aristotle, but they improved upon it, liberally and intelligently’.\(^3\) The disciplines of astronomy and astrology were codified in Persia during the height of the ‘Abbāsid caliphate. The translations of astrological works into Arabic were intrinsically linked with the remnants of the former Sasanian rule and the influence of Zoroastrian thought in Persia, which employed astrological prediction and horoscopes in all aspects of daily and spiritual life. The administration of the early

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Abbāsid court was led by two families with affiliations to Zoroastrianism: the Nawbakhts and the Tahirids who were responsible for the commissioning of several translations of astrological texts, from Pahlavi (Middle Persian) into Arabic. From 750 onward, demand grew for translations of Greek and Pahlavi astrological texts and Indian science and mathematics. In c. 771 or c. 773 Indian envoys visited the court of the 'Abbāsid caliph al-Mansūr in Baghdad, which resulted in an important intellectual coup, the translation of the Indian mathematical tables: Brahmagupta’s *Siddhanta*, known in Arabic as the *Sindhind*. Al-Fazārī, the first Muslim to construct an astrolabe, compiled a *zij* two years later based on the *Sindhind* known as the *Great Siddhanta*. The *Great Siddhanta* influenced the *Zij al-Sidhind* first compiled by al-Khwārizmī (c. 800–c. 847), which in turn, influenced mathematical astronomy in the early middle ages through Adelard of Bath’s translation of al-Majrīṭī’s revised version.

Adelard of Bath was the most prominent scholar to integrate Arabic works into the English astronomical corpus. He was scholar and tutor to Henry Plantagenet, to whom he dedicated a work on the abacus, *Regule abaci* (‘Rules of the Abacus’). In addition to translating al-Khwārizmī’s astronomical tables, he translated the *Ysagoge minor* of Abū Ma’shar. He also translated the pseudo-Ptolemaic commentary on the *Almagest*, the *Centiloquium* (‘One Hundred Sayings’) often ascribed to the eleventh-century Egyptian, 'Alī ibn Ridwān, but actually the work of the ninth-century Abū Ja’far Ahmad ibn Yusuf ibn Ibrahim ibn Tammām al-Siddīq al-Baghdādī, or Hametus, which became one of the most popular texts on the Latin university curriculum. Adelard compiled his own work on the astrolabe, *De opera astrolapsus* (‘On the Works of Astrolabes’), which contained a summary of Ptolemaic astronomy. The earliest version of Adelard’s translation of al-Khwārizmī’s tables is found in a manuscript.

2 In addition to Gutas, *Greek Thought*, p. 30, see David Pingree, ‘Astrology and Astronomy in India and Iran’, *Isis* 54 (1963), 229-46.
6 In addition to Haskins, *History of Medieval Science*, p. 29, see Burnett, *Conversations with his Nephew*, pp. xi-xlisi, esp. p. xii.
written in 1140 in the cathedral priory of Worcester. The manuscript also contains a work on *computus* by Roger of Hereford (1079-95), and two astronomical works by Walchern, the prior of Malvern, who possessed an astrolabe as early as 1092.¹ According to Charles Homer Haskins, the earliest Latin translations of Arabic science in England are the product of a school of translation based in Hereford and Worcester from c. 1120.² Walcher was also the pupil of Petrus Alfonsi, a Spanish Andalusian Jew who converted to Christianity, known to Chaucer as ‘Peter Alfonse’ (VII. 1189, p. 223), who is thought to have worked as Henry I’s physician.³ It seems likely that Petrus Alfonsi spent time in England, c. 1116-26, and that his influence is discernible in the ‘more exact observations’ of Walcher’s later astronomical works, as Haskins suggested.⁴ Petrus Alfonsi also translated al-Khwārizmī’s tables from the same manuscript as that used by Adelard of Bath, and it is possible he helped Adelard compose his translation.⁵ Certainly, his more advanced ‘knowledge of astronomy and Jewish theology was greatly appreciated by his northern contemporaries’.⁶

Petrus Alfonsi’s superior knowledge of astronomy owes a great deal to his education in Islamic Spain, which drew many English scholars such as Daniel of Morley and Robert of Ketton to the Iberian Peninsula. Daniel of Morley studied under Gerard of Cremona at Toledo instead of Paris, because the knowledge of Arabic scholars, the ‘wisest philosophers in the world’, could be found there.⁷ Similarly, in 1136, Robert of Ketton arrived in Barcelona to study under Plato of Tivoli and worked

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alongside Hermann of Carinthia in translating Ptolemy’s *Almagest* from the Arabic into Latin.\(^1\) The specialized scientific knowledge in circulation in Toledo and Cordova was the direct result of the translations and developments in spherical astronomy based on the Ptolemaic corpus in the Arabic world. The *Tetrabiblos* (‘Four Books’) or *Apotelesmatiká* (‘Effects’), known in Latin as the *Quadripartitum* (‘Four Parts’), an astrological, as opposed to an astronomical, text, was the first Ptolemaic work to be translated into Arabic. During the reign of the ‘Abbāsid caliph al-Mansūr, ‘Umar ibn Farrukhūn al-Tabarī, a Persian attached to the court at Baghdad, is thought to have commissioned a translation of the Pahlavi version of the *Tetrabiblos* into Arabic from al-Bītrīq, which ‘soon dominated astrological writing in Arabic, perhaps because of Ptolemy’s fame also in astronomy and musical theory’.\(^2\) Thus Arabic scholars were initially acquainted with Ptolemy, not as an astronomer, but as an astrologer, which mirrors his initial reception in the Latin West as the Wife of Bath reminds us, ‘The wise astrologien, Daun Ptholeme’ (III. 324, p. 109). Indeed, the *Tetrabiblos* was the first of the Ptolemaic corpus to be translated into Latin, by Plato of Tivoli in 1138. The translation of the *Tetrabiblos* ascribed to al-Bītrīq was preceded by an anonymous translation of the *Almagest*. However, the earliest use of the term *al-majistī*, which gave rise to the title used in the Latin West, has been traced to a version compiled in 829-30 by al-Hajjāj ibn Yusuf.\(^3\) There were several translations and commentaries on the *Almagest*, but the final and most widely used was composed by Ishaq ibn Hunāyn, later revised by his contemporary, the Persian Sabean, Thābit ibn Qurra al-Ḥarrānī al-Ṣābī’ah, known in the Latin West as Thebit ben Cora.\(^4\) Thus by the close of the ninth century, the *Almagest* was well-known to Arabic scholars. It influenced the work of the Andalusian astronomer and mathematician, Jabīr

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1 Robert of Ketton (‘Rodbertus Ketenensis’) has often been mistaken as Robert of Chester (‘Cestrensis’). Burnett notes that the difference between the two Roberts lies in their places of work; Robert of Ketton being based in Northern Spain, as opposed to Robert of Chester, who was based in Segovia and London. Robert of Ketton was also more interested in astronomical and geometrical works, as attested by the works firmly ascribed to him, while Robert of Chester was interested in astrology and alchemy. Cf. Charles Burnett, ‘Rodbertus Ketenensis’, *ODNB*, and Haskins, *SMHS*, pp. 120-23.

2 Gutas, *Greek Thought*, p. 109. Yahyā (Yūhannā) ibn al-Bītrīq was the son of al-Bītrīq, but according to Ibn al-Nadīm’s *Fihrist* it was al-Bītrīq who translated Ptolemy; cf. D.M. Dunlop, ‘The Translations of al-Bītrīq and Yahyā (Yūhannā) b. al-Bītrīq’, *JRAS* 91 (1959), 140-50.


ibn Aflah, known in Latin as Geber, whose *Islah al-Majisti* (‘Correction of the Almagest’), was translated into Latin by Gerard of Cremona under the title *Flores*.\(^1\) Moreover, the Ptolemaic corpus was transmitted to the Latin West in Greek and Arabic versions, although the Arabic texts were the most comprehensive. Some translations were made directly from the Greek from at least the twelfth century. In 1158 Henricus Aristippus, archdeacon of Catania, returned from Constantinople with a copy of the *Almagest*, known as the *Mathematike syntaxis*, which was translated into Latin by an anonymous scholar from Salerno who travelled to Sicily to accomplish this mission.\(^2\) In addition to the *Almagest* several Arabic commentaries, deemed necessary for understanding the work, were translated into Latin. Several commentaries were used to guide both the student and scholar, including such condensed versions of the *Almagest* as that of Jabīr ibn Aflah, known as *De Astronomia*, and a compilation, now known as the *Almagestum parvum*, falsely ascribed to Jabīr and generally thought to have been translated into Latin by Gerard of Cremona.\(^3\) This version was used by the Merton scholar, Simon Bredon, in his commentary on the *Almagest*, and by Richard of Wallingford in his *Albion*, *De sectore*, and *Quadripartitum* which were incorporated into Latin *florilegia*.\(^4\) As Olaf Pederson points out, ‘From the literary point of view the history of medieval astronomy is the history of how Ptolemaic astronomy was assimilated, taught and moulded in its particular Latin form without direct use of the *Almagest* itself’.\(^5\)

Chaucer’s awareness of such developments in mathematics and astronomy is reflected in his characterisation of Nicholas in the Miller’s Tale. As we have seen,

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1 Cf. R.P. Lorch, ‘Jabīr ibn Aflah’, *DSB*, VII, 38-9. He was often confused with the Arabic alchemist Jābir ibn Hayyān, also known in Latin as Geber, discussed below.
Chaucer was in contact with several natural philosophers of the late fourteenth-century, particularly those of Merton College, Oxford. 1 Significantly, during the latter half of the fourteenth century several Merton scholars began to study the science of the stars; gradually astrology was accepted as a scholarly endeavour, rather than a suspect pursuit of lay practitioners. 2 Merton College produced some of the most significant scholars of the fourteenth century: John Ashenden, Thomas Bradwardine, Simon Bredon, Nicholas Sandwich, William Rede, and Ralph Strode. John Ashenden’s principal astrological work, *Summa astrologiae judicialis* (‘Treatise on Astrological Judgements’) was written in 1348, and owes a considerable debt to the Arabic astrologers, al-Kindī, Abū Ma’shar and al-Qabīsī. 3 Simon Bredon’s will attests to the study of astronomical sciences at Oxford; for instance, he bequeathed a small astrolabe to his colleague, William Rede. 4 Simon also wrote a treatise on the astrolabe, influenced by a work ascribed to Mashāʾallāh, *De composizione et utilitate Astrolabi* (‘On the Construction and Use of the Astrolabe’) discussed below. It has been suggested that the *Equatorie of the Planetis*, uniquely preserved in Cambridge, MS Peterhouse 75.1, fols 71v-78v, is a Chaucer holograph, which is unlikely given the codicological and palaeographical evidence as we shall see, but the authorship of the work itself has been previously ascribed to Simon Bredon. 5 Nicholas of Sandwich, who incepted as a master of arts by 1305, also left William two volumes of texts on astrology and astronomy, which in turn, William left to Merton College in August 1385. He also left ‘twenty-five books to Exeter College, ten books also to Queen’s, Balliol and Oriel Colleges, and 100 books to New College’. 6 As Carey points out, William’s time at Oxford was the era when the study of astronomy and astrology reached its ‘greatest academic popularity’. 7 Thus, it is entirely possible that Chaucer’s *Treatise on the Astrolabe* was written with one eye on

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2 Cf. Hilary M. Carey, *Court ing Disaster: Astrology at the English Court and University in the Later Middle Ages* (Basingstoke, 1992), p. 21.
3 The work was first published in folio by Johannes Lucilius Santritter, for Franciscus Bolanus, on 7 July 1489; cf. Johannes Eschuid, *Summa astrologiae judicialis de accidentibus mundi quae anglicana vulgo nuncupatur* (Venice, 1489).
6 Carey, *Court ing Disaster*, p. 63.
7 *Court ing Disaster*, p. 63.
an audience which included ‘astronomical experts like Nicholas of Lynn’, and such learned friends as ‘the Merton man Ralph Strode’.¹

Certainly, Mashāʾallāh’s *De compositione et utilitate Astrolabi*, which Simon Bredon used for his work on the astrolabe, has been considered a source for Chaucer’s *Treatise on the Astrolabe*. Mashāʾallāh worked in Baghdad during the rule of the ʿAbbāsid caliphate and Ibn al-Nādīm’s *Fihrīst* (‘Index’) ascribes nineteen works to him, some of which were translated into Latin and cover astronomy, astrology and cosmology.² His work on astrolabes, *Kitāb sanāʾat al-asturlabat wa-l-ʿamal bi-ha* (‘The Book of the Construction and Use of Astrolabes’) has been identified with two similar Latin versions, but recent scholarship has debated the authenticity of this attribution.³ Certainly, one work on astrolabes translated from Arabic into Latin, c. 1150, was attributed to Mashāʾallāh. It was entitled *De compositione et utilitate Astrolabi* by either Gerard of Cremona or John of Seville, and gained currency in the Latin West as a textbook on technical astronomy, forming part of the medical curriculum at the University of Bologna as late as 1405. Here, it was prescribed reading for the second year, which combined the study of astronomy and astrology with medical works, alongside Sacrobosco’s *On the Sphere*, the second book of Euclid’s *Geometry*, and John of Lignières’ *Canons on the Tables*.⁴ This text has been identified as a source for Chaucer’s text, most notably by R.T. Gunther, whose edition of the *Treatise on the Astrolabe* also contains an edition of the Latin and English translations of *De

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¹ Laird, ‘Chaucer and Friends’, p. 441.
⁴ Cf. Statuti delle Università e dei Colletti dello studio Bolognese, 274-77, esp. pp. 289-90. Sacrobosco’s *On the Sphere* held an important place in the curriculum as it is the only work on astronomy, and was used as a core textbook well into the seventeenth-century. Little is known about John of Sacrobosco’s life, but Bartholomew of Parma notes he wrote *On the Sphere* while teaching at the University of Paris. Robert Grosseteste’s *De sphaera* may have been influenced by John’s text. Sacrobosco’s principal sources seem to be Ptolemy’s *Almagest* and al-Fargānī’s commentary, as well as the work of Macrobius and William of Conches; cf. Thorndike, *Sphere of Sacrobosco*, pp. 1-2, and North, *Chaucer’s Universe*, p. 7.
compositione et utilitate Astrolabii, derived from two manuscripts, Cambridge, MS Iii 3.3 dated 1276 and Oxford, MS Ashmole 1796.\(^1\)

Given the type of material in circulation at Merton and across England, it is hardly surprising that Nicholas in the Miller’s Tale is so taken by astrology and astronomy, as demonstrated by his personal effects:

His Almageste, and bookes grete and smale,  
His astrelabie, longyng for his art,  
His augrym stones layen faire apart. (l. 3208-10, p. 68)

Here, he is the poetic embodiment of contemporary clerks at Oxford with his ‘astrelabie’ and ‘augrym stones’, which refer to the counters used on an abacus, made of either metal or animal horn. Indeed, ‘augrym’ is the Middle English term for an algorism or algorithm, which is ultimately derived from the name of al-Khwārizmī, because the Latin West became acquainted with this arithmetical system through his work. His treatise on algorism was not only translated into Latin by an anonymous translator, who entitled it *Algoritmi numero de indorum*, but also by John of Seville, and his translation has been attributed to Gerard of Cremona. Indeed, al-Khwārizmī was known as ‘Algus’ or, as Chaucer puts it in the *Book of the Duchess*, ‘Argus, the noble countour’ (l. 435, p. 335)\(^2\).

The study of algorism involved the use of Hindu-Arabic numerals, introduced to the Latin West through the works of the tenth-century scholar, Gerbert of Aurillac, later Pope Sylvester II. Gerbert travelled to Spain to study Arabic mathematics in particular, and most probably visited Barcelona and Santa Maria de Ripoll in Catalonia, coming under the tutelage of Atto, Bishop of Vich. On returning to France, he taught at the cathedral school at Reims, instructing his students in ‘far more advanced mathematics and astronomy than had previously been taught, including Arabic numerals and the

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\(^1\) Cf. Gunther, *Chaucer and Massahalla*, p. 134: ‘We have examined two copies, both written about the time of Edward II. Both are admirably illustrated with figures, and either might have been read by Chaucer.’ Cf. also North, *Chaucer’s Universe*, p. 229.

\(^2\) Chaucer may have taken this reference from the *Roman de la Rose* which refers to al-Khwārizmī as both Algus and Argus; cf. L.C. Karpinski, ‘Augrim-Stones’, *MLN* 27 (1912), 206-9 (p. 207).
abacus'.

It was in the cathedral schools of the early eleventh century that Arabic mathematics and technical astronomy had the most impact, and many scholars trained in the new learning, such as Walcher of Malvern, travelled to England. Other scholars from Lotharingia proved ‘very popular in England’, where they became ‘archbishops, bishops and masters of the schools’. However, Chaucer reminds us that algorisms were still calculated with an abacus, which would not be the norm for Arabic scholars who relied solely on Hindu-Arabic numerals. During the fourteenth century both the abacus and algorism were taught ‘side by side’ by Latin scholars. Indeed, ‘Brunetto Latini states that arithmetic includes the study of algorism and the abacus and Giovanni Villani (d. 1348) makes a similar statement about Italian schools’. The association of Arabic mathematics with this system of counting is derived partly from Leonard of Pisa’s ‘monumental work Liber abaci or Book of the abacus and later occurrences of this term in this sense are doubtless due to the great influence of this Pisan’. Leonard of Pisa’s work continued to be taught in the fourteenth century alongside the Arithmetica of Boethius and Euclid, and it proved particularly popular in Oxford because ‘there was no great Oxford algebraist’ during this period.

Furthermore, ‘augrym stones’ continued to be used alongside the development of the Alfonsine Tables, which were in their ‘Golden Age’ by the mid-fourteenth-century. The Alfonsine Tables were a set of astronomical tables named after Alfonso X the Wise (1221-84), king of Leon and Castile. They were in constant use, c. 1320-1551, when Erasmus Reinhold published his Prutenic Tables, and they influenced the towering figure of Renaissance astronomy, Copernicus. They replaced the ‘tables Tolletanes’ (V. 1273-4, p. 185), as Chaucer calls them, which were the work of Ibn Sa’id and al-

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6 North, Chaucer’s Universe, p. 297.
Zarqālī, known in Latin as Azarchel, but translated into Latin by Gerard of Cremona and another anonymous translator, possibly John of Seville. The Toledan Tables combine the work of several mathematicians in charting the movement of the planets and stars: al-Khwārizmī, al-Battani, Thābit ibn Qūra, with an anonymous treatise ascribed to Hermes for the ‘equation of houses’. They were disseminated across northern Europe, influencing the Marseilles Tables composed in 1140, and were still ‘the prime authority in Paris and Oxford in the first decades of the fourteenth century’. Thus, it is hardly surprising that the Clerk of Orleans in the Franklin’s Tale uses the Toledan Tables, as opposed to the more recent Alfonsine Tables, in his calculations. Although Chaucer’s allusion may not be an exact reference to al-Zarqālī’s Toledan Tables as North suggests, ‘all tables likely to have been in Chaucer’s mind, or indeed possession, had a strong association with the city of Toledo’. The Alfonsine Tables became increasingly popular in Northern Europe from the middle of the fourteenth century, especially in Paris, in the work of John of Lignères, John of Murs and John of Saxony. Knowledge of these tables had reached Oxford from Paris by c. 1320, although the English versions display ‘several marks of originality and independence of Parisian styles’. Indeed, the Merton scholar, William Rede had adapted the Alfonsine Tables to the longitude of Oxford, c. 1340, accompanied with a set of canons for guidance. However, ‘there are several other examples of Alfonsine table with English association, not always by any means associated with Oxford’. An English version of the Alfonsine Tables, compiled in 1348, possibly by a William Batecomb, was disseminated across Europe as far as Poland. According to North, Chaucer owned a set of 1348 tables, and ‘in the 1380s a set of astronomical tables were compiled by Nicholas Lynn for John of Gaunt and another by John Somer for Joan of Kent’. Therefore, Chaucer may have been familiar with variations on the Toledan and Alfonsine Tables from a variety of sources.

3 North, *Chaucer’s Universe*, p. 148.
5 North, *Chaucer’s Universe*, p. 148.
7 North, *Chaucer’s Universe*, p. 149.
8 Smyser, ‘Chaucer’s Astronomy’, p. 360.
Aside from these references and the explicit citation of Ptolemy and al-Qabīsī, Wood has noted that a manuscript version of the Miller’s Tale, located in Paris, contains a reference to a work on judicial astrology by the philosopher al-Kindī:

Grayel, Myssal, and Holy Euangel
Of Marke alkyndys wryten fayre and wel,
The Book that hight Non est iudicium. 1

This explicitly cites ‘alkyndys’ and his work, ‘Non est iudicium’, which probably refers to the Judicia (‘Astrological Judgements’), translated by Robert of Ketton at the request of his colleague, Hermann of Carinthia. 2 ‘Myssal’ would appear to be a form of Messehalla, referring to Mashāʾallah. This is a common form of the name attested by Bartholomaeus Anglicus’ citation of a ‘Misael’ when describing the astrological figure of Saturn. 3

In addition to the Arabic works on Ptolemaic astronomy and mathematics which were transmitted to the Latin West, we must consider those concerned with ‘ilm al-ahkām (‘judicial astrology’), which relied on the accurate calculation of the planets in order to determine the fortune of man. Knowledge of judicial prognostication, particularly nativities, was known in the Latin West from at least the eleventh century onward, through the Mathesis of the fourth-century scholar, Julius Firmicus Maternus, and Marcus Manilius’ De astronomia. 4 However,

It is not until the Latin translation of the Arabic and Greek scientific corpus, a process that began in the late tenth century, that astrologers in the West had the technical means to practice Hellenic or scientific astrology, which incorporated the use of astronomical instruments and tables to observe and calculate the

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1 Chaucer and the Country of the Stars, n. 4, p. xi
2 Cf. Charles Burnett, ‘Rodbertus Ketensis’, ODNB.
3 De proprietatibus rerum, 8, 12, l. 10, I, p. 479.
heavenly bodies with precision, the casting of horoscopes, and the consultation of scholarly textbooks to guide their interpretation.¹

In Arabic treatises, ʿilm al-ahkām was composed of texts on mawālid (‘nativities’), katārchāi (‘interrogations’) and ikhtiyārā (‘elections’). It also included texts on the cycle of the world, with a particular interest in the conjunction of Saturn and Jupiter, known as revolutions and introductions, and works on divining fortunes and lots.² These forms of judicial astrology were developed in the Latin West through the Arabic translations, albeit sanctioned by the Greek masters. For instance, Ptolemy’s Tetrabiblos ‘gave strong support to the tenets of natal astrology, which is the interpretation of character, health and fortune based on the configurations of the heavens at the time of birth’.³ The Wife of Bath is entirely familiar with the idea of casting a nativity; she explains the nature of her personality ‘by vertu of my constellacioun’ (III. 616, p. 113), pointing to the position of Mars in Taurus and Venus at the time of her birth, ‘My chambre of Venus from a good felawe. / Yet have I Martes mark upon my face’.⁴

Indeed, Chaucer discusses judicial astrology, specifically nativities and elections, in the Treatise on the Astrolabe:

Natheles these ben observaunces of judicial matere and rytes of payens, in whiche my spirit hath no feith, ne knowing of her horoscopum. For they seyn that every signe is departid in thre evene parties by 10 degrees, and thilke porcioun they clepe a face. And although that a planete have a latituide fro the ecliptik, yit sey somme folk, so that the planete arise in same signe with

² Lemay, Abu Ma’shar, p. 234.
eny degree of the foreshide face in which his
longitude is reckned, that yet is the planete
\textit{in horoscopo}, be it in nativity or in election,
extc. (II. 4, pp. 670-1)

Here, he not only explains how the astrolabe can be used to determine the time of day and night, and the degrees of the signs of the Zodiac which ascend the eastern horizon, called the horoscope, but also comments on the ‘judicial matere’ of those ‘rytes of payens’ based on the twelve signs in the zodiac. Each sign has a face, which has been divided into three parts and the horoscope can be determined when the planets of the same sign rises, ‘with any degree of the foreshide face in which his longitude is reckned’. From this process nativities and elections can be determined, and Chaucer comments on both in his literary works. Interrogations are the practice of interpreting the planetary positions in response to a question or answer posed, while elections are used to predict when to undertake a propitious action, such as making a journey. An important source for the treatment of these forms of judicial astrology in Latin treatises is found in the Arabic translations of the works of Sahl ibn Bishr, known in Latin as Zael. According to Carmody, there are fourteen Latin translations of Sahl’s works, including such treatises on interrogations and elections as the \textit{Introductorium} and the \textit{Quinquaginta precepta}, in addition to \textit{De iudiciis}, \textit{De electionibus} and \textit{Liber temporum}.\(^1\) Carey notes that ‘Sahl’s work seemed to have the widest circulation’, in contrast to the work on elections and interrogations written by Mashāʾallāh and Abraham ibn Ezra.\(^2\)

The importance of casting an election before an event is emphasized in the Man of Law’s Tale. Here, the Man of Law stresses the need to consult an astrologer before Custance travels to Syria in order to marry the Sultan:

\begin{quote}
Imprudent Emperour of Rome, ala!  
Was ther no philosophre in al thy toun? (I. 309-10, p. 91)
\end{quote}

In one of his many astronomical apostrophes, the Man of Law is astounded that the Emperor of Rome did not consult a ‘philosophre’, referring to an astrologer, in order to

\footnote{1 Cf. \textit{Arabic Astronomical and Astrological Sciences}, p. 40-6.}
\footnote{2 ‘Judicial Astrology’, p. 91}
cast an election before sending Custance to marry the Sultan of Syria. Such a sentiment is also echoed by Roger Bacon who warns, ‘O most clement king, if it is at all possible, you should neither rise up nor sit down nor eat nor drink nor do anything without the advice of men learned in the art of astrology’.\(^1\) Roger’s hyperbolic emphasis on the importance of using an astrologer would have had a particular resonance almost a century later for Richard II, who took a keen interest in the astrological and divinatory sciences, although he was ‘more conservative’ than his continental counterparts.\(^2\) This attitude towards predictive astrology was not shared by all fourteenth-century scholars. In his *Livre de divinacions*, Nicolas Oresme declared himself ‘a vigorous opponent of astrological determinism’.\(^3\) He disliked particularly the notion of casting elections and interrogations, as stated in the fifth and sixth parts of his work, ‘La quinte partie, des interrogacions, et la sixte, des elections, n’ont point de raisonnable fondement et n’y a point de verite’.\(^4\) For Nicolas, there was no rational foundation, or truth, to be found in the casting of elections and interrogations. Certainly, distinct echoes of this viewpoint are found in Chaucer’s description of judicial astrology in terms of the ‘rytes of payens’ in the *Treatise on the Astrolabe*. Moreover, the judicial astrology practised by Clerk of Orleans in the Franklin’s Tale is described as being worth ‘nate a flye’, practised only by ‘hethen folk’. As Smyser notes:

Indeed, Chaucer himself, despite all his use of astrology in his poems and despite his discussion of various astrological concepts in his *Treatise on the Astrolabe*, feels called upon twice, albeit briefly and lamely, to denounce astrology as pagan.\(^5\)

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5. ‘Chaucer’s Astronomy’, p. 360.
Moreover, Chaucer’s denunciation of astrology must also be viewed in the light of the debate over free will, headed by another Merton scholar, Thomas Bradwardine.\(^1\) Chaucer affords Bradwardine a lofty position in the Nun’s Priest’s Tale where he is placed alongside Boethius and Augustine: ‘As kan the hooly doctour Augustyn, / Or Bocce, or the Bisshop Bradwardyn’ (VII. 3241-4, p. 258).\(^2\) Bradwardine accompanied Edward III to France during the 1346 campaign, where he delivered his *Sermo epinicius* in commemoration of the Battle of Crécy, which dealt a heavy blow to astrology and its practitioners.\(^3\) Chaucer may well have had this in mind when commenting on the dangers of prognostication, yet the Man of Law certainly speaks for a large sector of the affluent, educated population in emphasizing the need to cast an election on certain occasions.

The casting of an election involved a technical calculation which required the astrologer to ‘identify, balance and temper the opposing astrological forces in the horoscopes’.\(^4\) It also required the astrologer to use several different horoscopes in order to determine and calculate the position of the heavens, which was ‘only really possible for academics or court astrologers with secure patronage’.\(^5\) That this level of expertise can only flourish in rarefied environments is understood by the Man of Law, who invokes the figure of an educated, university-trained astrologer to calculate the election. Moreover, Chaucer places a particular stress on this understanding by furnishing us with an explanation, couched in technical, astronomical terms, of the position of the heavens at the time of Custance’s departure:

\[
\text{Infortunat ascendent tortuous,} \\
\text{Of which the lord is helplees falle, allas,} \\
\text{Out of his angle into the derkest hous!} \\
\text{O Mars, o atazir, as in this cas! (II. 299-305, p. 91)}
\]

North provides a detailed explanation of this ‘Infortunat ascendent tortuous’, which refers to ‘one of the signs between Capricorn and Gemini, inclusive of both’, whereby


\(^3\) Cf. Carey, *Courting Disaster*, p. 84.


the ‘lord’ of the ‘ascendent’, that is, ‘the planet to whom the sign is a domicile’, which could be ‘Saturn (Capricorn and Aquarius), Jupiter (Pisces), Mars (Aries), Venus (Taurus), and Mercury (Gemini)’, ‘is helpless having fallen from his angle into the darkest house’. Chaucer explains the significance of the ascendant in the *Treatise on the Astrolabe*:

> The ascendant sothly, as wel in alle nativites as in questions and eleccions of tymes, is a thing which that these astrologiens gretly ob- serven. (II. 4, p. 670)

Furthermore, the Man of Law uses the Arabic term, ‘atatir’, which describes ‘a process, in a complex astrological theory’, generally associated with the Tunisian scholar, ‘Ali ibn al Rijjāl, known in Latin as Albohazen Haly Abenragel, and Mashā‘allāh. The word is derived from the Arabic verb *sara*, ‘to move’ or ‘to be directed’, and the verbal noun, *taysir* ‘sending out’. It was used in Arabic translations of Ptolemy’s works to describe the ‘projection of rays which Ptolemy postulated of the planets’, and it is used in that sense in judicial astrology. According to Mashā‘allah, if ‘you have found the native will not live long, you will make atasir from the degrees of the ascendant up to the evil planet that hinders, and you will give a month to each sign’, and ‘if the native survives these months, he will live as many years as you have predicted’. For Chaucer to have come across this difficult, technical term he must have had access either to certain Arabic texts in translation, or he may have encountered the term in ‘John Walter’s tables of astrological houses’. The Man of Law, and by extension Chaucer, is clearly familiar with the process of ‘atatir’, and it is employed in a manner which further emphasizes the unfortunate celestial aspect of Custance’s

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2 North, Chaucer’s Universe, p. 220.
3 North, Chaucer’s Universe, p. 226.
4 North, Chaucer’s Universe, p. 226.
6 North, Chaucer’s Universe, pp. 226-8.
departure, because it refers to Mars, ‘the destructive, anaeretic, thing that made the horoscope so grave’.

Chaucer’s knowledge and understanding of such difficult, learned terms derived from the Arabic is also demonstrated in the Franklin’s Tale. We are told that the Clerk of Orleans has studied ‘magyk natureel’ (V. 1125, p. 183), which helps him determine the tide which will cover the black rocks that vex Dorigen. The Franklin describes him as one of those ‘yonge clerkes that been lykerous / To reden artes that been curious’ (V. 1119-20, p. 183). He goes beyond the prescribed university lectures to indulge his passion for natural science:

Seken in every halke and every herne
Particuler sciences for to lerne-
He hym remembred that, upon a day,
At Orliens in studie a book he say
Of magyk natureel, which his felawe,
That was that tyme a bacheler of lawe… (V. 1121-6, p. 183)

Here, it is interesting to note that the Clerk actively seeks out new sciences ‘in every halke and every herne’, which reminds us of the description of the Yeoman and his master, ‘Lurkynge in hernes and in lanes blynde’ (VIII. 658, p. 271). Both the Canon and the Yeoman practise the dubious art of alchemy, seeking knowledge in the same dark corners and blind alleys as the Clerk. Through the use of this metaphorical, marginal landscape, Chaucer makes it clear that the ‘astrologye’ (I. 3192) which interests Nicholas is not the same as that sanctioned at ‘Oxenford’ (I. 3187). Similarly, the Clerk of Orleans is so deeply interested in certain dubious forms of natural science that his attention is diverted from his study of the artes liberales. Here, it is important to note the significance of the university setting, as Orleans was ‘widely regarded as a centre of astronomical study’. This is emphasized by the behaviour of the Clerk’s friend, who is ostensibly studying for the higher degree of law, but gives the impression he is ‘ther to lerne another craft’. That he leaves a book for the Clerk ‘prively upon his desk’ (V. 1127-8, p. 183), is indicative of the marginal status of this ‘craft’ elsewhere in

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1 North, *Chaucer’s Universe*, p. 228.

2 Ben Parsons, ‘No Laughing Matter: Fraud, the Fabliau and Chaucer’s Franklin’s Tale’, *Neophilologus* 96 (2012), 121-36 (p. 125).
the *Canterbury Tales*. We are reminded that in the Miller’s Tale, John exclaims that such study breaches ‘Goddes pryvetee’ (I. 3454, p. 71), and it is not for man to meddle in God’s ‘purveiaunce’ (I. 3011, p.65). Fittingly, the Clerk’s book is a technical work, which deals with ‘operaciouns’ of the twenty-eight stations, or mansions of the moon:

> Which book spak muchel of the operaciouns  
> Touchynge the eighte and twenty mansiouns  
> That longen to the moone, and swich folye. (V. 1129-31, p. 183)

Similarly, the Franklin deploys an impressive degree of technical precision in describing the Clerk’s Toledan Tables, which chart the movement of the sun, moon and the nine planets. Here, it is worth noting that these tables have been ‘Ful wel corrected’ (V. 1273-4, p. 185) to the latitude of Brittany, which demonstrates Chaucer’s precise knowledge of their function:

> And by his eighte speere in his wirkyng  
> He knew ful wel how fer Alnath was shove  
> Fro the heed of thilke fixe Aries above,  
> That in the ninthe speere considered is; (V. 1280-3, p. 184)

As North points out, this refers to the ‘eighth sphere’, which is the *stellatum* or ‘sphere of the fixed stars, conceived as moving with respect to the system of the celestial circles and points, in particular the equinoctial points (the head of “thilke fixe Aries” being one of the two). This “fixed” system is that of the “ninthe sphere”, the *Primum Mobile.*¹ Moreover, the term ‘Alnath’ comes from the Arabic verb *nataha*, which literally means ‘the act of going or butting with the horns’.² It is the name given to the first mansion of the moon in Arabic sources, but it is sometimes identified with first star in the horns of Aries and referred to as such in the Toledan Tables. However, it is clear that the Franklin is not referring to the star, but the mansion of the moon. As North observes,

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¹ Chaucer’s Universe, p. 154.  
‘The mansions are each, for Chaucer, at least, twenty-eight equal divisions of the 360˚ of the zodiac.’

Significantly, Chaucer’s technical knowledge of astronomy, ultimately derived from Arabic sources, is coupled with his understanding of the discipline of iatromathematics, or medical astrology. The Physician is described in the General Prologue as having a comprehensive knowledge of the stars and their influence on one’s physical wellbeing:

For he was grounded in astronomye.
He kepte his pacient a ful greet deel
In houres by his magyk natureel.
Wel koude he fortune the ascendent
Of his ymage for his pacient.
He knew the cause of everich maladye,
Were it of hoot, or coold, or moyste, or drye,
And where they engendred, and of what humour. (I. 411-21, p. 30)

Here, it is important to note that Chaucer introduces his Physician with a description which places a particular stress on his grasp of medical astrology, being ‘grounded in astronomye’. Chaucer conflates the two terms, which is not uncommon for this period. The MED defines ‘astronomie’ as ‘the science of astronomy together with the pseudo-science of astrology, as developed by the Greeks and Arabs’, concluding that the ‘terms astronomie and astrologie were used interchangeably’. Similarly, in the Miller’s Tale, when John exclaims that Nicholas is the architect of his own downfall due to his immersion in ‘astromye’ (I. 3451, p. 71), he is referring to his calculation of the movement of the stars.

However, although the terms would appear to be used interchangeably by Chaucer, he is adhering to a categorisation stemming from Isidore of Seville’s Etymologiae. Drawing on a rudimentary knowledge of the mathematical works of Ptolemy, Isidore redefined the two terms:

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1 Chaucer’s Universe, p. 156.
2 MED, ‘astronomie (n.1)’, 1.
Astronomy (astronomia) is the law… of the stars (aster), which, by investigative reasoning, touches on the course of the constellations, and the figures and positions of the stars relative to each other and to the earth.¹

Here, astronomy is defined as a mathematical science, which traces the course and position of the stars in the cosmos. Astrology is a sub-section of astronomy:

There is some difference between astronomy and astrology… astrology is partly natural, and partly superstitious. It is natural as long as it investigates the courses of the sun and the moon, or the specific positions of the stars according to the seasons; but it is a superstitious belief that the astrologers (mathematicus) follow when they practice augury by the stars, or when they associate the twelve signs of the zodiac with specific parts of the soul or body, or when they attempt to predict the nativities and characters of people by the motion of the stars.²

According to Isidore, natural astrology, which covered ‘astronomical, biological, medical, agricultural, and nautical uses of the science’, is legitimate.³ This term could be extended to encompass cosmology, specifically the influence of the celestial spheres on terrestrial activity. However, it is judicial astrology that aims to predict the ‘nativities and characters of people’, which is condemned as a superstitious practise. Given that astrology came under the heading of astronomy, it was not unusual for even those astrological practises concerned with prognostication to be termed ‘astronomye’.

By the fourteenth century, astrology was included in the higher medical degree at the University of Bologna, and a chair in astrology was also introduced, in contradistinction to the universities of France and England. This inclusion of astrology in the study of medicine began with Cecco d’Ascoli, professor of mathematics and astrology at Bologna from 1322-4. D’Ascoli quoted from Hipparchus to illustrate the close relationship between the two subjects, ‘a physician without astrology is like an

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eye that cannot see’. However, earlier Italian professors, such as Peter of Abano (1250-1315) had initiated the theoretical links between astrology and medicine, which came to define medical studies at Bologna during the fourteenth century. Peter of Abano discussed the close relationship between astrology with medicine in his *Conciliator*, although his preference for astrology ultimately earned him a dubious reputation as a necromancer and magician. However, the inclusion of astrology in the study of medicine, spearheaded by Alderotti at Bologna, was subsequently adopted by the universities of Padua and Florence. By the middle of the fourteenth century, a charter was drawn up by the University of Paris for the foundation of a college of astrology and medicine under the headship of Maître Chrétien Gervais and the patronage of Charles V, who offered the college two fellowships. According to Simon de Phares, writing in the fifteenth century, the King secured approval for the college from Pope Urban V who was at Avignon, 1362-72. Certainly, the 1366 medical curriculum of the University of Paris now encompassed mathematical works, including works of an astrological dimension.

Moreover, judicial astrology was assimilated into this specialist branch of medicine, independent from scientific astrology and academic medicine. Carey notes that two types of medical astrology predominated: lunar medicine which focused on the cycles of the moon in order to balance the humours and find a patient’s critical days, and the five branches of judicial astrology, based on the Graeco-Arabic astrological and scientific texts discussed above. The practise of finding the crisis and critical days of

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3 Cf. Siraisi, *Taddeo Alderotti*, p. 117.
5 ‘Medieval Latin Astrology’, pp. 35-7. Early Medieval texts demonstrate the use of computus in medicine to determine the lunar cycles. Every movement of the moon could determine not only the month, but also the day and aid in casting horoscopes, interpreting dreams, and indicating the best time for Phlebotomy. However, the introduction of judicial astrology ‘radically transformed the astronomical-time elements in computus manuscripts’ (Faith Wallis, ‘Medicine in Medieval Calendar Manuscripts’, in *Manuscript Sources of Medieval Medicine*, ed. Margaret R. Schleissner (New York, 1995), pp. 105-43 (p. 119). Computus was now used for predicting conjunctions and eclipses, as opposed to its original function in determining the date of Easter.
an illness was codified in a thirteenth-century treatise called *Aggregationes de crisi et creticis diebus* (‘Summary on Crises and Critical Days’). It was based on the works on Galen, but made use of mathematical astronomy derived from Arabic translations to explain the concept of a crisis and a critical day in terms of medical astrology. A crisis was a ‘sudden alteration in the course of a disease’, leading either to a recovery or a decline, and a critical day was ‘when a crisis occurs or can be expected to occur’.¹ As Wallis’ translation of the text indicates, the anonymous author of the treatise cites Galen, as well as Constantinus Africanus.² Chaucer does not explicitly reference critical days, but he does note the Physician’s ability to treat his patients ‘In houres by this magyk natureel’. Pauline Aiken has suggested that this is derived from Vincent of Beauvais’ *Speculum naturale*, which is ultimately derived from Avicenna, and describes the ‘hora’, the Physician’s ‘houres’ that measure each stage of a disease.³ Additionally, a physician or an astrologer might cast a revolution to predict the course of a long-term illness, or indeed an epidemic, as John Ashenden attempted to in the case of the Black Death. A nativity might be cast to determine the length of one’s life in the context of a particular disease. Examining the lunar cycle and computing calendars was also part of elections, which was used to determine when to dispense medicine or practise phlebotomy.⁴

Phlebotomy also came under the remit of astrology as it required the physician to locate the position of the moon before drawing blood. The blood in the body was likened to the tide, which was controlled by the stations of moon moving through the constellations of the zodiac that also caused the blood in specific parts of the body to increase.⁵ In order to calculate the position of the body before undertaking phlebotomy, the physician needed to consult a series of astronomical tables called almanacs. These tables could be in ‘perpetual use’ because they gave the daily positions of the Sun, Moon and five planets for different periods of time and were ‘fixed at an integer number

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They gave direct readings of the position of the celestial bodies with little need for additional astronomical computation. The etymology of the term ‘almanac’ is unknown, but the first documented reference to it comes from a Latin text attributed to Abraham ibn Ezra. The corresponding term used in Arabic astronomical writings is manakh, of which the oldest recorded example is now described as al-Zarqālī’s Almanac of Azarquiel, which uses Ptolemaic mathematical parameters as its guide and computes the same dates as those given in the Toledan Tables. Almanacs gained popularity throughout the fourteenth and fifteenth centuries, and such notable Latin scholars as John of Lignières and John of Saxony not only used them, but went on to compile their own. Indeed, ‘there is evidence of various almanacs compiled in England, but no names are associated with them’.  

These almanacs were often accompanied by a pictorial representation of Zodiacal Man, which attributed different parts of the body to the zodiac, thus aiding the physician’s prescribed treatment, as well as determining the appropriate times for blood-letting and purging:

Texts accompanying the zodiac man specify that on days when the Moon is in any particular sign, blood should not be let from the part of the body ruled by that sign; likewise, the organ ruled by that sign is likely at that time to be vulnerable to disease.

The image of the zodiac man was a result of the Graeco-Arabic astrological transmissions and translations; Ptolemy and Abū Ma’shar ‘provided medical illustrations as part of their proofs of astrology’. That Chaucer is aware of what an almanac is, and how it functions, is clear from his introduction to the Treatise on the Astrolabe:

The whiche
fourthe partie in speciall shal shewen a

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3 Wallis, ‘Medicine in Medieval Calendar Manuscripts’, p. 120.
Here, Chaucer notes that the fourth part of the *Treatise*, which has not been recovered, will discuss the movement of the planets and moon from ‘houre to houre’, referring to the twelve mansions of the moon, ‘every day and in every signe’, as is shown in an ‘almenak’.

Moreover, Chaucer’s Physician grounds his practise of ‘astronomye’ in Galenic humoural theory: ‘ Were it of hoot, or coold, or moyste, or drye’ (I. 420, p. 30). That this form of medical astrology was assimilated into Arabic medicine is attested by al-Rāzī, ‘Wise physicians are agreed that all things here below, air, water, the complexions, sickness, and so on, suffer change in accordance with the motions of the planets’.¹ According to medical astrology, each of the signs of the Zodiac has inherent qualities, ‘Aries, Leo, Sagittarius are fiery; Taurus, Virgo and Capricorn are earthy; Gemini, Libra and Aquarius are airy; Cancer, Scorpio and Pisces are watery’.² Aries, Cancer, Libra and Capricorn are considered to be ‘tortuous signs’ because the four elements, or complexions, are renewed through them, ‘hot and dry in Cancer, cold and dry in Libra, hot and dry in Cancer, cold and moist in Capricorn’.³ Taurus and Virgo are ‘fixed signs’ because the complexities remain constant, while Gemini and Aquarius are ‘common signs’ as the complexions decline.⁴ Chaucer explains this process in the *Treatise on the Astrolabe* while discussing the ascendant:

And understond also that whan an hot planete cometh into an hot signe, than encrescith his hete; and yf a planete be cold, than amenusith his coldnesse by cause of the hoote sygne.
And by thys conclusiou[n] maist thou take en[s]ample in alle the signes, be thei moist or drie,

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² Curry, *Chaucer and the Mediaeval Sciences*, p. 7.
³ Curry, *Chaucer and the Mediaeval Sciences*, pp. 7-8.
⁴ Curry, *Chaucer and the Mediaeval Sciences*, pp. 7-8.
or moeble or fixe, reknyng the qualite of the planete as I first seide. And everich of these 12 signes hath respect to a certeyn parcel of the body of a man, and hath it in governaunce; as Aries hath thin heved, and Taurus thy nekke and thy throte, Gemini thin armholes and thin armes, and so furth, as shall be shewid more pleyn in the 5 partie of this tretis. (I. 63-77, pp. 668-9)

Thus, when a hot planet comes into a hot sign, then its heat increases, whereas the opposite happens if a cold planet enters a cold planet. Chaucer understands that all of the signs have different qualities, ‘moist or drie’, as well as being either ‘moevable or fixe’, and each of the planets are assigned a certain part of the body, as demonstrated in Zodiacal Man. He notes that ‘Aries hath thin heved’ meaning that when the moon is in Aries blood moves to the head, as a fifteenth-century folded almanac currently housed in the Wellcome Institute, MS 40 notes, ‘Aries: Beware of incision in the head or in the face, nor should you make an incision in the great vein of the head.’ Aries is followed by Taurus, ‘Beware of incision in the neck or in the throat, nor should you make an incision in a vein in these place’. This is echoed in the Treatise on the Astrolabe where Taurus is aligned with the neck and throat. Similarly, Chaucer aligns Gemini with the arms and arm sockets, in keeping with the tradition expressed in the almanac, ‘Beware of incision in the person’s arms or hands, nor should you open a vein in these places.’

Carey has noted that such ‘client-based practice of scientific astrology’ as the Physician can offer is rarely documented in the early medieval period and seems to have come into vogue towards the end of the fifteenth century. Indeed, the Physician is partially defined by a cutting-edge, scientific practise, which had developed through the use of Arabic mathematical astronomy.

Significantly, the Physician is also able to ‘fortune the ascendant / Of his ymages for his pacient’, which demonstrates his proficiency with astronomical tables in order to calculate the highest planet in the ascendant, and construct the favourable planets as

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1 Wallis, Medieval Medicine, p. 287.
2 ‘Judicial Astrology’, p. 90.
talismanic images to cure the ills of his patient. This is in the manner of such astrological talismanic texts as written by Thābit ibn Qūra, which was translated into Latin by John of Seville as De imaginibus.\(^1\) This text was possibly influenced by Ptolemy’s Liber imaginum and explains the use of seven talismanic images and their value in different situations, including to ‘stimulate love or hatred between two persons’.\(^2\) Chaucer also condemns the use of talismanic ‘ymages’ (I. 417) in the House of Fame. In Book Three, the narrator vividly portrays Fame’s citadel, where he comes across ‘Olde wicches, sorceresses / That use exorsisacions’ (III. 1262-3, p. 363), and magicians, wizards, enchantresses and ‘clerkes’ (III. 1265) who practise ‘magik naturel’ (III. 1266). Here, it is the clerk who, similar to the Physician, knows how to construct images to help heal man:

And clerkes eke, which konne wel
Al this magik naturel,
That craftely doon her ententes
To make, in certeyn ascendentes,
Ymages, lo, thrugh which magik
To make a man ben hool or syk. (III. 1265-70, p. 363)

For Chaucer, the term ‘magik natureel’ is associated with educated men who use some form of judicial astrology: the Physician in the General Prologue, the Clerk of Orleans who uses ‘magyk natureel’ (V. 1125, p. 183) to calculate the position of the tide in the Franklin’s Tale, and the clerks in the House of Fame. Here, Chaucer presents an explicitly condemnatory portrait of this use of judicial astrology, as these clerks proceed ‘craftily’ with their talismans.

The influence of Arabic astrological writings on the medical diagnosis of amor hereos is most clearly discernible in the alignment of the planet Saturn with melancholia in judicial astrology. As we have seen, the aetiology of melancholia lay in an excess of black bile in the physical body, which had both pathological and physiological manifestations. Moreover, the Latin West derived a large proportion of its information on melancholia as a mental illness from the Latin translations of Arabic medical

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\(^1\) Cf. Carmody, Thabit ibn Qurra, p. 172.

\(^2\) Cf. Carmody, Thabit ibn Qurra, p. 168.
treatises by Constantinus Africanus, Ishaq ibn Imrān, al-Rāzī, Avicenna and Averroes. These scholars based their works largely on Aristotle and Rufus of Ephesus, thus combining the aetiologies of a natural philosopher and a physician respectively.

Chaucer’s use of Saturn is most clearly delineated in the Knight’s Tale and the House of Fame. The concept of melancholic lovesickness presented in both works would appear to reflect the Arabic astrological descriptions of Saturn, which affect both the somatic and physical symptoms of melancholia. In particular, we may note the parallels between the description of Saturn in the Knight’s Tale and the descriptions found in the works of Abū Māʾshar, al-Qabīsī and ‘Ali ibn al Rijjāl. The incorporation of the humours with astrology was first presented by Ptolemy and codified by the Arabic scholars. The idea that the four dispositions: the melancholic, sanguine, choleric and phlegmatic, were aligned to the planets was systematised in the Arabic tradition. Melancholy was twinned with Saturn, sanguineous with Jupiter or Venus, choleric with Mars and phlegmatic with the Moon. Moreover, Galen, followed by the Arabic scholars such as al-Kindī, attributed the parts of the day to the four humours which stressed the dominant humour and temperament of a person. Therefore, ‘men born in the first quadrant from the east point to the centre of the sky are sanguine, in the second choleric, in the third melancholic, in the fourth phlegmatic’. In his Introductorium maius, Abū Māʾshar also relates the qualities of the four dispositions to the temperaments ‘and credits them with an influence on physique, emotions and character’. Moreover, the movement of the planets at certain times of the day could also cause disease, for instance, ‘if Luna is in Cancer when the sickness begins and in conjunction with Saturn and Mars, the infirmity comes from a super abundance of black cholera’.

Abū Māʾshar and al-Qabīsī both describe the characteristics of the planet Saturn, which were a combination of the accounts of the astronomical star Saturn and the mythological god Saturn. For Arabic writers, the characteristics of Saturn were derived from the Roman god of agriculture known as Kronos, son of Uranus, and Chronos, the god of time. Kronos bestowed life and nature as well as taking it away. This dualistic

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1 Cf. Curry, Chaucer and the Mediaeval Sciences, pp. 11-12.
2 Kliblansky, Saturn and Melancholy, p. 127.
3 Kliblansky, Saturn and Melancholy, p. 127.
4 Curry, Chaucer and the Mediaeval Sciences, pp. 11-12.
aspect was discussed by Vettius Valens, who states that along with agriculture Saturn is associated with ‘celibacy and childlessness, widowhood, child-exposure, orphanhood, violence and hidden malice’.\(^1\) Furthermore, Saturn occupied the highest position in the Neoplatonic cosmos, and in the Ptolemaic-Aristotelian universe the seventh concentric circle. In metaphysical terms this was the highest position as the ‘genitor took precedence over the generated’, while in Aristotelian metaphysics the ‘higher position in space signified greater metaphysical worth’.\(^2\) In astronomical terms this meant that Saturn was the furthest planet from the sun and therefore cold and dry. Chaucer characterises him as such in the Knight’s Tale, as ‘pale Saturnus the colde,’ (I. 1443, p. 58). These qualities were equated with the earthly temperament of black bile which was the medical cause of melancholia.

Abū Māʾshar describes Saturn’s qualities and attributes, in which his association with melancholia can be also discerned:

> With regard to Saturn, his nature is cold, dry, bitter, black, dark, violent and harsh. Sometimes too it is cold, moist, heavy, and of stinking wind. He eats much and is honest in friendship. He presides over works of moisture, husbandry, and farming; over owners of land, works of construction on estates, land and much property, and estates with their wealth; over avarice and bitter poverty… he further presides over old men and surly people; over fear, reverses of fortune, cares, fits of sadness, writing, confusion…affliction.\(^3\)

This gives us a good sense of Saturn’s inherent contrariness. He is both ‘dry’ and ‘moist’, he presides over avarice and poverty, and those who are introverted and ostentatious. Moreover, Abū Māʾshar also associates him with ‘reverses of fortune’, which is reminiscent of Chaucer’s introduction to Saturn in the Knight’s Tale:

> Fortune hath yeven us this adversitee.

> Som wikke aspect or dispocioun

> Of Saturn, by som constellacioun,

\(^1\) Klibansky, *Saturn and Melancholy*, p. 143.


\(^3\) Klibansky, *Saturn and Melancholy*, pp. 130-1, quoting Albumasar, *Introductorium maius*, Leiden University, MS Or. 47.
Hath yeven us this, although we hadde it
sworn;
So stood the hevene when that we were
born. (I. 1086-90, p. 40)

It is the Boethian wheel of fortune which has caused Arcite and Palamon’s ‘adversitee’, but Chaucer emphasizes the astrological aspect of the depths of their misfortunes. Their fall is not simply due to Fortune, but a wicked aspect of the heavenly constellations which has caused Saturn to be in ‘dispocioun’. However, as Arcite points out to Palamon, they were told that such a tragedy would not befall them, most likely through the casting of their nativity at the time of their birth. Here, Chaucer provides an explanation of the Knights’ misfortune using both Boethian philosophy and judicial astrology via the Arabic tradition.

In parts three and four of the Knight’s Tale, Chaucer provides a detailed description of Saturn, which focuses on his astronomical position, ‘My cours, that hath so wyde for to turne’, and his astrological influence upon man, because he ‘Hath moore power than woot any man’ (I. 2454-5, p. 58). This power is intrinsically linked with his position in the heavenly cosmos; being the furthest from the earth means being closer to the ‘First Moevere’ (I. 2987, p.65) than any other planet. He goes on to claim responsibility for those diseases caused by black bile, ‘myne be the maladyes colde’ (I. 2467, p. 58). The cold, dry aspects of Saturn are reiterated by al-Qabīsī, who systematised Abū Maʾšar’s depictions:

He is bad, masculine, in daytime cold, dry, melancholy (literally: blackish of mixture) … To him belong hearing, comprehension, the viscous, sticky, blackish (melancholy) thick humours, and of the parts of the body, and of diseases, gout, elephantiasis, dropsy, hypochondria, and all chronic illnesses which come from cold and dryness.¹

The association with melancholia is more immediate than in Abū Maʾšar’s description: the black complexion denotes the melancholic, a tradition rooted in Greek medicine, but

this is preceded by the cold, dry aspects which cause the affliction and, according to al-Qabīsī, several other diseases, including hypochondria. This association with hypochondria is stressed in Rufus of Ephesus’ *De melancholia* and Ishâq ibn Imrân’s commentary on it. As we have seen, Latin Christendom became acquainted with *De melancholia* by means of Constantinus Africanus’ translation of this commentary, which popularized the belief that hypochondriac melancholia was derived from black bile.¹

When in the hypochondria or in the neighbourhood of the orifice of the stomach, following a disturbance of the digestion, a large amount of black bile collects, a black bile vapour rises from it into the brain, as the result of which, sadness, depression and hallucinations appear.²

It is no surprise then, that al-Qabīsī notes hypochondria as a disease caused by Saturn considering it is derived from black bile and associated with melancholia.

The iconographic imprint of Saturn’s judgement upon Arcite is discernible in his fall, as his horse leaps aside, his broken body is left ‘As blak he lay as any cole or crowe’ (I. 2692, p. 61), which reminds us that Arcite’s punishment is controlled by Saturn, whom Abū Ma’shar’ describes as ‘blackish of mixture’. Chaucer also describes Saturn’s association with navigation and seafaring, ‘Myn is the drenchyng of the see so wan’ (I. 2456, p. 58), an attribute found in the Arabic astrologers. Abū Ma’shar notes that Saturn presides over ‘sea travel’, while al-Qabīsī emphasizes his influence ‘over respectable professions which have to do with water like the commanding of ships and their management’.³ However, al-Qabīsī’s portrait is somewhat at variance with the dark overtones of Chaucer’s description, where Saturn is particularly associated with drowning. Indeed, the malefic disposition of Saturn is emphasized through the exercise of power in the Knight’s Tale. Saturn not only exerts power over the destiny of sailors, but also over prisoners:

Myn is the prison in the derke cote;

Myn is the stranglyng and hangyng by the throte. (I. 2458-9, p. 58)

This association of Saturn with imprisonment is also emphasized by Palamon, ‘But I moost been in prisoun thurgh Saturne’ (I. 1328, p. 43). Moreover, as his dialogue with Venus evinces, it would appear that Chaucer’s Saturn is permanently fixed in an unfortunate ascendant as his character is unremittingly negative. We are reminded of al-Qabīsī’s description of Saturn, ‘But when he is evil he presides over hatred, obstinacy, care, grief, lamenting, weeping, evil opinion, suspicion between men.’ Chaucer’s Saturn is indeed ‘obdurate, fearful, given to anger’, as al-Qabīsī puts it, who destroys mankind’s pretentions to greatness or permanence, ‘Myn is the ruyne of the hye halles, / The fallynge of the toures and of the walles’ (I. 2464-5, p. 58).¹

However, Chaucer also emphasizes Saturn’s age and wisdom:

Til that the pale Saturnus the colde
That knew so manye of aventure olde,
Foond in his olde experience an art
That he ful soone hath plesed every part.
As sooth is seyd, elde hath greet avantage;
In elde is bothe wysdom and usage;
Men may the olde atrenne and noght atrede.
Saturne anon, to stynten strif and drede,
Al be it that it is agayn his kynde,
Of al this stif he gan remedie fynde. (I. 2443-50, p. 58)

This depiction is reminiscent of Ḥarīrī’s portrait, where Saturn is depicted as having a delicate memory, dedicated to pondering ancient wisdom.² According to al-Qabīsī, Saturn ‘presides over fathers’, ‘over old age and dotage and over elder brothers and ancestors’, and ‘over experience of things’.³ The association of Saturn with age and

¹Klibansky, Saturn and Melancholy, pp. 131-2, quoting Alcabitius, Libellus ysagogicus, Oxford, Bodleian, MS Marsh 663.
³Klibansky, Saturn and Melancholy, pp. 131-2, quoting Alcabitius, Libellus ysagogicus, Oxford, Bodleian, MS Marsh 663.
wisdom is particularly well-developed in the Neoplatonic tradition, and is embodied in ‘olde fader Egeus’ (I. 2838, p. 63) in the Knight’s Tale. Moreover, the wisdom granted to elders by Saturn characterizes the depiction of Judaism in the *House of Fame*:

Hym of secte saturnyn,
The Ebrayk Josephus the olde,
That of Jewes gestes tolde. (III. 1432–4, p. 365)

Here Chaucer explicitly links Flavius Josephus with the ‘secte saturnyn’, together with another ‘sevene’ unnamed Jewish worthies who uphold the fame of ‘the Jewerye’ (III. 1436–7, p. 365). This echoes al-Qabīsī’s description of Saturn, ‘He has the faith of Judaism, black clothing; of days Saturday, and the night of Wednesday’. Moreover, we may note the description of the conjunction of Saturn and Jupiter in Roger Bacon’s *Opus maius*, which draws on the Arabic astronomical tradition:

Whence the skilful authorities aforesaid and others say if Jupiter is in conjunction with Saturn, he signifies the sacred books and of the sects that of the Jews, because it is more ancient than the others and prior to them, just as Saturn is the father of the planets and more remote and prior in the egress of the planets and in their order in existence. All faiths acknowledge it, and it acknowledges no other, just as all the planets are in conjunction with Saturn and he with no one of them because of the slowness of his motion.

According to Bacon, whenever Jupiter is in conjunction with any planet a new religion is born. When Jupiter was in conjunction with Saturn, the oldest Abrahamic faith came into being, as Chaucer’s reference to the ‘secte satunye’ reminds us.

It is clear the depiction of Saturn in Abū Ma’ṣhar, al-Qabīsī and ‘Alī ibn al-Rījāl had a profound influence on his depiction in the Latin West, especially in the case of Daniel of Morley and such twelfth-century encyclopaedists as Vincent of Beauvais and

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Bartholomeus Anglicus. In *De proprietatibus rerum*, Bartholomeus specifically associates Saturn with melancholy:

> Misael seiþ þat Saturnus is an yuel-willid planete, colde and drye, a nyȝt planete, and heuy; and þerfore by fablis he is ipeyntid as an olde man...And he loueþ stinking beestis and vnclene, and soure þingis and scharpe, for in here complexioun melancolik humour haþ maistrie.¹

Bartholomeus cites ‘Misael’ as his authority, referring to the Arabic astronomer, Mashā‘allāh. He also follows the descriptions given by both Abū Maʾshar and al-Qabīsī, Saturn is described as cold and dry, and has mastery over the malefic, ‘complexioun melancolik humour’, as well as being ‘yuel-willid’, and ‘olde’.

By the time Bartholomaeus and Vincent were compiling their encyclopaedias, Arabic authorities and their works had become fully assimilated into the practice of astrology, and had make a significant contribution to the concept of Saturn as a ‘malevolent figure of menace’.² This negative portrayal of Saturn continued throughout the medieval period. Michael Scot’s portrayal is particularly damning:

> The Saturnine man is the worst of all men, and his facial and temperamental peculiarities reflect the vileness of his whole appearance ... he is timid, depressed, thoughtful, seldom laughing or even cheerful; lazy, envious, negligent in dress, boring in speech, deceitful, rapacious, thievish, ungrateful, miserly and misanthropic.³

The contrary, dualistic nature of Saturn, with his ‘ful large whel to turne’ (III. 1450, p. 365), furthest from the Sun, yet lord ascendant over all the planets, is emphasized throughout the Middle Ages, with an increasing emphasis on the pensive aspect of the planet. As Abū Maʾshar notes, Saturn is responsible for ‘over much thinking, aversion

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¹ *De proprietatibus rerum* 8, 12, ll. 10-29, I, p. 479.
from speech and importunity, over persistence in a course’.\(^1\) Yet the Renaissance concept of the obsessive, isolated, Saturnine thinker is foreshadowed in Chaucer’s depiction of Arcite, amidst his deepest, darkest stint of melancholia, ‘And solitaire he was and euer alone’ (l. 1365, p. 43).

Finally, any examination of Chaucer’s astronomy in relation to his Arabic sources would not be complete without further consideration of the anonymous *Equatorie of the Planetis*. It has been attributed to Chaucer, notably by Price, who suggested it was the remainder of the unfinished *Treatise on the Astrolabe* pointing to a line in the text, ‘differentia Christi et [radix] chaucer’, as concrete evidence of Chaucer’s authorship.\(^2\) Price’s attribution has been endorsed by North and more recently, Pamela Robinson.\(^3\) However, the codicological and palaeographical evidence in particular make it difficult to accept this is a Chaucer holograph.\(^4\) Given that the text contains a horoscope excerpt from Mashāʾallah on folio 64v, derived from chapters eight and nine of the astrologers’ *Liber de receptione*, it would be tempting to accept the *Equatorie* as a canonical Chaucerian text, but the preponderance of evidence points heavily toward an anonymous author.\(^5\)

Notwithstanding the tantalizing prospect of Chaucer’s authorship of the *Equatorie* and its direct textual relationship with Mashāʾallah’s horoscope, as we have observed above, there is ample evidence in Chaucer’s canonical works which demonstrate his direct engagement with Arabic astronomy and astrology, particularly with regard to the descriptions of melancholia and *amor hereos*. Moreover, these Arabic writings on the stars, both in the Eastern and Western traditions, are intrinsically related to the

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development of the contentious art of alchemy. As the Canon’s Yeoman’s Tale evinces, Chaucer had a meticulous understanding of this art. In order to appreciate the breadth of Arabic learning that Chaucer assimilated during his writing career, we must next turn to the depiction the Arabic alchemical tradition in his work, noting the technical knowledge derived from the Arabic translations, as well as the influence alchemy exerted on Chaucer’s depiction of saturnine melancholia and the condition of *amor hereos.*
CHAPTER FOUR

Alchemy, Avarice, Acedia, and Chaucer

Chaucer’s fascination with the mechanical arts, or disputed sciences, in particular his alchemical depictions, has held the attention of scholars since the fifteenth century.\(^1\) The Canon’s Yeoman’s Tale was assumed to represent Chaucer’s own practice of this secret art. It was the only text which dealt with alchemy printed in English until the publication in 1591 of *The Compound of Alchymy*, by George Ripley, Canon of Bridlington, who died in 1490.\(^2\) The later middle ages became acquainted with Arabic alchemical knowledge through the Latin translations of Graeco-Arabic texts translated during the twelfth and thirteenth centuries in the intellectual centres of the Iberian Peninsula.\(^3\) That Chaucer was aware of a variety of alchemical works is clear from the Canon’s Yeoman’s Tale where he explicitly cites a number of authorities in the final lines: ‘Arnold of the Newe Toun’, ‘Hermes’, ‘Senior’, and ‘Plato’ (VIII. 1428, 1434, 1450, 1453). The authorities cited are indicative of the three main avenues of alchemical knowledge in the fourteenth-century: Greek, Arabic and Latin.

The first authority cited by Chaucer is Arnald of Villanova (c. 1240-1311), a Catalan physician known for his theological writings for which he was censured.\(^4\) Arnald studied at the University of Montpellier, c. 1260, and by 1291 he was the


University’s medical magister of the studium generale. He was a key figure in the integration of Graeco-Arabic medical works into the University of Montpellier’s medical curriculum, and acted as an advisor to Clement V’s codification of the new curriculum on 8 September 1309. He wrote a number of medical works, including the *Regimen sanitatis* (‘The Guide to Health’) for James II of Aragon in 1307, and the *Speculum medicine* (‘Mirror of Medicine’). His ability to read Arabic, acquired during his formative years in Valencia, enabled him to translate Avicenna’s *De viribus cordis* (‘On the Strength of the Heart’) into Latin, ‘which subsequently proved immensely popular’. Arnald is therefore a fitting scholar for Chaucer to cite first in his list of authorities at the end of the Canon’s Yeoman’s Tale, as he represents the culmination of Latin scholasticism based on Graeco-Arabic scientific and philosophical works. A number of alchemical works were ascribed to him during the later Middle Ages, most notably, the *Flos florum* (‘Flower of Flowers’), and the *Rosarius philosophorum* (‘Rosary of the Philosophers’), cited by Chaucer as the ‘Rosarie’ (VIII. 1429, p. 281). John Livingston Lowes maintained this referred to Arnald’s *De lapide philosophorum* (‘The Philosopher’s Stone’), as opposed to the *Rosarius philosophorum*. However, his conclusions regarding the wider influence of medieval medicine on Chaucer’s oeuvre are generally correct, ‘Arnaldus de Villanova and the other medieval physicians are of the utmost interest for the light they throw on what Chaucer has to say, not only on the ‘loveris maladye of Hereos’, but also of dreams, images and hours’. More recently, Arnald’s authorship of these alchemical texts, particularly the *Flos florum* has been questioned by Jacques Payen. Notwithstanding recent critical scrutiny, these

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5 ‘The Dragon and His Brother’, p. 229.
alchemical texts were considered to be Arnald’s from the fourteenth century onward and there would be no reason for Chaucer to doubt their authorship. Chaucer may have become acquainted with Arnald’s works through his acquaintance with Henry of Grosmont, Duke of Lancaster and Earl of Derby (c. 1310-61), the father of John of Gaunt’s first wife, Blanche. Henry studied at the University of Montpellier and his 1354 Anglo-Norman treatise, *Le Livre de Seyntz Medicines* (‘The Book of Holy Medicines’) is student with alchemical lore.\(^1\) It is likely that Chaucer met Henry when he accompanied Lionel, Duke of Clarence, on Edward II’s 1359-60 campaign to France, in which Henry also fought.\(^2\) Henry may have acquired his knowledge of alchemy during his time at Montpellier, as by the middle of the fourteenth century the city and its university, were under the rule of James III of Majorca (1324-44). During the thirteenth century, Majorca became a hive of alchemical activity under the patronage of the children of James II, Sancho I (1311-24) and Sancia of Majorca (1281-1345), who also supported the medical school of the University of Montpellier.\(^3\) This period is characterized by an increase in trade between Majorca and England, and as Jonathan Hughes suggests, alchemical works may have reached ‘the English court from Islamic Spain via the maritime trade routes’.\(^4\) Furthermore, many physicians who trained at the University of Montpellier worked in the English court during the fourteenth century, including Pietro of Montpellier and Odo of Odin, Queen Isabella of Majorca’s pharmacist.\(^5\) Thus, Chaucer’s awareness of Arnald of Villanova and his use of Arabic sources, as a physician and an alchemist, may owe a debt to the close ties between England, Spain, and Montpellier during the fourteenth century.


Chaucer also cites the Arabic alchemist, al-Shaikh Muhammad ibn Umail al-Tamīmī al-Sādiq, known in Latin as Senior Zadith filius Hamuel. Senior Zadith lived in Egypt during the tenth century where he wrote a number of alchemical treatises. His most celebrated works are the Kitāb al-ma’āl wa’l ard al-najmiyah (‘The Book of the Silvery Water and Starry Earth’), and the poem Risāla al-shams al-hilal (‘Letter from the Sun to the Moon’). The first is a compendium of ancient philosophical extracts on alchemy, written as a commentary on the poem Risāla al-shams al-hilal, which Chaucer knows as the ‘book Senior’ (VIII. 1450, p. 281). However, as Dorothee Finkelstein notes:

the Latin versions of Ibn Umail’s treatise, which constitute the ‘book Senior’, contain large portions of the commentary and part of the Risāla under the title ‘Epistola solis ad lunam crecentum’. Therefore, the Latin ‘Book Senior’ and the ‘Epistola solis ad lunam crecentum’ are ‘frequently titles of the same identical work.’

Thomas Tyrwhitt was the first to identify Chaucer’s book with a text published by Eberhard Zetzner in 1622 in the fifth volume of the Theatrum chemicum, where it is given the title Senioris Zadith filius Hamuelis tabula chemica (‘The Chemical Tables of Senior Zadith son of Hamuel’). However, it was Julius Ruska who first identified this text as the Latin translation of the Arabic commentary of the Kitāb al-ma’āl wa’l ard al-najmiyah.

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1 ‘Senior’ corresponds to the Arabic title of ‘al-Shaikh’(‘the elder’).


Ruska was also the first to translate al-Rāzī’s *Kitāb sirr al-asrar* (‘The Book of Secret of Secrets’), commonly referred to as the *Kitāb al-asrar* (‘The Book of Secrets’), from Arabic into German.¹ As an example of a ninth-century laboratory manual it illustrated the scientific methodologies, forms of apparatuses and the practical chemical process involved in the transmutation of base metals into gold in a clear, scientific manner, without the veil of allegory, which as we will see, was typical of many Arabic alchemical treatises. One notable legacy of the allegorical language of alchemy, which has been largely overlooked, is its contribution to the language of *fin’ amors*. In order to grasp Chaucer’s understanding of Arabic alchemical works in translation fully, it is important to examine not only Chaucer’s technical knowledge of the craft, but also the influence of alchemy on the development of *fin’ amors* as a literary construct. In his examination of the Arabic roots of *fin’ amors*, Denomy does not consider the impact of alchemical terms on the language of love. However, David Burnley notes Du Cange’s adumbration of the origins of the phrase *fin’ amors* in the Medieval Latin term, *aurum finum*: the ‘pure gold’ sought by alchemists.² Furthermore, we may note the similarities between the portrait of the alchemists in the Canon’s Yeoman’s Tale and the melancholic figure, under the shadow of Saturn that typifies acedia, or indeed *amor hereos*.³ But before turning to these points in particular, we must consider the variety of sources which may have informed Chaucer’s technical knowledge of alchemy.

The belief that Chaucer was a master of alchemy took hold in the seventeenth and eighteenth centuries, as evinced by Elias Ashmole’s inclusion of the Canon’s Yeoman’s Tale in his compendium of English alchemical treatises, the *Theatrum Chemicum Britannicum* (‘Theatre of British Chemistry’), published in 1652. Ashmole states that whoever ‘reads the latter part’ of the *Canon’s Yeoman’s Tale*, ‘will easily perceive him to be a Judicious Philosopher, and one that fully knew the Mistery’.⁴ For Ashmole, the esoteric, secret nature of alchemy was a national treasure, intertwined with judicial astrology; thus, Chaucer must be treasured as an ‘able Astrologian, for almost in every

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Worke he interweaves most found and perfect Astrologie". As we have seen, this form of astrological divination was codified in the Latin West largely through the translation of Arabic astrological and astronomical works, as was a large proportion of alchemical knowledge. Ashmole also describes Chaucer as one of the ‘Hermetik philosophers’ due to the association of Hermeticism with alchemy and divination. Hermes Trismegistus, the legendary Graeco-Egyptian founder of alchemy, is indeed cited as an authority at the close of the Canon’s Yeoman’s Tale, where we are told: ‘Of philosophres fader was, Hermes’ (VIII. 1434, p. 281). The figure of Hermes Trismegistus emerged in fourth-century Alexandria as the alleged author of a collection of Neo-Platonic texts in Greek, which became known as the Corpus Hermeticum. One of these texts, the Asclepius, was translated into Latin in the fourth century by pseudo-Apuleius. Although much of the Corpus Hermeticum was lost to the Latin West during the early Middle Ages, the Latin Asclepius was ‘echoed in virtually every cosmological treatise of the twelfth century’, especially the Cosmographia of Bernardus Silvestris. Indeed, such scholars as Roger Bacon, Daniel of Morley, Albertus Magnus, and William of Auvergne were familiar with the text, ‘quoting from it or referring to it’. In addition to the seventeen treatises of the Corpus Hermeticum, including the Latin Asclepius, which ‘came to be treated as a distinct body of writing’ because of their concern with philosophy and theology, there were ‘more than two dozen known titles’ of technical Hermetic writings concerned with astrology and alchemy. Some of these texts were attributed to ‘Tat’,

1 Theatrum Chemicum Britannicum, pp. 470-1.
6 Copenhaver, Hermetica, pp. xvi, xxxii.
referring to Thoth, the Egyptian god of wisdom and language, who was associated with Hermes Trismegistus by the Greeks in Egypt. ¹

In Alexandria the synergy between Greek and Egyptian culture contributed to the development of alchemy, with a particular concentration on the process of transmutation, which would turn base metals into gold, and the artificial production of metals, dyes and pigments. Given that the alchemical processes known to the Arabs and Persians, and Latin Christendom, developed in Alexandria, it is hardly a surprise that Chaucer’s alchemical tale begins with a reference to ‘Alisaundre’, situating the development of the alchemical tradition firmly in the Levant:

Ther is a chanoun of religioun
Amonges us, wolde infecte al a toun,
Thogh it as greet were as was Nynyvee,
Rome, Alisaundre, Troye, and othere three. (VIII. 972-5, p. 275)

Chaucer associates Alexandria with the capital of the Assyrian empire, Nineveh: a place of luxuriousness and avarice, doomed to divine destruction in the Book of Nahum and the Book of Tobit.² Indeed, in the Book of the Duchess the Man in Black associates Nineveh with opulence:

And therto had the worthynesse
Of Alysaunder, and al the rychesse
That ever was in Babyloyne,
In Cartage, or in Macedoyne,
Or in Rome, or in Nynyve. (ll. 1059-63, p. 343)

As David Wallace points out, ‘The protagonist of the Canon’s Yeoman’s Tale is said to stand, in his “infinite falsnesse,” with the worst betrayers of the ancient world’, which

includes Alexandria. At first glance these two cities, Alexandria and Nineveh, in addition to Rome and Troy, would appear to lend Biblical and classical authority to the narrative, but they also succeed in conveying a sense of luxuriousness, avarice and artificiality which foreshadows the rest of the tale.

This sense of luxuriousness reminds us of the art of imitating precious metals and stones particularly associated with Alexandria. The earliest known recipes for making gold and silver are found in two Egyptian papyri, known as the Leiden Papyrus 10 and Stockholm Papyrus 154. Leiden Papyrus 10 is concerned largely with metallurgy, while Stockholm Papyrus 154 concentrates on the art of faking precious metals, stones and textile dyes such as purple.\(^2\) The texts are concerned with imitating these rare commodities, as opposed to their production.\(^3\) However, from the second century B.C., the technological methods outlined in these papyri were invested with a philosophical dimension, ‘one begins to see the claim that alchemy can really alter substances at a level beneath that of superficial change’.\(^4\) Instead of being able to simply mimic natural products such as pigment and precious stones, the alchemists sought to change their substance. This in part was influenced by Aristotle’s *Meteorologia* (‘Meteorology’) and *De generatione et corruptione* (‘On Generation and Corruption’) which gave alchemy its basis in natural philosophy.

According to Aristotle, each of the four elements, fire, air, water and earth, had their natural place and their own primary qualities: fire is dry and hot; air is hot and moist; water is wet and cold, and earth is cold and dry. The transmutation of each of these elements was possible: ‘if fire should lose its dryness and become wet, it would be transmuted into air; if it were to lose both its dryness and heat, it would become its own

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\(^1\) *Chaucerian Polity: Absolute Lineages and Associational Forms in England and Italy* (Stanford, 1997), p. 251.


opposite, namely, water’.\(^1\) From this perspective, the form of the matter could change if the qualities of the substance changed, and this theory was applied to the chemical processes of alchemy, such as sublimation, which causes liquid to turn to gas when heated for a prolonged period of time. Altering the essential matter of substances is first associated with the Egyptian Bolos of Mendes, also known as the Democritean or pseudo-Democritus, and his contested work, *De Physika et mystika* (‘On Things Natural and Physical’).\(^2\) This shift in thinking came to fruition around the end of the third century B.C in the writings of Zosimos of Panopolis.\(^3\) Thus, the Hellenic-Egyptian pursuit of the process of transmutation was well-established by the time of the Arab conquest of Alexandria in c. 641. The Arabic scholars, who developed the science of chemistry as we know it today, derived the very core of their knowledge from this earlier alchemical tradition. The developments made in the intellectual centres of Syria, Baghdad and Toledo, were vital to the subsequent development of the ‘experimental sciences’, as Lynn Thorndike calls them, not only in the East, but also in the Latin West.

The influence of the Egypto-Greek practise of alchemy is most clearly evinced in the transmission of terminology. The Arabic al-\(kīmīyāʾ\) (‘alchemy’) is ultimately derived from the Greek definition for metallurgy, chemeia or chymeia, which, in turn, was transliterated into Latin as *alchymia*. Egypto-Greek metallurgical practice became known to the Arabs and Persians of Syria and Baghdad most probably through Syriac translations. While we are still uncertain as to the process of transmission it is clear that Arabic alchemical knowledge was ultimately derived from treatises in Greek from Alexandria. The term *al-\(kīmīyāʾ\)* is most likely derived from the Syriac \(kīmīyāʾ\), which was transliterated into the Arabic language with the addition of the Arabic definite article, ‘\( al\)’ (‘the’), resulting in the term *al-\(kīmīyāʾ\)*.\(^4\) However, an etymological link to the ancient Egyptian name for Egypt has also been suggested: it was suggested that *kmt*

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3 In addition to Fowden, *Egyptian Hermes*, pp. 120-6, see F. Sherwood Taylor, ‘The Vision of Zosimos’, *Ambix* 1 (1937), 88-92.
or chem meant ‘the black land’, referring to the Egyptian practise of alchemy. Yet, as Holmyard indicates, ‘against this etymology is the fact that in ancient texts kmt or chem is never associated with alchemy, and it is perhaps more likely that kīmiya comes from the Greek, chyma, meaning to fuse or cast a metal’.\(^1\) The late Latin word, alchemia, and Chaucer’s ‘alkamystre’ (VIII. 1204, p. 278), are undoubtedly derived from the Arabic al-kīmiyāʾ. Al-kīmiyāʾ was also taken to be synonymous with the terms for ‘ilm al-sināʾa (‘knowledge of art’) and al-hikma (‘wisdom’), but was primarily used to describe the theory and practice of the transmutation process which would turn base metals into gold and silver.\(^2\) While the term can be traced directly to its Greek etymology, the exact process of transmission of the alchemical treatises is still largely unknown, in contradistinction to such disciplines as medicine, astrology and philosophy. However, it is possible that the translation school established under the Nestorian Hunayn ibn Ishāq contributed to the availability of Greek works translated into Arabic via Syriac.

Hermetic writings also contributed to the development of the Arabic alchemical tradition. The legend of Hermes Trismegistus acquired a new meaning in the Arabic tradition; he was considered the ‘founder of the pagan religion before the great Flood, a lawgiver who ascended to the heavenly spheres of the planets and returned to teach astrology, a true prophet like Jesus and Mohammad’.\(^3\) The prophetic status thrust upon this legendary figure diverged into three separate figures: the first was identified with Enoch, or the Arabic Idris, who founded the sciences before the Flood; the second Hermes was a postdiluvian, Babylonian sage, while the Corpus Hermeticum was ascribed to the third Hermes, who lived in Egypt. The association of Hermes with Idris was originally made by the inhabitants of Harran, in north-western Mesopotamia, who renamed themselves Sabans, from the Qur’ānic al-Sābīʿah, after the conquest of Syria by the early Islamic caliphate.\(^4\) The Hermetic Idris was also associated with geomancy: a form of divination which involved reading dots and lines cast on the ground which developed in the Arabic world, and subsequently transmitted to the Latin West through

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\(^1\) Holmyard, Alchemy, p. 19. On the etymology of alchemy from kmt or khem, see John Read Prelude to Chemistry, 2nd edn (London, 1939), pp. 4-5.


\(^4\) Cf. Fakhry, History of Islamic Philosophy, p. 3; Copenhagen, Hermetica, p. xlv.
Chaucer demonstrates a familiarity with the practical terminology of geomancy in the Knight’s Tale. In the Temple of Mars we are presented with an *ekphrasis* of a statue of the planetary god:

And over his heed ther shynen two figures
Of sterres, that been cleped in scriptures,
That oon Puella, that oother Rubeus
That god of armes was arrayed thus. (I. 2043-6, p. 53)

Rubeus is a geomantic figure under the sign of Scorpio in the domicile of Mars, as the name suggests, but Puella may seem puzzling in this context, being ascribed to the sign of Libra in the domicile of Venus by Bartholomew of Parma, as Skeat pointed out. Skeat questions the note in Thomas Speight’s edition, first published in 1598, that ‘Puella signifieth Mars retrograde, and Rubeus Mars direct’, and in unquestioningly following Bartholomew of Parma, concludes that Chaucer confuses Puer, which he ascribes to Aries in the domicile of Mars, with Puella, allegedly ‘dedicated to Venus’. However, Skeat seems unaware that it is only Bartholomew of Parma who confused the relative positions of Puella and Puer; thus, the mistake is Bartholomew’s, not Chaucer’s. Significantly, both Puella, known in Arabic as *Jawdala* (‘beardless’), and Rubeus, known in Arabic as *Humra* (‘red’), are domiciled in Mars in al-Qabisi’s *Kitāb al-madkhal ilā sinā‘at ahkām al-nujūm*, which is typical of Arabic commentaries on geomancy. Geomancy also features in *Troilus and Criseyde*, ‘Fortuna Major’, that

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anoon Criseyde’ (III. 1420, p. 532). Here, North discerns the influence of Dante’s citation of Fortuna Major in *Purgatorio*: ‘quand i geomanti lor Maggior Fortuna’, and the Geomantic tables composed for Richard II in 1391, the *Liber judiciorum* extant in Oxford, Bodleian Library, MS Bodley 58.

Hermes’s association with astrology and divination in the Arabic corpus is also attested through the work of Abū Ma’shar. The idea of three figures named Hermes is recorded in his *Kitāb al-Ulūf* (‘Book of Thousands’), which finds its way into the Latin Hermetic tradition, where the second Hermes is transformed into the Biblical Noah.

The transmission of this legend into Latin was due largely to Hermann of Carinthia, who was, as we have seen, well-acquainted with the works of Abū Ma’shar, having translated *Kitāb al-mādkhal*, which may have influenced his own *De essentiis*. Abū Ma’shar’s knowledge of Hermes also demonstrates how the concept of the sublunar world influenced not only on astrology, but also medicine and alchemy.

The Alexandrian Hermes was thought to be the author of an alchemical work known in Latin as the *Tabula smaragdina* (‘Emerald Tablet’), the original text of which was allegedly inscribed on an emerald tablet in Phoenician characters. However, the actual treatise called the *Tabula smaragdina* first appeared in Arabic, written ‘at least in its final form, during the caliphate of al-Ma’mūn (813-33)’. It was translated into Latin by Hugh of Santalla in the twelfth century, but the original provenance of the text, prior to the Arabic version, is still unknown. However, in the Arabic world, the *Tabula smaragdina* was taken to be an original Hermetic text, considered one of the oldest treatises on alchemy, demonstrating the influence of celestial forces which effect

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change. The text describes the macrocosm and microcosm of the universe maintained by a single force which affects the unity of creation, also represented in the philosopher’s stone: a single substance which aids the process of transmutation. The *Tabula smaragdina* was translated into Latin around the same time as such astrological and astronomical texts as the *Kitāb al-madkhāl*; thus, it is hardly surprising that Abū Ma’shār’s translator, Hermann of Carinthia, also drew on the *Tabula smaragdina* when discussing the cosmos in his *De essentīs*.\(^2\) Plato of Tivoli, who first translated Ptolemy’s *Tetrabiblos* from the Arabic, also translated a Hermetic text attributed to Apollonius of Tyana, known as Balīnūs in Arabic, the *Liber de secretis naturae et occultis rerum causis* (‘The Book of Secrets of Nature and Causes of Occult Things’) to which the *Tabula smaragdina* was appended.\(^3\) As Michela Perreira notes, ‘Hermes himself seems to owe his basic position in the alchemical tradition to the fame acquired through this book’.\(^4\) However, by the time of Chaucer, the ‘philosophres fader’ is particularly associated with alchemy due to another work, the *Ghayyat al-Hākim*, known in the Latin West as the *Picatrix*. The authorship of the *Ghayyat al-Hākim* is still unknown, but it was falsely ascribed to the Andalusian mathematician, Maslāma al-Mājrīṭī.\(^5\)

The Arabic alchemical tradition transmitted to the Latin West also included the technical, chemical aspects of the processes of transmutation, notably al-Rāzi’s *Kitāb al-asrar*. Here, it is important to note that it was Chaucer’s precise, technical descriptions of the alchemical process in the Canon’s Yeoman’s Tale which led to the belief he was an adept.\(^6\) As Pauline Aiken notes, the list of equipment and ingredients, which take up almost a third of the Canon’s Yeoman’s Tale, ‘seems much too complete

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4 ‘*Tabula Smaragdina*’, p. 131.
The Canon’s Yeoman’s list of ingredients and the type of equipment used are ultimately derived from Arabic sources, albeit through Latin translations. Chaucer was influenced in particular by Vincent of Beauvais’ encyclopaedic compendia, the *Speculum naturale* and the *Speculum doctrinale*, particularly the eighth book of the *Speculum naturale* where he ‘describes every known chemical element or compound occurring in nature’. Vincent’s alchemical information was taken, in part, from a pseudo-Avicennian work, *De anima in arte alchemiae* (‘On the Soul in the Art of Alchemy’), which was considered authentic until Ruska’s study of 1934. The *De anima in arte alchemiae* is a twelfth-century Arabic text, composed in Spain and translated into Latin, c. 1226-35. Influenced by al-Rāzī and the eighth-century Persian, Abū Mūsa Jābir ibn Hayyān, it contained a wealth of technical information concerning the process of transmutation. Vincent of Beauvais ascribed it to Avicenna, and draws on such singular features as the use of the term *aurum vivum* to describe a submilate of sulphur and mercury.

In fact, Avicenna did write a treatise on alchemy, albeit condemning it. This work was disseminated in the Latin West as an Aristotelian text and centred on two main arguments prefaced in Latin by the words, *Sciant artifices* (‘Let the artificers know’). It was translated into Latin by Alfred of Sareshel, most probably at Hereford, c. 1200, who gave it the title *Liber de congelatione et conglutinatione lapidum* (‘Book on the Congealment and Concretion of Stones’). Alfred assumed it was a lost fragment of Aristotle’s *Meteorology*, and attached it to Gerard of Cremona’s translation of Books

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1 ‘Vincent of Beauvais’, p. 371.
2 ‘Vincent of Beauvais’, p. 373.
5 In addition to Moureau, ‘Some Considerations’, p. 52, cf. Aiken, ‘Vincent of Beauvais’, p. 371: ‘He knows that mercury must be both employed in its crude state and “sublimed”, that is, in the form of *aurum vivum*.’
One to Three, and Henricus Aristippus’ translation of Book Four, c. 1156. Thus Alfred’s translation was treated as an authentic Aristotelian work until Albertus Magnus ascribed it to Avicenna in his Liber mineralium.\(^1\) Notwithstanding Avicenna’s actual thoughts on alchemy, he was paradoxically identified as an adept by the time of Chaucer. In Part Four of the Confessio amantis, Gower attests to his mastery of the art:

Hermes was on the ferste of alle,
To whom this art is most applied;
Geber therof was magnified,
And Ortolan and Morien,
Among the whiche is Avicen,
Which fond and wrot a gret partie
The practique of Alconomie. (ll. 2606-12)\(^2\)

Here, Gower not only mentions Hermes, but also four authorities not cited by Chaucer: ‘Geber’ or Jābir ibn Hayyān; ‘Ortolan’ or John of Garland; ‘Morien’ or Morienus, who wrote the Liber de compositione alchemiae, translated by Robert of Chester, and Avicenna.\(^3\)

In addition to the influence of the pseudo-Avicennian De anima in arte alchemiae via Vincent of Beauvais, it is important to note that the Canon’s Yeoman’s technical process bears a striking resemblance to that described in al-Rāzī’s Kitāb al-asrar, allied to another alchemical text ascribed to al-Rāzī, known in Latin as De aluminibus et salibus, and translated by Gerard of Cremona. Significantly, the De anima in arte alchemiae was influenced by the De aluminibus et salibus in its classification of alchemical materials. Only a fragment of the Arabic text of De aluminibus et salibus has survived, but it was most likely composed in Spain, then ascribed to al-Rāzī. At the very least, the text was modified by Arabic scholars in Spain before Gerard of Cremona

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\(^1\) For a detailed summary of the transmission of the text see Avicennae de congelatione et conglutatione lapidum, ed. and trans. E.J Holmyard and D.C Mandeville (Paris, 1927), pp. 1-17.


made his translation.\(^1\) In addition to *De anima in arte alchemiae*, Vincent of Beauvais also drew on *De aluminibus et salibus* in the composition of the *Speculum naturale*.\(^2\) Moreover, Roger Bacon uses *De aluminibus et salibus*, preferring to refer to it as *De spiritibus et corporibus* (‘On Spirits and Bodies’), albeit fully aware of its more usual title.\(^3\) However, the popularity of *De aluminibus et salibus* diminished during the fourteenth century with the dissemination of the *Liber de investigatione perfectionis* (‘Book of the Investigation of Perfection’), also known as the *Summa perfectionis magisterii* (‘Highest Magisterial Perfection’).\(^4\) During Chaucer’s lifetime this text was considered to be a translation of an Arabic work by Jābir ibn Hayyān. Because of his pivotal role in the development of alchemy, a number of works were ascribed to Jābir ibn Hayyān, many of which have now been deemed spurious.\(^5\) In the West the following works circulating in Latin were ascribed to him: the *Summa perfectionis magisterii*, the *Liber de investigatione perfectionis*, the *Liber de inventione veritatis* (‘Book of the True Invention’), the *Liber fornacum, Testamentum* (‘Testament’), and the *Liber de septuaginta* (‘The Book of Seventy’), translated by Gerard of Cremona. The roots of these works have perplexed scholars for generations. Indeed, William Newman maintains the *Summa perfectionis magisterii* is a fourteenth-century composition, written originally in Latin, and influenced by Latin works that incorporated Arabic elements, including Paul of Taranto’s *De investigatione perfectionis* (‘On Investigation of Perfection’). This thirteenth-century Franciscan used a number of sources that incorporated texts ascribed to Arabic writers, such as the *Liber secretorum de voce Bubacaris* (‘The Secret Book of the Voice of Bubacaris’), which Berthelot ascribed to al-Rāzī, and the *De aluminibus et salibus*, formerly ascribed to al-Rāzī.\(^6\) Certainly al-Rāzī’s *Kitāb al-asrār* also influenced pseudo-Geber’s *Summa Perfectionis*.

\(^1\) Cf. ‘Practical Chemistry in the Twelfth Century *Rasis de aluminibus et salibus’*, Isis 12 (1929), 10-46 (pp. 12-13); cf. also Gabriele Ferrario, ‘An Arabic Dictionary of Alchemical Terms: MS Sprenger 1908 of the Staatsbibliothek zu Berlin (fols. 3r-6r)’, Ambix 56 (2009), 36-48.


\(^3\) Cf. Steele, ‘Practical Chemistry’, p. 12.


\(^6\) *Summa Perfectionis*, p. 70.
perfectionis magisterii. In the Margarita pretiosa novella (‘The Precious New Pearl’), composed by the Lombard, Petrus Bonus, c. 1330, al-Rāzī is cited ‘thirteen times in the course of its straightforward procedures’.1

The Margarita pretiosa novella was written during a period of intense integration of Arabic alchemical material into Latin. The title itself refers to the increasingly esoteric, metaphysical terminology used by alchemists, with the pearl symbolising mercury, the main component in the process of transmutation. This echoes a description of the ‘precious pearl’ in the Secreta secretorum. According to Hughes, the Margarita pretiosa novella was ‘the most influential exposition of the Muslim theories of the fundamental importance of mercury’.2 It was written at a time when the English court was becoming increasingly receptive to alchemy and astrology, epitomized by one of Philippa of Hainault’s wedding gifts to Edward III, a sumptuous copy of the Secreta secretorum, considered an authentic Aristotelian work. Over a hundred pseudo-Aristotelian works have come down to us from the Middle Ages and the Secreta secretorum was undoubtedly the most popular. Six hundred extant manuscript copies were known throughout Europe, which far outstrips the number of any genuine work by Aristotle.3 It is most likely a translation of an original Arabic work from the tenth century, of which two recensions survive.4 The oldest is in eight books and is allegedly based on letters sent by Aristotle to Alexander the Great during his Persian campaign. As William Eamon notes:

During the eleventh and twelfth centuries, this version took on a proem and additional layers of scientific and occult material, emerging as the so-called Long Form in ten books. The bulk of this accreted material was derived from

2 Hughes, Rise of Alchemy, p. 43.
the *Rasa’il*, or philosophical epistles, of the Brethren of Purity (*Ikhwan al-Safa*), a secret religious and political fraternity devoted to the Ismaili cause.¹

The *Secreta secretorum* was partially translated into Latin by John of Seville, *c*. 1125, now known as the short Latin text, extant in 150 manuscripts. There are two English versions of this translation, the Middle English *Booke of Goode Governance and Guyding of the Body*, *c*. 1400, and an Elizabethan version by Jenkin Gwynne, a surveyor in the Court of the Exchequer, completed in 1569 under the patronage of Sir Walter Mildmay.² The long Latin translation was the work of Philip of Tripoli, *c*. 1230, under the patronage of the bishop of Tripoli, Guy de Vere of Valence, and this version was used by Roger Bacon and Michael Scot.³ A French translation of Philip of Tripoli’s translation was given to Edward III by Philippa of Hainault in advance of their marriage and his coronation in January 1327 (Paris, Bibliothèque nationale, MS fr. 571).⁴ Moreover, the King’s Clerk, Walter de Milemete, presented Edward with his own copy of Philip of Tripoli’s translation in advance of the same occasion (London, British Library MS Additional 47680).⁵ According to Hughes, the ‘copying and illustration of the *Secreta secretorum*, a work of Muslim alchemical traditions’ for Edward III ‘represents the culmination of the emergence of alchemy as a political force in the Latin West’.⁶ However that might be, a considerable number of Latin alchemical works, incorporating Arabic alchemical ideas, were available by the time Chaucer began his writing career. As Hughes points out:

³ See Williams, *Secret of Secrets*.
The survival in Britain of nearly 3,500 fourteenth-, fifteenth- and sixteenth-century manuscripts of Latin translations of these Arabic treatises and the Latin alchemical treatises of the thirteenth-century English alchemists is testimony to the significance of alchemy in the later Middle Ages.¹

Many of these manuscripts, like Roger Bacon’s *Scientia experimentalis* (‘Experimental Science’), advocated a technical approach based on experiment, and the Canon’s Yeoman’s Tale is a literary representation of this technical chemical experimentation.

At the beginning of the Canon’s Yeoman’s explication of the process of transmutation, Chaucer uses *occupatio* in order to draw attention surreptitiously to his detailed knowledge of the art:

> Thogh I by ordre hem nat reherce kan,
> By cause that I am a lewed man,
> Yet wol I telle hem as they come to mynde. (VIII. 786-9, p. 273)

The Canon’s Yeoman claims he is a ‘lewed man’ and cannot explain his duties in any order, but only ‘as they come to mynde’. However, Chaucer provides us with a full description of the necessary ingredients, equipment and procedures for the process of transmutation. In keeping with al-Rāzī’s division of alchemy into ‘the knowledge of substances, the knowledge of equipment and the knowledge of procedures’ in the *Kitāb al-asrar*, the Canon’s Yeoman begins with ‘the knowledge of substances’.² Al-Rāzī’s description of organic matter consists largely of ‘plants, blood and hair’, which is reflected in the numerous organic substances cited by the Canon’s Yeoman, ‘Poudres diverse, ashes, donge, pisse, and cley’, and ‘Cley maad with hors or mannes heer, and oille’ (VIII. 807, 812, p. 273).³ Among the diverse powders used by alchemists are ash, dung, urine and clay, and clay made with either human hair or oil. In *De aluminibus et salibus* of Pseudo-al-Rāzī, urine is mentioned eight times, divided into three types: *urina, urina antiquata*, which refers to decomposed urine that forms a solution of

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¹ *Rise of Alchemy*, pp. 9-10.
ammonium carbonate with chloride, useful for the preparation of sulphur, and *urina pueri antiquata*, which refers to urine from boys which is rich in phosphates.¹

In the *sixth dictio* of Pseudo-Avicenna’s *De anima arte alchemiae* the production of elixirs derive from three organic substances: blood, egg and hair, but urine is also on his list of useful ingredients, alongside sperm and horse dung.² These substances are listed in Vincent’s *Speculum doctrinale*, ‘urinam, capillos, ova, sanguinem, sperma, stercus equi’.³ Unlike al-Rāzī’s list which differentiates between organic and inorganic substances, Vincent lists both together, following Pseudo-Avicenna, which may explain why the Canon’s Yeoman’s list mixes both types of matter together, albeit omitting sperm and blood.⁴ Chaucer’s use of dung is presaged in the *Kitāb al-asrar*, where it is used as a heating method for sublimating glass, ‘Bury it 40 days in dung, so that it becomes a pure water, purer than tears’⁵. Manure was used as a heating method well into the sixteenth century, notably by apothecaries, ‘to provide a standard even heat for the digestions and fermentations needed to make their medicines’.⁶ It is also mentioned in the *De aluminibus et salibus*, as an ingredient in the production of a solution of mercury and sulphur.⁷ However, the use of urine and dung is condemned by Senior Zadith, who states only false alchemists use organic matter in their chemical processes:

> After they knew this [that true alchemy is something divine], they [still] said that this [art] concerns hairs and eggs and arsenics and sulphurs and foul and sordid things, so that some pursued it out of the weakness of their own reason, [using] dung and urine an attempt antithetical to the wise servants of the glorious and sublime God.⁸


Here, Senior Zadith’s dismissal of eggs contradicts al-Rāzī, who states they are intrinsic to the process of transmutation, alongside ‘wine vinegar, distilled vinegar, distilled water, honey’.\(^1\) The Canon’s Yeoman has a similar list of basic substances, ‘Unslekked lym, chalk, and gleyre of an ey’ (VIII. 806, p. 273). However, if we follow Senior Zadith, Chaucer’s inclusion of hair, eggs, dung and urine suggest that the Canon’s Yeoman and his master are fraudulent, sly practitioners. Chaucer lists ‘brent bones’ and ‘boles galle’ (VIII. 759, 797, p. 273), which are mentioned in *De aluminibus et salibus* alongside urine. However, such herbs as ‘egremonye, valerian, and lunarie’, in addition to ‘tartre’, ‘berme’, and ‘argoille’ (VIII. 800, 813, p. 273) are not listed in Vincent’s works.\(^2\) The eclectic use of agrimony, valerian, and moonwart, along with such byproducts of the vintner’s and brewer’s trade as cream of tartar, brewers’ yeast, and unfermented malt, add to the general sense that the Canon’s Yeoman and his master are making it up on the spot.

Al-Rāzī classified the inorganic substances used in the process of transmutation into spirits, metals, stones, vitriols, borax, and salts.\(^3\) Chaucer’s Yeoman is aware of these distinctions and he outlines the four spirits and seven metals necessary for the process of transmutation:

> I wol yow telle, as was me taught also,
> The foure spirites and the bodies sevene,
> By ordre, as ofte I herde my lord hem nevene.
> The firste spirite quyksilver called is,
> The second orpyment, the thridde, ywis,
> Sal armonyak, and the ferthe brymstoon.
> The bodyes sevene eek, lo, hem heere anoon:
> Sol gold is, and Luna silver we threpe,
> Mars iren, Mercurie quyksilver we clepe,
> Saturnus leed, and Juppiter is tyn,
> And Venus coper, by my fader kyn! (VIII. 819-29, p. 273)

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The four spirits, or volatile agents, are mercury (‘quyksilver’); arsenic (‘orpiment’); ammonium chloride (‘sal armonyak’), and sulphur (‘brymstoone’). All of these substances are easily transformed by heat, and were considered essential to the alchemical process. Mercury was also known as the argent vive (‘living agent’) because of its strong reaction with other substances. It was primarily with sulphur in the mortification process. Chaucer also refers to ‘the dragon, Mercurie’ (VIII. 1438, p. 281), and which was ‘only one of sixty code words for quicksilver’ used in the Arabic alchemical tradition. As Finkelstein notes, ‘many code words for mercury express its property of elusiveness as winged flight’. These include, tair abyād (‘white bird’), uqab abyād (‘white eagle’), ghūl (‘demon’), and al-fārr (‘the fleeing one’). Mercury is referred to in terms of a dragon in the Latin translation of Senior Zadith’s work, ‘Draco autem est aqua divina’, who also refers to the spirit as tīnnīn (‘dragon’), and it is likely that Chaucer borrowed the analogy from this source. The last spirit listed by the Canon’s Yeoman is sulphur or brimstone: a bright yellow mineral, solid at room temperature, which has the capacity to oxidise many metals. Sulphur was used particularly with mercury in alchemical procedures, and was also given a code word in Arabic, al-aqrāb (‘scorpion’), which was not employed in the Latin West.

Chaucer describes ‘brymstoone’ as the ‘brother’ (VIII. 1439, p. 281) of Mercury, which is ‘a basic principle of medieval alchemical allegory’, found in the Arabic alchemical tradition. Sulphur and mercury are often described as brother and sister, sometimes united in marriage, as in De aluminibus et salibus, “And if anyone unites me with my brother”, says Mercury, “he will live and rejoice, and I shall be sufficient unto him with all eternity, were he to live a thousand times thousand years”. Moreover, mercury can only die with her brother, in the chemical process known as mortification:

Ther may no man mercurie mortifie
But it be with his brother knowlechyng. (VIII. 1431-2, p. 281)

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1 Finkelstein, ‘Chaucer’s “Secree of Secrees”’, p. 263.
2 ‘Chaucer’s “Secree of Secrees”’, pp. 262-63.
3 Cf. ‘Chaucer’s “Secree of Secrees”’, p. 263.
4 Ibn Umail, Three Arabic Treatises, p. 46; cf. Finkelstein, ‘Chaucer’s “Secree of Secrees”’, p. 263.
5 Finkelstein, ‘Chaucer’s “Secree of Secrees”’, p. 265.
6 Finkelstein, ‘Chaucer’s “Secree of Secrees”’, p. 267.
Here, Chaucer depicts the process of mortification in a symbolic manner, in keeping with the Arabic alchemical tradition. Even al-Rāzī, who adopts a strictly technical approach to alchemy as we have seen, states ‘take living quicksilver and kill it’.¹

The Latin term for arsenic, arsenica and azarnet comes from the Arabic al-zarnikh, which in turn gave rise to the Middle English ‘arsenyk’ (VIII. 798, p. 273), which Chaucer distinguished from such arsenic sulphides as ‘resalgar’, the Arabic rahj al-gār (‘powder of the mine), via Medieval Latin, and ‘orpymnt’ (VIII. 814, 823, p. 273). In Arabic as zarnikh is also referred to as akh (‘brother’), while realgar and orpiment are known as al-akhwan (‘the two brothers’), or al-khatilan (‘the two friends’).² According to Aiken, the Canon’s Yeoman is ‘apparently unaware’ that arsenic and orpiment ‘are merely two names for the same substance, the native yellow sulphuret of arsenic’.³ However, Chaucer’s terminology does actually distinguish between grey arsenic and realgar, which is red or orange in colour, and orpiment, which is distinguished from realgar by its bright yellow colour. The next spirit mentioned is sal ammoniac or ammonium chloride: a white crystalline salt, which becomes mildly acidic when dissolved in water, most commonly formed when coal is burned. Holmyard credits Jābir ibn Hayyān with the earliest mention of the substance, and ‘knew how to prepare it from organic matter’.⁴ The Arabic term is al-nūshādar, is derived from Persian, and transliterated into Latin as almizadar. However, the Middle English term is derived from its alternative name in Latin, sal ammoniacus. Aiken notes that ‘Vincent lists the spirits in exactly the order followed by Chaucer’.⁵ Aurum vivum is followed by auripigmentum, sal hammoniacum, and sulphur, which Chaucer lists as ‘quyksilver’, ‘orpymnt’, ‘sal armonyak’, and ‘brymstoon’. Moreover, Chaucer lists quicksilver as both a spirit and a body, a deviation from normal practise also found in Vincent: ‘Since most of the alchemical works agree in stating there are six bodies, it is worth noting that Vincent offers authority for Chaucer’s list of seven’.⁶ However, it is important to note that quicksilver is also classified as both a spirit and body in the work of Senior Zadith:

¹ Finkelstein, ‘Chaucer’s “Secree of Secrees”’, p. 265.
² Finkelstein, ‘Chaucer’s “Secree of Secrees”’, p. 265.
³ ‘Vincent of Beauvais’, p. 372.
⁴ Alchemy, p. 80.
⁵ ‘Vincent of Beauvais’, p. 378.
⁶ ‘Vincent of Beauvais’, p. 379.
As to quicksilver, we have enumerated its name with the metals. As to its being mentioned among the metals, this is necessary because it is the first of them and the others are derived from it and descend from it. As to its being mentioned among the ‘spirits’, this is because it flees from fire and does not resist it, and thus it is also counted among the spirits. Accordingly, the ‘bodies’ are those which melt in fire and do not flee from it, while the ‘spirits’ flee from fire and cannot bear it.¹

Given that Chaucer provides a technical reason for classifying quicksilver as both a spirit and a body, in contradistinction to Vincent, it is possible that Chaucer is also drawing on Senior Zadith in this instance. Moreover, the Canon’s Yeoman also lists the last two classifications of substances in al-Rāzī’s list, vitriols and boraxes. Sulphuric acid, or ‘vitriole’ is highly corrosive, yellow in colour, and pungent in odour, and it is often associated with potassium nitrate or ‘sal peter’ (VIII. 808, p. 273) in alchemical treatises. Chaucer also mentions borax: a term derived from the Arabic ḏūraq and transliterated into Latin as baurach or borac, which signified a number of substances, including sodium borate and verdigris. Here, Chaucer uses ‘boras’ to denote sodium borate, which he distinguishes from ‘verdegrees’ (VIII. 790, p. 273). The Latin term for verdigris, zimar or zinnar, is derived from the Arabic zinjar, which usually refers to a copper carbonate, formed when an acetic acid is mixed with copper, to produce a green dye.

Thus many of the technical, alchemical terms known to Chaucer were derived from translations from the Arabic, incorporated into such Latin texts as the encyclopaedic compendia of Vincent of Beauvais. However, Chaucer’s use of these texts reflects the marginal position of alchemy in higher education throughout the middle ages. Unlike the Graeco-Arabic medical and astrological works previously discussed, alchemical texts were not incorporated into the university curriculum, due to the division of the artes liberalis into the Trivium and the Quadrivium. Certainly, the content of the Quadrivium found an echo in al-Fārābī’s Ihsaʿal-ulum (‘Enumeration of the Sciences’), which defines science as the study of arithmetic, geometry, astronomy, music, as well as

engineering, optics, and weights.¹ Al-Fārābī’s text was translated into Latin by Gerard of Cremona as De scientiis (‘On Science’), further discussed in his De divisione philosophiae (‘Division of Philosophy’), and again by Dominicus Gundissalinus as part of his De divisione philosophiae.² Al-Fārābī excluded both medicine and alchemy from his classification of the sciences because he regarded them as mechanical arts, as explained in a text ascribed to him, the Risāla fī wujub sināʾ at al-kimīyya (‘Epistle on the Necessity of the Art of Alchemy’). By contrast, in his Risāla al-ʿulum (‘Epistle of the Sciences’), Avicenna includes not only alchemy, but also medicine, astrology, physiognomics, oneiromancy, talismans, and theurgy under the natural sciences: a subdivision of the ʿulum ʿaqliyya (‘intellectual sciences’).³ Avicenna’s Risāla al-ʿulum was only translated into Latin in its entirety in 1546 by Andrea Alpago as De divisione scientiarum (‘On the Division of Sciences’).⁴ However, it was known during the later Middle Ages through a treatise attributed to al-Fārābī known in Latin as De ortu scientiarum (‘The Rise of the Sciences’), which associated necromancy with alchemy.⁵

As we have seen, medicine was classified as a mechanical art alongside alchemy because of its technical, practical application. Roger Bacon states that medical knowledge ‘comes by the senses of memory and experience’.⁶ He also links medicine with alchemy, as demonstrated by his critique of the deficiencies of contemporary


⁴ See Andrea Alpago, ‘De divisione philosophiae’, in In Avicennae philosophi praecellentissimi ac medicorum principio (Venice, 1546), 139v-145v.


doctors, ‘they are ignorant of alchemy’. Thomas Aquinas also classifies medicine and alchemy as practical arts, in comparison to mathematics and metaphysics, but also as a technical art alongside agriculture, in comparison to physics. Prior to this, Hugh of St Victor had classed medicine and alchemy among the imitative, mechanical arts, ‘the products of artificers, while not nature, imitate nature, and in the design by which they imitate, they express the form of their exemplar, which is nature’. During the later Middle Ages academic practitioners of alchemy went ‘underground’, because ‘it would have been academically unprofitable, to say the least, for a university master to teach alchemy publicly’. The marginal nature of the life of the alchemist is evinced by the Canon’s Yeoman’s reply when the Host inquiries as to where he lives with his master:

‘In the suburbes of a toun,’ quod he,
‘Lurkyng in hernes and in lanes blynde,
Whereas thise robbours and thise theves by
kynde
Holden hir pryvee fereful residence,
As they that dar nat shewen hir presence;
So faren we, if I shal seye the sothe.’ (VIII. 657-62, p. 271)

Here, the suburban marginality of the alchemist’s life reflects the academic attitude toward the practical application of alchemy by the fourteenth century. Chaucer describes a dark and uninviting place where thieves lurk in corners, and hide in the shadows, a fitting place for such a dubious ‘philosophre’, obsessed with having gold ‘in his cofre’ (VIII. 836, p. 274). By contrast, Chaucer’s Clerk is committed to the liberal arts, particularly the study of Aristotle, ‘But al be that he was a philosophre, / Yet hadde

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1 Welborn, ‘Errors of the Doctors’, p. 32.
he but litel gold in cofre’ (l. 297-8, p. 28). Significantly, it is another practitioner of the mechanical arts, the Physician, who is well-versed in the works of such Arabic authorities as ‘Avycen’ and ‘Averrois’, that ‘lovede gold in special’ (l. 444, p. 30).

It is important to note that Chaucer refers to the Canon as an alchemist only once in the tale, ‘And whan this alkamystre saugh his tyme’ (VIII. 1204, p. 278). However, he is described as a ‘philosphre’ on five occasions. Four of these occasions occur toward the end of the tale, and would appear to point to the advanced knowledge and technical acumen of alchemists. However, the final use of the term is striking because of its association with the philosopher’s stone, and the reminder that this art is against the wishes of God:

Thanne conclude I thus, sith that God of hevene
Ne wil nat that the philosophres nevene
How that a man shal come unto this stoon,
I rede, as for the beste, lete it goon. (VIII. 1472-5, p. 281)

Chaucer’s final advice to alchemists is to break free of their art because of the religious peril it poses, which echoes contemporary, scholastic debates over nature and artificiality. Finkelstein has noted that Chaucer’s invocation of God mirrors that of Senior Zadith, who reminds his readers that the secret of transmutation belongs only to God, ‘And this is the secret about which they swore that they would not put it into a book and not one of them would reveal it and they referred the matter concerning it to Allah who is great and mighty’.¹ As Finkelstein observes: ‘An additional feature in Chaucer is the elaboration of “the secret” in a Christian admonition about the spiritual hazards of alchemy … He was, in fact using the literal translation of an Islamic invocation to Allah’.² Chaucer’s tale not only comments on the conflict between nature and artifice, which influenced the marginal position of alchemy in Latin scholarship, but also the close association between the physician and alchemist as practitioners of the mechanical arts. This association stems ultimately from the shared legacy of medicine and alchemy in the Arabic world exemplified by al-Rāzī, who was famed as a clinician,

¹ Ibn Umail, Three Arabic Treatises, p. 41; cited by Finkelstein, ‘Chaucer’s “Secree of Secrees”’, p. 271.
² ‘Chaucer’s “Secree of Secrees”’, pp. 270-1.
thus interested in alchemical processes, particularly in the context of the chemical composition of drugs. Oswei Temkin has demonstrated that a close affinity between Arabic medicine and alchemy can be firmly established from the ninth century onward.\textsuperscript{1} Prior to the Syriac and Arabic translations, medical practitioners were not interested in alchemy, while ‘Greek alchemists considered the rise of their art as something outside of medicine’.\textsuperscript{2} Between the fifth and ninth century medicine and alchemy became closely aligned, for reasons which are still not entirely clear, but most likely related to the development of chemical processes. By the time al-Rāzī and Jābir ibn Hayyān were composing their treatises, the Greek medical \textit{auctores} had been incorporated into alchemical treatises, and alchemical techniques were employed widely in a variety of activities which required the manipulation of substances. As Temkin notes, ‘techniques including those cultivated by alchemists were so widely spread that they could be used by a physician like al-Kindī who was adverse to alchemy’.\textsuperscript{3}

With the transmission of Graeco-Arabic alchemical treatises to the Latin West, the affinity between alchemy and pharmacy continued to develop; those involved in the production of medicinal drugs shared the same procedures and apparatus as those involved in the process of transmutation. The processes used in the production of \textit{materia medica} required extraction, purification and intensification, and these same procedures defined the process of transmutation. The process of distillation resulted in the production of distilled alcohol (from the Arabic \textit{al-kuh\l}), known as \textit{aqua vitae}, or \textit{aqua ardens} in Latin, which ‘fascinated surgeons and doctors alike’, and was used widely in surgery and medicine.\textsuperscript{4} Just as it was used by physicians and surgeons, it was also employed by the Franciscan alchemist, John of Rupecissa, as evinced by his \textit{Liber lucis} (‘The Book of Light’), completed c. 1350, and his \textit{De consideratione quintae essentiae omnium rerum} (‘On the Consideration of the Fifth Essence of All Things’), composed in 1351-2, which discussed the distillation of \textit{aqua vitae} from wine for medical purposes.\textsuperscript{5} Certainly, some Latin scholars advocated the use of alchemical processes, if not alchemy, in the practise of medicine. Roger Bacon states that ‘many

\textsuperscript{1} Cf. ‘Medicine and Graeco-Arabic Alchemy’, \textit{BHM} 29 (1955), 134-53.
\textsuperscript{2} Temkin, ‘Medicine’, p. 4.
\textsuperscript{3} ‘Medicine’, p. 148.
\textsuperscript{5} Cf. Hughes, \textit{Rise of Alchemy}, p. 47.
drugs should be sublimated, just as Avicenna and others have clearly told us’.\(^1\) In his *Liber mineralium* (*Book of Minerals*), Albertus Magnus even equates ‘skilful alchemists’ with ‘skilful physicians’.\(^2\) That Chaucer is aware of the use of alchemical substances in pharmacology is borne out by the description of the Summoner in the General Prologue who suffers from a ‘fyr-reed cherubynnes face’ (I. 624, p. 33). Curry diagnoses this as a ‘species of morphea known as *gutta rosacea* which has already been allowed to develop into that kind of leprosy called *alopecia*’. According to Guy de Chauliac, this kind of morphea can be treated with ‘aigre de citron, ceruse, agent, vif, borax, soultre et alum, avec huil de tarter’.\(^3\) Similarly, Chaucer lists mercury, lead monoxide, sulphur, borax, white lead, and cream of tartar, which have so far failed to cure the Summoner, ‘Ther nas quyk-silver, lytarge, ne brymstoon, / Boras, ceruce, ne oille of tartre noon’ (I. 629-30, p. 33). Several of these ingredients are, of course, all too familiar to the Canon’s Yeoman.

An even greater similarity between alchemical and medical practice centred on the potential medicinal effect of gold, ‘because its chemical stability seemed to indicate exceptional preservative powers’, which fascinated Latin scholastics interested in the manipulation of metals.\(^4\) According to Roger Bacon, the alchemical processes which calcite, sublimate and distillate precious metals will enable a better use of gold and silver in the preparation of complex drugs. If gold and silver are used prior to these procedures they will merely pass through the body without providing any relief or cure. However if prepared ‘with the aid of experimental science, they can even in small quantities aid the human body, beyond all expectation’.\(^5\) Here, Roger Bacon cites Aristotle, Galen and Avicenna as authorities on the particular properties of precious metals in medicine, ‘Aristotle speaks in the eighth book of the *Metaphysica*, and as is written at the end of the *Metheora*, they will be able to cure the human body more than

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1 Welborn, ‘Errors of the Doctors’, p. 32.
is believable’. In the case of the Physician in the General Prologue, his mastery of medical theory and his glowing credentials are counterbalanced by his avaricious interest in the practical aspect of medicine. He specializes in using gold in his practise, which is subtly equated with his desire to increase his own wealth, ‘For gold in phisik is a cordial / Therefore he lovede gold in special’ (I. 443-4, p. 30). The benefits of both gold and silver to the health are explained by Avicenna in Book Two, Treatise 2, Fen 79 of the Canon:

Gold is perfectly balanced. Actions and properties: Gold in the form of limatura [fine powder] goes into medicines against melancholy, while cauterizations made with a golden tool are better and heal faster. Personal hygiene: Gold kept in the mouth removes foul smell from the mouth, and if drunk [in the form of suspension] it goes into drugs against loss of hair, foxsickness and into ointments against ringworm. Eyes: When used in the form of alcohol, it relieves eye pain. Lungs and Chest: It is helpful in heart pain and tremor, in the ills of the soul, and those who speak to themselves.

Significantly, gold is a prime ingredient in ‘medicines against melancholy’ and also aids against those somatic and psychological diseases, affiliated with melancholy.  

Certainly, Avicenna was considered the progenitor of gilding and silvering pills to increase their price, which became prevalent in the seventeenth century, but was also considered a common practise in the Latin middle ages. In spite of the lack of any evidence for such a practise in Avicenna’s Canon, or the writings of any Latin medieval practitioner that have come down to us, Curry ascribed this practise to the Physician:

By gilding his cheap pills and charging high prices for them, by covering the electuaries received from his covenant Apothecaries with a film of gold, and by putting a few drops of aurum potabile, the Elixir of Life, into his cordials, Chaucer’s Doctor is provided with such wealth that he is able to make a holiday-

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pilgrimage to Canterbury, arranged in clothes of blood-red and bluish-grey colour lined with taffeta and then silk.¹

However, Avicenna did not advocate the practise of gilding pills, but he does recommend using gold as an electuary to cure a variety of ills. If the Physician is following the works of the learned authorities he describes, then he would have been familiar with the use of gold as an electuary, in a multitude of forms. In the Latin West, Arnald of Villanova recommended gold as an electuary, emphasizing its efficacy as a fine powder, liquidised and swallowed whole.² Roger Bacon was also a firm advocate of using gold in medicine and his list of its uses is strikingly similar to that of Avicenna: it should be ground into a fine powder and can be used for ‘tremors of the heart’.³ Moreover, Roger notes that it can be used against ‘greediness’ and the malady it creates, defined by Chaucer’s Parson as ‘a likerousness in herte to have / erthely thynges’ (X. 742-3, p. 313).⁴ It is fitting that Roger advocates gold as a cure for greediness, as a homeopathic antidote to that covetousness which drives alchemists to achieve the process of transmutation, as the use of aurum potabile as a medical cure stems from the alchemical tradition. Jābir ibn Hayyān tells us he used gold in his treatment of a noble slave girl, administering ‘a little of the elixir’ when all other treatments failed, which led to the patient regaining perfection, exactly as the elixir would in the process of transmutation.⁵

The principal medical function of aurum potabile was to arrest any physical ailments besetting the heart, often via the respiratory system, but it was also prescribed for lovesickness. As we have seen, the excess of black bile raises the heat in the organs and in the heart, which results in the physiological symptoms of amor hereos. In Book One of Troilus and Criseyde, when Troilus is struck by love, Chaucer introduces the medical concept of the heart as a hot organ, ‘Ayeyns his wille that shuld his herte stere,

¹ Chaucer and the Mediaeval Sciences, p. 35. Curry substantiates his argument with an account of such practises in The Accomplisht Physician, the Honest Apothecary, and the Skilful Surgeon (London, 1670), pp. 74-5.
Yet with a look his herte wex a-fere’ (I. 228-9, p. 476). In this instance, gold might be used in order to counter this heat, and balance out any excess humours. Moreover, as Avicenna also reminds us, gold is especially beneficial for curing melancholy. Certainly, the correlation between alchemy and fin’amors is immediately discernible in the opening of the Canon’s Yeoman’s Prologue. The Canon is described as ‘A man that clothed was in clothes blake, / And undernethe he hadde a whyt surplys’ (VIII. 557-8, p. 270), which identifies him as an Augustinian Canon Regular, but he is also wearing the symbolic colour of melancholy. We are reminded of the most striking detail that typifies the central figure in the Book of the Duchess, ‘And he was clothed al in blak’ (ll. 457, p. 336).¹ Moreover, the Canon’s obsessive fixation on the process of transmutation, reminds us of the obsessive fixation on an image of the beloved, which leads to melancholy and eventually to the ‘frenesie’ (I. 727, p. 483) of amor hereos discussed in Troilus and Criseyde. Indeed, the obsessive pursuit of the secret that lies at the heart of alchemy leads to a form of melancholia, resulting in ‘madnesse and folye’ (VIII. 742). The Canon’s Yeoman acknowledges that the fruitless labour, and the money expended in the quest for the Elixir of Life has led him and his fellow alchemist to the brink of madness: ‘almoost we wexen wood’, were it not for ‘that good hope’ that ‘crepeth in oure herte’ (VIII. 869-70, p. 274). The inherent folly of keeping this hope alive is further emphasized later on in the text, ‘We faille of that which that we wolden have, / And in oure madnesse evermoore we rave’ (VIII. 958-9, p. 275).

However, that the Canon’s Yeoman was once ‘fressh’ and ‘gay’ (VIII. 724, p. 272), before his obsession got the better of him, is also reminiscent of the fin’amors tradition. Moreover, the priest’s unconfined joy at the end of tale, at the prospect of reaping the rewards that the false canon has allegedly created, is reminiscent of the unconfined joy of the fin’amant in the archetypal May setting:

This sotted preest, who was gladder than he?
Was nevere brid gladder agayn the day,
Ne nyghtyngale, in the sesoun of May,
Was nevere noon that luste bet to synge;
Ne lady lustier in carolynge,
Or for to speke of love and wommanhede,

¹ Marie P. Hamilton, ‘The Clerical Status of Chaucer’s Alchemist’, Speculum 16 (1941), 103-08 (p. 103).
Ne knyght in armes to doon an hardy dede,
To stonden in grace of his lady deere,
Than hadde this preest this soory craft to leere. (VIII. 1341-9, p. 278)

By contrast, the Canon’s Yeoman, is incapable of such joy, however deluded it might be. Moreover, the description of the alchemists in the tale also suggests their spiritual suffering from *acedia*, as they undertake countless attempts at transmutation with no tangible results. In the *Confessio amantis*, Gower describes alchemy as a ‘fruitless quest’ which ‘is related to sloth’.¹ According to the theological classifications of sin, *acedia* was affiliated with spiritual inactivity which manifested itself in physical changes to the body. The Parson reminds us it one of the seven deadly sins:

Of the roote of thise sevene synnes, thanne, is
Pride, the general roote of alle harmes. For of
this roote sprynge certein braunches, as Ire,
Envye, Accidie or Slewthe, Avarice or Coveitise
(to commune understondynge), Glutonye, and
Lecherye. (X. 385-90, p. 299)

Aquinas explains *acedia* in terms of ‘the avoidance of a good’, and ‘this flight may be from one’s own personal good; *acedia* is a case of this, since it is sadness over a spiritual value that troubles the body’s ease’.² Indeed, *acedia*, as the result of spiritual inactivity, is associated with alchemists because their obsessive focus on the process of transmutation, causes them to neglect their spiritual wellbeing: ‘this implies neglect in seeking out spiritual good because of the labour involved’.³ As the Parson puts it:

Agayns this roten-herted synne of
Accidie and Slouthe sholde men exercise hem-
self to doon goode werkes, and manly and ver-
tuosly cacchen corage wel to doon. (X. 685, p. 311)

¹ Cf. Dean, ‘Dismantling’, p. 750.
² *ST IaAe* 84.4, pp. 74-5.
³ *ST IaAe* 84.4, pp. 76-7.
The alchemists, whose sole focus is the creation of *aurum finum*, which mirrors the Physician’s love of gold, are physically and spiritually troubled. Moreover, there is a certain irony in the fact that the spiritual ailments besetting the alchemists, can be alleviated through the use of *aurum potabile*, at least according to Avicenna.

The spiritual suffering of Chaucer’s alchemists is manifested physically, as the process of transmutation takes its toll, ‘The alchemical work itself contains its own black imagery’, because ‘the alchemist separates his elements and brings about the *nigredo*, which produces ‘the *prima materia*, the chaos from which God originally created the world, including Adam’.¹ This stage in the process of transmutation reinforces the position of alchemy as a mechanical art, which attempts to imitate the work of the Creator. Indeed, the *nigredo* is reflected in the physical description of the alchemists: the Canons’ Yeoman’s face is ‘wan and of a leden hewe’ (VIII. 728, p. 272), while his master dresses in black. This imagery not only indicates the ‘evil and mortal sin’ of *acedia*, which leads to despair, ‘but also his brooding, melancholic humor’, reinforced in the contrast between his former rosy complexion, and the current state of his dark, discoloured face:²

> For shame of hym my chekes wexen rede.  
> Algates they bigynnen for to glowe,  
> For reednesse have I noon, right wel I knowe,  
> In my visage; for fumes diverse  
> Of metals, whiche ye han herd me reherce,  
> Consumed and wasted han my reednesse. (VIII. 1095-1100, p. 277)

The ‘reednesse’, which signifies the Canon’s Yeoman’s previous, healthy balance, has been affected by technical side of the alchemical process, but also indicates that his *acedia* is rooted in saturnine melancholia. The description of Saturn in the works of such Arabic astrologers as Chaucer’s ‘Alkubaciús’ emphasizes the planetary god’s association with the dark, viscous humours of melancholy. Saturn is cold and dry, like black bile, and those under his influence are characterized by a ‘leden hewe’, as Saturn’s metal is lead, as we have seen. According to al-Qabīsī, Saturn is also

¹ Dean, ‘Dismantling’, p. 751.  
² Dean, ‘Dismantling’, p. 751
associated with ‘hearing’ and ‘comprehension’, which reminds us that the alchemists in the Canon’s Yeoman’s Tale are depicted as ‘philosophres’, of great understanding and knowledge, albeit misdirected in the pursuit of gold. However, when Saturn is in an unfortunate position, al-Qabīsī reminds us he presides over ‘suspicion between men’, which characterizes the relationship between the Canon’s Yeoman and his master, ‘for suspicioun / Of mennes speche evere hadde this Chanoun’ (VIII. 686-7, p. 271). Like Saturn, he is ‘fearful’ and ‘given to anger’, which fuels his belief that the Canon’s Yeoman has ‘sclaundrest me heere in this compaignye’ (VIII. 695, p. 271), in attempting to discuss their trade openly.¹ Most importantly, Saturn presides over those who are the victims of poverty, and the pursuit of the impossible, as Abū Ma’shar’ reminds us.² Certainly, Chaucer’s alchemists are embroiled in an impossible task, and the process of transmutation remains more elusive than ever, which is accepted by the Canon’s Yeoman, ‘And of his science am I never the neer’ (VIII. 721, p. 272). Indeed, the consistent attempt to create gold has paradoxically impoverished the Canon’s Yeoman, both materially and spiritually, because an alchemist is obliged to ‘empte his purs and make his wittes thynne’ (VIII. 741, p. 272). Chaucer emphasizes the inherent irony that the alchemist’s obsession with producing gold only succeeds in producing avarice and acedia in the alchemist. Here, it is worth noting that avarice, the vice particularly associated with the sterility of old age, is yet another aspect of the malign influence of Saturn in both the Arabic scholarly tradition and that of the Latin West.

It is clear that the precise description of various aspects of the technical processes of alchemy in the Canterbury Tales owes a great deal to the Arabic alchemical tradition, but the destructive futility of the alchemist’s elusive pursuit of the aurem purem is also informed by the tropes of fin’ amors, which, as we have seen, were informed by the allegorical language of alchemy ab initio. Moreover, the Arabic medical tradition lends authority to Chaucer’s portrait of the alchemist as a willing victim of saturnine melancholia and acedia. Through the figures of the Physician and the Canon’s Yeoman in particular, Chaucer’s demonstrates a familiarity with the technical art of alchemy and its relationship with medicine, which was an important aspect of the assimilation of Arabic science in the Latin West. However, this appropriation of Arabic science was

¹ Klibansky, Saturn and Melancholy, pp. 131-2, quoting Alcabitius, Libellus ysagogicus, Oxford, Bodleian, MS Marsh 663.
² Klibansky, Saturn and Melancholy, pp. 130-1, quoting Albumasar, Introductorium maius, Leiden University, MS Or. 47.
largely divorced from the cultural milieu that gave birth to it, as exemplified in Chaucer’s oeuvre. Chaucer’s deep familiarity with Arabic learning is in itself a distillate of Islamic culture, and his attitude toward Islam is ultimately dichotomous. It is this dichotomy to which this study now turns in its examination of how Chaucer faced the East.
CHAPTER FIVE

Chaucer, Heresy and Islam

In the list of authorities cited by the Physician, ‘Damascien’ is placed between ‘Averrois’ and ‘Constantyn’ (I. 433, p. 30). It has been suggested that this refers to the Melkite, Yuhanna ibn Mansūr ibn Sarjūn, known as John of Damascus (c. 675-749), the earliest Christian writer to classify Islam as a Christian heresy.\(^1\) Given his writings had a profound effect on the Latin West, ‘St John was the real founder of the Christian tradition’ concerning Islam, as Norman Daniel aptly notes.\(^2\) John was thoroughly educated in theology, the subjects of the *artes liberales*, and fluent in both Arabic and Greek. Following his father and grandfather, he lived and worked in Damascus as the financial administrator of the ‘Umayyad caliphate.\(^3\) In c. 725, he retreated from this world to become a monk, possibly to Mar Sabas, where he completed most of his writings, which are concerned primarily with theology, exegesis, homiletics and history.\(^4\) As a Christian, John was classified in Islam as one of the *ahl al-Kitāb* (‘people of the book’) thus protected by the *dhimmi* laws of the state. As a *dhimmi*, originally defined as a Christian, Jew, Sabean, or Zoroastrian, John was allowed to practise his faith, albeit with some restrictions, including paying a higher *jizya* or poll-tax to the state.\(^5\) However, many Christians did convert to Islam during John’s lifetime, and it was the rapid rate of conversion that worried John in particular. As Sidney Griffith points out, it is precisely because of incentives held out to Christians to renounce their *dhimmi* status that Eastern theologians begin defending their faith in theological and

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polemical tracts. In the next few centuries, in both East and West, Christian opposition to the dhimmi laws developed into physical demonstrations, exemplified by the case of Antony Rawh al-Qurashī, executed in Damascus in 799, and the forty-four Cordovan Martyrs, executed between 850-9 by the Muslim government of Córdoba for disparaging Islam.

John’s primary concern was the threat of Iconoclasm, then plaguing the Christian East, examined in his seminal work, the Fount of Knowledge (c. 743), consisting of the Dialectica (‘Dialectics’), De haeresibus (‘On Heresies’), and De fide orthodoxa (‘On the Orthodox Faith’). De haeresibus defines one hundred and one heresies, with Islam considered last, illustrating, for John at least, its position as a Christian heresy. If Chaucer is actually referring to John of Damascus in the General Prologue, it seems curious that he would place him on a list which specifically highlights the Arabic sources of Latin medicine, as we have seen. However, Dante provides a precedent for this dichotomous attitude toward Islam in the depiction of the Virtuous Pagans in Limbo:

Poi ch’innalzai un poco piú le ciglia,
vidi ’l maestro di color che sanno
seder tra filosofica famiglia.
Tutti lo miran, tutti onor li fanno:
quivi vid’ io Socrate e Platone,
che ’nnanzi a li altri piú presso li stanno;

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1 Church in the Shadow, p. 16.
e vidi il buono accoglitore del quale,
Diascoride dico; e vidi Orfeo,
Tulio e Lino e Seneca morale;
Euclide geomètra e Tolomeo,
Ipocràte, Avicenna e Galìeno,
Averoìs che ‘l gran comento feo

This ‘philosophic family’ is headed by Aristotle, the ‘master of those who know’, and Dante acknowledges the contribution made by Avicenna and Averroes, and his ‘great commentary’ on Aristotle, in revealing the work of the Greek magisters to the Latin West by grouping them altogether, as in the Physician’s list of authorities.

However, in keeping with John of Damascus’ definition of Islam as a heresy, Dante places the prophet Muhammad and his nephew ‘Alī in the circle of Schismatics. Here, Dante distinguishes between Heretics, who obstinately question or deny the truths of the Church, which are to be believed by divine faith, and schismatics, who refuse to submit to papal authority, in communion with the Church:

Vedi come storpiato è Maometto!
Dinanzi a me sen va piangendo Ali,
Fesso nel volto dal mento al ciuffetto.

The cloven face of ‘Alī symbolizes the effects of schism, while the depiction of Muhammad’s mangled, suspended body is in keeping with his characterization as a deceptive pseudo-prophet in such Latin polemical biographies as Embrico of Mainz’s Vita Mahumeti, Walter of Compiègne’s De otia Machometi, the Vita Machometi of

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1 Inferno, IV, 130-44, Divine Comedy I, pp. 64-5: ‘When I raised my eyes a little higher, I saw the master of them who know, sitting amid a philosophic family, all of them regarding him and all showing him honour. There I saw Socrates and Plato in front of the rest and nearest to him, Democritus, who ascribes the world to chance, Diogenes, Anaxagoras and Thales, Empedocles, Heraclitus, and Zeno; I saw the skilled collector of simples – I mean Dioscorides – and I saw Orpheus, Cicero, Linus, and Seneca the moralist, Euclid the geometer, and Ptolemy, Hippocrates, Avicenna, Galen, and Averroes, him who made the Great Commentary’.

2 Inferno, XXVIII, 31-33, Divine Comedy I, pp. 348-9: ‘See how Mahomet is mangled! Before me goes Ali in tears, his face cleft from chin to forelock.’
Adelphus, and Guibert of Nogent’s *Dei gesta per Francos*. Thus, there is a marked difference between Dante’s treatment of Islam as an obstinately irrational schism, and his perception of Arabic scholars as virtuous pagans:

In the great age of Islamic learning, when Western scientists looked admiringly on Avicenna … and Western philosophers referred to Averroes simply as ‘the Commentator’, irrationality could not be imputed to Muslims at large, but only (at best) to the supposed irrationality of their religion.

In Dante, the apparent dichotomy between the power of reason, embodied in Avicenna and Averroes and the wilful error and superstition of Islam is yet again emphasized in the description of the pit of Hell as a city of ‘meschite’ (‘mosques’) in Canto VIII. This binary opposition between rationality / irrationality, or reason / faith is made abundantly clear in Andrea di Bonaiuto’s fresco cycle in what is now known as the Spanish Chapel of the Dominican friary, Santa Maria Novella, Florence. Indeed, Chaucer’s representation of Arabic science in the *Canterbury Tales* is influenced by this binary of the rational Christian and irrational Muslim, so vividly depicted in Bonaiuto’s fresco cycle. This binary also influences his undoubtedly scholarly approach to the theological intricacies of Islam, which he depicts as a heresy, on the basis of the distinctions established by John of Damascus, and in the Latin translations of the Qur’an. Moreover, there is strong evidence to suggest Chaucer’s depiction of Islam in the Man of Law’s Tale in particular was informed by his first-hand knowledge of Bonaiuto’s fresco cycle, particularly the *Triumph of St Thomas Aquinas* on the west wall, and the *Via veritatis* on the east wall.


The Dominican chapterhouse of Santa Maria Novella, Florence, was built c. 1350-5, with work on the fresco cycle beginning c. 1365. The construction was funded by a wealthy merchant, Buonomico di Lapo Guidalotti, in memory of his wife, struck down by the Black Death in 1348. Guidalotti died in August 1355, but left a further 400 florins in his will to fund the fresco cycle.¹ The frescoes, painted by Bonaiuto between c. 1365-9, cover the entire chapterhouse; the west wall depicts *The Triumph of St Thomas Aquinas*, with the *Via veritatis* on the east wall, while the *Passion of Christ* occupies the south wall, opposite the *Life of St Peter Martyr* on the north wall. The *Resurrection* is depicted on the north vault, followed by the *Pentecost* on the east vault, the *Ascension* on the south vault, and the *Navicella* on the west vault.² According to Joseph Polzer, the frescoes ‘rank among the most impressive records of Dominican art and thought in late medieval Italy’.³ At the very least, Chaucer was aware of this Dominican friary and church from his reading of Boccaccio, as the seven young women and three young men depart for the countryside from this location in the first book of the *Decameron*.⁴ However, it seems likely that Chaucer saw these frescoes during his first recorded visit to Italy in 1372-3, as suggested by such critics as Mary Aquinas Devlin, V.A. Kolve, David Wallace and Anne Marie D’Arcy.⁵ There is considerable evidence to suggest that Chaucer’s iconography is directly informed by the *Triumph of St Thomas Aquinas*, the *Navicella*, the *Life of St Peter Martyr*, and the *Via veritatis*, which portrays the Dominican road to salvation.⁶ Indeed, it would appear that

³ Joseph Polzer, ‘Andrea di Bonaiuto’s *Via veritatis* and Dominican Thought in Late Medieval Italy’, *AB* 77 (1995), 262-89 (p. 262).
⁵ See George B. Parks, ‘The Route of Chaucer’s First Journey to Italy’, *ELH* 16 (1949), 174-87.
⁶ In addition to Wallace, *Chaucerian Polity*, pp. 182-212, see Sr Mary Aquinas Devlin, ‘An English Knight of the Garter in the Spanish Chapel in Florence’, *Speculum* 4 (1929), 270-81; V.A. Kolve,
Chaucer’s depiction of Islam in the Man of Law’s Tale is mirrored in the *Via veritatis*, which celebrates the crusading spirit of the fourteenth-century and the extirpation of all forms of heresy: Christian heretics and schismatics, and Muslims and Jews, who were generally defined in terms of heretics or schismatics. Furthermore, Chaucer’s dichotomous attitude toward Arabic science and Islam finds parallels in the depiction of the Great Commentator, Averroes, in the *Triumph of St Thomas Aquinas*, directly opposite the *Via veritatis*. The idea that Islam is a heresy is enforced in this portrait, which paradoxically recalls the contribution and appropriation of Arabic science to the development of Latin scholasticism.

The frescoes represent the chief purpose of the Dominican Order: the salvation of pagans, heretics and schismatics through the power of preaching and intellectual debate. Since the foundation of the Dominican Order under the Papal bull, *Religiosam vitam* (22 December 1216), its principal concern was the eradication of heresy, but the frescoes also depict very specific concerns about heresy in Florence during the 1360s.¹ As Millard Meiss points out, just when Bonaiuto began painting the fresco cycle, ‘Urban V issued a bull urging inquisitors to be more active against heresy’.² This recurrent bull, *In Coena Domini* (12 October 1363) adopted a stringent stance against heretics and schismatics in particular. This included such lay rulers as the Visconti family, who had been the subject of a papal crusade in 1324 following John XXII’s condemnation of Matthew Visconti as a heretic, as well as contemporary concerns regarding the *routiers* or mercenaries then wreaking havoc across Italy and France.³ During Chaucer’s lifetime, heresy came in many different forms, but what was reiterated again and again was the dogma that no salvation is possible outside of the Church. In the memorable words of the papal bull promulgated by Boniface VIII, *Unam sanctum* (18 November 1302): *extra ecclesiam nulla salus*. Under this dictum, crusades against Christians whose rulers opposed the Church politically were

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² *Painting in Florence*, p. 103.
increasingly sanctioned by the Papacy during the thirteenth and fourteenth centuries, and ‘from the papal viewpoint, the crusade against Christian rulers was as closely related to the defence of the Faith as was that against heretics’. Crusades to the Holy Land continued into the fourteenth-century, albeit on a lesser scale than before, and occurred at the same time as crusades in the Latin West. While these crusades did not preclude attempts to recover the Holy Land, they were considered a distraction by Christians in the Levant who implored the Papacy for assistance: in 1298 Gregory the Patriarch of Armenia wrote to Boniface VIII for support in Cilicia Armenia, in 1327 King Leon V of Armenia again asked John XXII for aid in this region, and in 1328 Louis IV blamed John XXII for the failures and attacks in Armenia and Prussia.

Crusades were also launched against the pagans of Finland and Lithuania, who remained a legitimate target, along with heretics and schismatics, well into Chaucer’s lifetime, as demonstrated in Chaucer’s portrait of the Knight in the General Prologue, who has fought ‘Aboven alle nacions in Pruce; / In Lettow hadde he reysed and in Ruce’ (I. 53-4, p. 24). By the end of the thirteenth century crusading activity ‘was directed against a single enemy: the grand duchy of Lithuania, which constituted the last pagan polity in all of Europe’. Lithuania remained pagan until 1386, its rulers having spent most of the fourteenth century engaged in ongoing warfare with Poland, assisted by Hungary and the papacy. The Teutonic Order were responsible for regular onslaughts against ‘Lettow’, but also ‘Pruce’ and ‘Ruce’, assisted by a host of knights from Western Europe who assembled each year ‘at the Prussian strongholds of Königsberg’ (now Kaliningrad in Russia), and ‘Marienburg’ (now Malbork in Poland). Between 1328 and 1410, over 200 English crusaders are known to have fought with the Teutonic Order in Lithuania. The winter campaign, which took place between October and April, was known as the winter-reyse, and the summer campaign, which began in August or September, was known as sommer-reyse. As Murray notes, ‘the crusades

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2 See Housley, *Italian Crusades*, pp. 77-79
5 Murray, ‘Saracens’, p. 413.
7 See Murray, ‘Saracens’, p. 413.
against the Lithuanians proved so popular that the German word for the military expedition passed into French usage as reze’, while Chaucer is at pains to tell us the Knight has ‘reysed’ in the Baltic region. Moreover, the Knight has also served in crusades which were launched across the Levant against such Islamic sultanates as ‘Tramyssene’ (I. 62, p. 24), or Morocco, and ‘Gernade’ (I. 56), which reminds us of the ongoing attempt to reconquer Muslim Granada.

Indeed, the politics of fourteenth-century crusading against lay rulers in the Latin West, pagan states, such as Lithuania, and Muslim sultanates are depicted in great detail in the *Via veritatis* (fig. 1). The fresco is divided into three compositional zones. At the apex of the fresco Christ in Glory is portrayed with a book in his right hand, emphasising the importance of the divine word, and key to true salvation in his left hand. Christ surmounts the mercy seat, where the *agnus Dei* is offered up in sacrificial *propitiation*, attended by the four evangelists in symbolic form, and flanked on each side by the angelic host, with Mary to the right of the composition. The middle zone depicts the faithful gazing intently upon Christ, but to their left several figures are ‘enjoying the pleasures of the world, dancing, playing music or listening to it, and eating fruit’. The bottom zone is dominated by the exterior elevation of the Cathedral of Santa Maria del Fiore, and a series of prominent figures, most notably Pope Urban V, flanked by the Emperor Charles IV, Amadeus of Savoy, and Peter I of Cyprus, better known as Pierre de Lusignan. Among the lower orders, we may note the prominent figure of a lone English Knight of the Garter, first identified as Edward Despenser by Devlin, and such literary auctores as Petrarch and Boccaccio (fig. 2). The particular significance of such crusading figures as Amadeus of Savoy, Pierre de Lusignan, and Edward Despenser for Chaucer’s portrait of the Knight has been examined by Devlin, and more recently by D’Arcy, who stresses the close friendship between Edward Despenser and Lionel, Duke of Clarence. Lionel’s first wife, Elizabeth de Burgh, fourth countess of Ulster and fifth baroness of Connaught, was Chaucer’s first patron, who

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1 ‘Saracens’, pp. 413-14.


died in Dublin, on 10 December 1363. Lionel remained in Dublin as Lord Lieutenant until 7 November 1366, when he was recalled to marry Violante Visconti. The marriage contract was signed at Westminster on 15 May 1367; the wedding took place in Milan on 28 May or 5 June 1368, and Lionel died at Alba on 17 October 1368, most probably poisoned by his father-in-law, Galeazzo II of Pavia, and his brother ‘Barnabo Viscounte’, the ‘scourge of Lumbardy’ (VII. 3589-90, p. 247). In an attempt to avenge his friend and probably acting under Edward III’s orders, Edward Despenser joined the papal crusade against the Visconti, which explains his presence in the *Via veritatis*, showing his allegiance to the Pope in the company of such prominent crusaders as Pierre de Lusignan and Amadeus of Savoy. Chaucer was undoubtedly familiar with Edward Despenser from the English court, and would at least remember the 1363 visit of Pierre de Lusignan, who travelled to England to gather support for his crusade. Certainly, the Knight in the General Prologue heeded De Lusignan’s call to arms against the heretical or schismatic Saracen. In 1365, Pierre led the successful siege of Alexandria against the Mamluk sultanate, where the Knight distinguished himself, ‘At Alisaundre he was whan it was wonne’ (I. 51, p. 24). We are told he also served in ‘Algezir’ (I. 57) or Algeciras in Spain, ‘Lyeys’ (I. 58) or Ayas in Cilicia, ‘Satalye’ (I. 58) or Atalia in Turkey, ‘Tramayssene’ (I. 62) or Tlemcen near Morocco, and ‘Palatye’ (I. 65) or Balat, also in Turkey. Many Englishmen fought in these crusading theatres during Chaucer’s lifetime, including several of his friends and acquaintances. William Scrope was with Pierre de Lusignan at the conquest of Satalia and Stephen Scrope was knighted by Pierre de Lusignan at Alexandria.

The sustained commitment to crusading that distinguished such families as the Scropes, or the Knight in the General Prologue, was fed by the type of anti-heretical iconography we find to the right of the Pope, Emperor, and various representatives of the Church Militant in the *Via veritatis*. Between the commanding depiction of Florence Cathedral and the figures of heretics on the far-right of the composition, stands the figure of Dominic, with black and white dogs, a visual pun on *domini canes*, running underfoot. Next to him stand the figures of Thomas Aquinas, canonised on 18

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July 1323 by Pope John XXII, and Peter Martyr canonised on 9 March 1253 by Pope Innocent IV (fig. 3). They are preaching to groups of Muslims and Jews, asserting the power of conversion through rational means. Peter Martyr preaches to one group of heretics, converting some of them through the spoken word. Similarly, Thomas Aquinas preaches to another group by means of the written word, exemplified by the open book in his hand. From this scene it is unclear whether Islam is represented as a heresy, a schism, or as paganism. According to Daniel, the image of a pagan, idolatrous Islam characterizes such the popular works as the *Chansons de geste*.

This perception would appear to stand in sharp contrast to the depiction of Islam found in the writings of Peter the Venerable, and such later commentators as William of Tripoli, and Richard FitzRalph, Archbishop of Armagh. However, as John V. Tolan demonstrates, there was a greater interpenetration between the popular view of Muslims as pagans and the scholarly view of Muslims as heretics or schismatics than scholars have allowed. As Peter the Venerable puts it in his *Summa totius haeresis ac diabolicae Saracenorum sive Hismahelitarum* (‘Sum of the Entire Heresy or Demonic Sect of the Saracens or Ishmaelites’): ‘I cannot cogently decide … whether the Mohammedan error must be called a heresy and its followers’ heretics, or whether they are to be called pagans’. In spite of these deliberations, Peter the Venerable favoured the notion of Islam as a heresy:

Peter did put forward two original, vivid, and somewhat daring interpretations in his theses concerning Islam as a summation of Christian heresies and itself a heresy (though, owing to its denial of the sacramental system, a heresy bordering on paganism) and Mohammad as a “mean” between Arius and the Antichrist.

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2. See *Heroes and Saracens* (Edinburgh, 1984).
For Peter the Venerable, Islam was the summation of Christian heresies, especially the principal Christian heresies found in the East: Arianism, Monophytism, and Nestorianism. Monophytism and Nestorianism were only declared heresies after the Council of Chalcedon in 451, which reaffirmed the doctrine that Christ has two natures, one human and one divine, in the three persons of the Trinity, whereas Arianism was denounced as a heresy at the Council of Nicea in 325. Here, Arius had denied the divine nature of Christ, as divinity would make him coeternal with God. Instead, Arius distinguished between the Logos and the Son; through the Logos, God created the Son who remained mutable and good because of his free will and not because of his intrinsic divinity. However, Arius and his followers continued to worship Christ, including baptism in the name of the Father, the Son and the Holy Spirit, and were consequently accused of polytheism: ‘for by worshipping as divine one whom they refused to call divine, they would “certainly be going on to more gods” and would “lead into a plurality” of divine beings’. Similarly, Nestorianism challenged the orthodox doctrine of the nature of Christ. Rooted in the theological thinking of the early fifth-century theologians, Nestorius and Theodore of Mopsuestia, and codified in Babai the Great’s Liber de unione (‘Book of the Union’) in the sixth century, Nestorians believed Christ had two hypostases in one person. Nestorianism developed in newly-conquered Islamic territories, and, as Griffith points out, the ‘Nestorian Church of the East was left to define its sociological identity within the new circumstances provided by the world of Islam’. Indeed, many Arabic scholars studied under Nestorians, as we have seen. Al-Fārābī studied under the Nestorians Yuhanna ibn Haylan (d. 910) and Abū Bishr Matta ibn Yunūs, while the fact that al-Fārābī, ‘Abū Bishr Matta ibn Yunūs, and possibly al-Rāzī, taught the Nestorian Yahya ibn Ḍī in turn, testifies to the tolerance of scholastic circles at least. The translators, Hunayn ibn Ishāq, known in Latin as Johannitius, and his son Ishāq ibn Hunayn were also Nestorian Christians.

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4 See Babai Magni liber de unione, CSCO 79-80 (Louvain, 1915).
5 Church in the Shadow, p. 113.
From a Christian perspective, Islam encapsulated such heresies; thus could be considered a Christian heresy in itself, because of its monotheism, its theological claim to Christ and Mary, and its denial of the Trinity. Throughout the later middle ages, most scholars in the Latin West followed the lead of such Eastern theologians as John of Damascus and the Syrian Melkite, Theodore Abū Qūrra (c. 750-c. 823), who acknowledged that Islam was a monotheistic religion which recognised the distinction between God and his prophet, Muhammad.\(^1\) In a letter to Louis VII, Peter the Venerable assures him Muslims believe ‘that Christ was born of a Virgin, and agree with us concerning many things about Him’.\(^2\) However, Islam’s denial of the divinity of the Logos made it Arian; its denial of Christ’s divine nature made it Nestorian, while its attitude toward demons laid it open to charges of Manichaeism as defined as a Christian heresy.\(^3\) Moreover, the association of Muhammad with the Antichrist is rooted in the Apocalypse, where heresy, ‘the false wisdom’, was associated with visions of the Antichrist.\(^4\) John of Damascus calls Islam, as opposed to Muhammad, ‘the forerunner of the Antichrist’.\(^5\) However, the term was used by him to describe anyone who strayed from Orthodox Christian teaching on the divine nature of Christ. For instance, in addition to Islam John of Damascus denounced Emperor Leo III, his son Constantine V, not to mention the Patriarch of Constantinople John VII Grammaticos, as Antichrist. Similarly in the *De fide Orthodoxa*, he denounces Nestorius as Antichrist because he gives Mary the name Christokos, as opposed to Theotokos.\(^6\) Indeed, the concept of Islam as a Christian heresy is very much current in the fourteenth century, as evinced by the *Triumph of St Thomas Aquinas* in Santa Maria Novella, where Averroes is representative of Islam as a heresy alongside such Christian heretics as Arius and Sabellius (fig. 5). This echoes the fact that in Latin scholastic writings, the term heresy was used ‘as a common noun in referring to Islam; for example, Mark of Toledo could

\(^1\) Cf. Griffith *Church in the Shadow*, pp. 60-6, and Tolan, *Saracens*, pp. 56-8, 63.
\(^2\) Kritzeck, *Peter the Venerable*, pp. 21-2.
speak of Muslims enforcing “their heresy”\textsuperscript{1}. However, it is worth noting that according to Peter the Venerable, Islam borders on paganism because it does not accept baptism, and this distinction is key to understanding Chaucer’s attitude toward Islam in the Man of Law’s Tale.

Indeed, Chaucer’s depiction of Islam in the Man of Law’s Tale is one of the most notable departures from his sources: Pope Innocent III’s \textit{De miseria conditionis humane} (‘On the Misery Condition of Man’); Nicholas Trevet’s \textit{De la noble femme Custance} (‘The Noble Lady Custance’) in his \textit{Chronicles} (‘Chronicles’); John Gower’s Tale of Constance in the \textit{Confessio amantis}; and Boccaccio’s tale of Gostanza in the \textit{Decameron}.\textsuperscript{2} Here, Chaucer correctly presents the main tenets of Islam with notable precision. Muhammad is referred to as ‘Mahoun, oure prophete’ (II. 224, p. 90), who revealed the word of God in the Qur’ān, God’s final revelation, as the messenger of Islam: ‘The hooly lawes of our Alkaron, / Yeven by Goddes message Makomete’ (II. 332-3, p. 92). Moreover, ‘the Man of Law reveals that he knows that Islam was a monotheistic religion’.\textsuperscript{3} Brenda Deen Schildgen goes on to examine the tale in terms of the ‘Other’ and Peter the Venerable’s writings on Islam, but does not elucidate the possible contemporary sources of Chaucer’s knowledge. Similarly, Susan Schibanoff considers the depiction of Islam as heresy in the tale within the parameters of medieval orientalism, but focusing on its relation to antifeminism.\textsuperscript{4} Moreover, although Chaucer does not deliberately misinterpret the basic tenets of Islam in the Man of Law’s Tale, he does present them within a ‘carefully structured Christian argument’, much like Peter the Venerable’s works against Islam and the frescoes of Santa Maria Novella.\textsuperscript{5} In the Latin West, the first learned commentaries on Islam, which addressed the essential doctrinal framework noted in the Man of Law’s Tale: that Islam is monotheistic, that the Qur’ān is the word of God, and Muhammad is the messenger of God, are found in the Latin translations of the Qur’ān. As Daniel states, ‘the essentials of Islamic belief were

\textsuperscript{1} Daniel, \textit{Islam and the West}, p. 213.
\textsuperscript{2} Cf. \textit{Sources and Analogues to the Canterbury Tales}, II, 277-350.
\textsuperscript{3} \textit{Pagans, Tartars, Moslems and Jews}, p. 60.
\textsuperscript{5} Kritzeck, \textit{Peter the Venerable}, p. 25.
known to those scholastic and other educated authors who took a serious interest in the subject.\(^1\)  

In response to the failure of the First and Second Crusades to move Muslim hearts or minds, and troubled by the military zeal of the crusaders, Peter the Venerable embarked on a project to translate, examine, and refute the principal Islamic theological texts, most notably, the Qur’ān.\(^2\) During a trip to Spain on official business, c. 1144, Peter approached two Latin scholars on the banks of the Ebro, Robert of Ketton and Hermann of Carinthia, who were then working on Arabic astronomical and mathematical texts in Toledo, to assist him in his project. In the years that followed, Peter, Robert, and Hermann, were joined by Peter of Toledo and a Muslim known only by his forename, Muhammad, and succeeded in compiling a corpus of texts, now known as the Toledan Collection, preserved in the original manuscript compiled in Cluny, Paris, Bibliothèque de l’Arsenal, MS 1162.\(^3\) The Toledan Collection consists of several texts: the *Fabulae Saracenorum* (‘Fables of the Saracens’), also entitled the *Chronica mendosa et ridicula Saracenorum* (‘Chronicles of the Faults of the Saracens’), translated by Robert Ketton; the *Liber generationis Mahumet* (‘Book of the Generations of Muhammad’) and the *Doctrina Mahumet* (‘Doctrine of Mohammad’), both translated by Hermann of Carinthia, and Robert’s translation of the Qur’ān.\(^4\) This translation gained widespread popularity throughout Europe; it is extant in twenty-five manuscript copies and in two printed editions of 1543 and 1550, and was considered the authoritative version of the text up until the seventeenth-century.\(^5\) Certainly, Peter the Venerable’s visit to Spain would have allowed him to witness the cultural and political effect of Islamic rule at close quarters, especially Alfonso VII’s struggle to wrest control of Southern and Western Spain from the Almoravid dynasty. The second translation of the Qur’ān into Latin was commissioned by Bishop Rodrigo Jimenez da Rada and Mauricius, archdeacon of Toledo, leading up to the battle of Las Navas de

\(^1\) *Islam and the West*, p. 66.

\(^2\) See Gillian R. Knight, *The Correspondence Between Peter the Venerable and Bernard of Clairvaux* (Aldershot, 2002).


\(^5\) See *Machometis Saracenorum principis, eiusque successorum vitae, doctrina vitae, doctrina ac ipse Alcoran*, ed. Theodore Bibliander (Basel, 1543), and *Machometis Saracenorum principis, eiusque successorum vitae, doctrina vitae, doctrina ac ipse Alcoran*, ed. Theodore Bibliander (Basel, 1550).
Tolosa, on 16 July 1212, with a view to exerting dominance over the Muslim community after the military defeat of the Almohad dynasty.\(^1\) The translator entrusted with the task was Mark of Toledo, a native Iberian fluent in Arabic, whose *Liber Alchorani* survives in seven manuscript copies. When later combined with copies of the *Lex Mahumet* and two fifteenth-century translations, this text remained a best seller right into the early modern period.\(^2\)

These translations drew on the skills of scholars already engaged in translating the mathematical, astronomical and scientific works of the classical Greek *auctores*, Aristotle, Hippocrates, Galen, Ptolemy and Euclid, from the Arabic into Latin. It has been suggested that when faced with the ‘thriving, prosperous, intellectually sophisticated Muslim world, the Christian polemicist needed to convince his readers that the “heresy of Muhammad” was a debased parody of the true religion’.\(^3\) To this end, a process of distillation occurred, whereby the Arabic intellectual works held up as rational authorities in subjects such as medicine in the Latin West were extracted from their Islamic context. Both translators of the Qur’ān, Robert of Ketton and Mark of Toledo, were engaged in scientific and mathematical Arabic translations before undertaking their translations of the Qur’ān, and as Thomas E. Burman has demonstrated, both were capable of drawing on Qur’ānic *tafsir* (‘exegesis’) during the translation process.\(^4\) In Islam, the Qur’ān is considered to be the uncreated word of God, but also the governing law of Muslims. The concepts of law, religion and revelation were closely aligned in the middle ages, hence Robert of Ketton’s title of his translation, the *Lex Mahumet* or *Liber legis*, and Peter the Venerable’s explanation in the *Summa totius haeresis Saracenorum* that the ‘Qur’ān is the “name they call their law’’.\(^5\) Furthermore, the Latin translators did not distinguish between God speaking in the Qur’ān and Muhammad speaking: ‘Because writers wished to insist that the “pseudoprophet” manufactured *his* Qur’ān, they very generally used such phrases as


\(^3\) Tolan, *Saracens*, p. 167.


Similarly, in the Man of Law’s Tale, the laws of the Qur’ān are apparently the work of Muhammad, ‘Wedden his child under oure lawe sweete / That us was taught by Mahoun, our prophete’ (I. 223–4, p. 90).

Here, Chaucer’s description of Muhammad as ‘our prophete’ is particularly acute. In Islam Muhammad is most often described as a nabī (‘prophet’) or rasul (‘messenger’), and these titles were often the topic of much debate in Christian Latin polemic. Certainly, Peter the Venerable understood the Islamic belief that Muhammad was the last of the prophets who had revealed the final prophecy:

As he was the last of all the prophets in order, and like a seal of all the prophets; as he was not the author, but the bearer of the divine law; not the Lord, but the messenger: he received the heavenly commands which were sent to him by God through Gabriel.²

As a Christian, Peter the Venerable rejected this doctrine, but it does reveal his accurate knowledge about the position of Muhammed in Islam, which finds an echo in Chaucer. The Word of God is ‘Yeven by Godes messege Machomete’ (II. 333, p. 92). In Robert Ketton’s translation of the Qur’ān, the faithful are told to ‘Believe in the envoy sent to you with the divine truth’.³ Similarly, Mark of Toledo translated the same verse as ‘Ye men, now an envoy has come to you with the truth of your Creator’.⁴ Several Latin terms were used to convey Muhammad’s position as the messenger of God, most notably propheta and pseudopropheta, and nuntius for nabí and rasul, or apostolus for apostle. Phrases such as propheta vel nuntius (‘prophet or messenger’) and propheta Dei et nuntius (‘prophet of God and messenger), were often used.⁵ For instance, Richard FitzRalph emphasizes Muhammad’s position in terms of ‘delivering God’s rules’, while Roger Bacon ‘clearly understood that Muhammad claimed only to have received a revelation that God had sent’.⁶

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¹ Daniel, Islam and the West, p. 55.
² Daniel, Islam and the West, p. 36, citing Contra sectam Sarracenorum, II, 3.
⁴ Mark of Toledo, Liber Alchorani, 6, cited in Daniel, Islam and the West, p. 36.
⁵ Daniel, Islam and the West, p. 37.
⁶ Daniel, Islam and the West, p. 37.
However, echoes of paganism are also discernible in Chaucer’s depiction of Muhammad, particularly the use of such terms as ‘mawmettrie’ (II. 236, p. 90), Mahoun (II. 224, p. 90), and Makomete (II. 333, p. 92). The MED defines the term ‘maumet’, as ‘the name of a fictitious deity supposed to be worshipped by Moslems; also, a pagan god’.\(^1\) Paganism was first attributed to Islam in the Eastern Christian tradition, for instance, the ninth-century scholar, Nicetas of Byzantium, mistranslated the Arabic term samad in the Qur’ānic verse Surah al-Tawhid, rendering a verse which proclaims the oneness of God into an assertion of polytheism: ‘He is God alone, God made of solid hammer-beaten metal; He begets not and is not begotten, nor is there like unto Him any one’\(^2\). Here, the figurative term samad (‘permanent, everlasting, eternal’) was translated as ‘solid hammer-beaten metal’\(^3\). According to Kritzeck, the idea that Islam was a pagan religion was widespread; thus, ‘the most common European view still saw Islam as a variety of polytheism and persisted in the identification of Muhammad with the Islamic god or gods’, which is recalled in Chaucer’s use of the term ‘mawmettrie’\(^4\). Such a view was typically expressed in the *Chansons de geste* where the Saracens, identified as Muslims, pray to three gods: Tervagent, Mahoun and Apollo, which represents ‘unofficial attitudes to Islam and the Arabs’\(^5\). The term Mahoun in the *Chansons de geste* refers to a fictional god and not the historical figure of Muhammad:

Whatever explanation of this curious convention of a pantheon we finally adopt, we shall recognise that is offensive to use the name of the Prophet to denote something that in no way at all resembles the historic Muhammad.\(^6\)

In the Man of Law’s Tale, Chaucer qualifies Mahoun with ‘oure prophete’, signalling a familiarity with the position of Muhammad as the prophet of Islam, rather than the

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\(^1\) *MED*, ‘maumet (n)’, 1a.


\(^3\) Cf. Hanson, ‘Manuel I Comnenus’, pp. 60-3.

\(^4\) Kritzeck, *Peter the Venerable*, p. 117.


popular image of Mahoun as a pagan deity. However, the pagan Mahoun is evoked in the Tale of Sir Thopas:

Til that ther cam a greet geaunt,
His name was sire Olifaunt,
A perilous man of dede.
He seyde, ‘Child, by Termagaunt,
But if thou prike out of myn haunt,
Anon I sle thy steede

With mace. (VII. 807-13, p. 214)

The names of the three pagan gods in the Chansons de geste were often used interchangeably, and Chaucer’s ‘Termagaunt’ has been read in this manner. According to Haskell, ‘Termagaunt’ is synonymous with a ‘god of Mohammad, or Maumet’, which came to denote idolatry or puppetry in Middle English.¹ However, Termagaunt is not a god of Muhammad, but clearly a variation on Tervagent, which we might expect to find in a romance parody written in a low, rhetorical register, featuring the pagan Saracens, the archetypal enemies inherited from the Chanson de geste tradition.

Like Chaucer, the Book of Marvels and Travels of John Mandeville provides a more considered, scholarly depiction of Islam. Mandeville composed his Travels from a wide variety of sources: William of Tripoli’s De statu Saracenorum; Caesarius of Heisterbach’s Dialogus miraculorum; Odoric of Pordenone’s Relatio; William of Boldensele’s account of travelling to the Holy Land in the Liber de quibusdam ultramarinis partibus (‘The Book of Certain Regions Overseas’); Bartholomeaus Anglicus’ De proprietatibus rerum; Vincent of Beauvais’ Speculum historiale and Speculum naturale, and The Letter of Prester John, written c. 1165.² Like Chaucer, Mandeville refers to the Qur’ān as ‘bookis of here lawe pat Macomet bitoke hem (whiche pei clepip Alkoran)’.³ He also devotes an entire section to explaining the

‘trewpe of pe Sarasyns’ which includes an explication of the Qur’ān’s treatment of Jesus and Mary, Abraham and Moses, Islam as a monotheistic faith, and Muhammad as the messenger of God.\(^1\) It has been argued that Chaucer knew Mandeville’s *Travels*, certainly, the similarities in their comments on Islam are also indicative of this possibility.\(^2\) While it is possible that Mandeville was a source for Chaucer’s knowledge of Islam, it is also likely that Chaucer gleaned his understanding of the religion from his contemporaries at Merton College, a source which has not been considered hitherto. It is important to note that Richard FitzRalph, whose anti-fraternal writings have been considered a possible influence on the *Canterbury Tales*, had a strong interest in Islam, which may date back to his time at Oxford, and Merton College in particular. Katherine Walsh points out that Robert of Ketton’s *Lex Mahumet* survives in a manuscript, Oxford, Merton College, MS H.3.13, which also contains Robert’s *Chronica mendosa et ridiculosa Saracenorum*, and Hermann of Carinthia’s *Doctrina Mahumet*. That FitzRalph consulted this manuscript is likely as the copy of Robert’s *Lex Mahumet* was incomplete, finishing at Azoara 77 and in FitzRalph’s *Summa de Questionibus Armenorum*, ‘none of FitzRalph’s references pertain to later sections of the Koran’.\(^3\)

Significantly, the Latin translations of the Qur’ān were read in a similar manner to Latin scholastic texts. The thirteenth-century Italian friar, Riccoldo di Monte Croce, read and used a Latin translation of the Qur’ān alongside an Arabic Qur’ān for his treatise *Contra legem Sarracenorum* (‘Against the laws of the Saracens’).\(^4\) The copy of Robert of Ketton’s *Lex Mahumet* in Paris, Bibliothèque de l’Arsenal, MS lat.1162, was read in the same manner as an Aristotelian text; it contains glosses and marginal notes much like Latin scholastic textbooks. As Burman observes, ‘The Latin Qur’an has been presented to its earliest readers within a very specific sort of manuscript design that which was characteristic of the books produced for the new scholastic intellectuals of

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\(^1\) *Mandeville’s Travels*, pp. 56-64.


the twelfth-century Renaissance’. The elevation of the Latin Qur’an to the level of a scholastic textbook paradoxically bestowed upon it a prestige and authority in the Latin West, which belied the original, polemical purpose in translating it. It operated like a ‘Christian scholar’s Bible’, glossed in a similar fashion to the *prisca theologia* of Plato or Aristotle, or patristic texts. Some manuscript copies were also regarded as a ‘collector’s item’, as Burman puts it, and were paired with such works as the life of Alexander the Great, to create a valuable example of ‘oriental exotica’.

Certainly, the nuanced depiction of Islam which generally characterizes Chaucer’s oeuvre is better understood in light of his portrayal of the Syrian merchants in the Man of Law’s Tale. Unlike such sources as Trevet and Gower, Chaucer depicts the Syrian merchants in an overwhelmingly positive manner:

In Surrye whilom dwelte a compaignye
Of chapmen riche, and therto sadde and trewe
That wyde-where senten hir spicerye,
Clothes of gold, and satyns riche of hewe.
Hir chaffare was so thryft and so newe
That every wight hath deyntee to chaffare
With hem, and eek to sellen hem hire ware. (II.134-40, p. 89)

The merchants are from Syria, they are rich, but trustworthy, with a wide array of quality spices and textiles for sale, paradigmatic of the luxury goods from the orient, which made their way to the docks of Northern Europe. Records show that whilst in Italy, Chaucer was commissioned to ‘treat with the Genoese concerning the appointment of a special seaport for the use of Genoese merchants’. Similarly, it is likely he would have met with merchants coming from the Middle East, particularly Syria, as they traded regularly with Italy through the port of Genoa. The regularity of such trade routes is documented through papal letters in the later fourteenth century, which implore the Italian ports to forego trading with Middle Eastern traders as part of

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1 *Reading the Qur’an*, p. 84.
2 Burman, *Reading the Qur’an*, p. 84.
3 Burman, *Reading the Qur’an*, p. 129.
5 Cf. *Chaucer Life-Records*, p. 32.
the crusading efforts.¹ By contrast, Gower devotes two lines to his merchants, ‘That the greteste of Barbarie / Of hem whiche usen marchandie’.² Trevet also notes the quality of the merchandise of these pagan ‘merchants from the great Saracen land carrying much diverse and rich merchandise’, and their conversation with Constance who converts them to Christianity:

Constance went down to see their riches and asked them about their land and their religion. And when she understood that they were heathens, she preached the Christian faith to them. And when they had assented to the Christian faith, she had them baptised and instructed perfectly in the faith of Jesus Christ.³

Neither Gower nor Trevet indicate the exact origin of the merchants, noting only they are from the land of the Saracens, the vague, undifferentiated space which stretched between the Latin West and the Far East. Chaucer follows Gower in stating the merchants are from the ‘Barbre nacioun’ (II. 281, p. 91), but, significantly, he does not use the term ‘Saracen’ in this context.

As a term, ‘Saracen’ is usually identified with two other terms, which are explicitly biblical in origin, ‘Ishmaelite’ and ‘Hagarene’, taken as indicative of the origin and ethnicity of the Arabs. They were frequently employed by Christian writers to denote an Islamic religious identity, in contradistinction to the Qur’ānic term, ‘Muslim’. As Katherine Scarfe Beckett notes, ‘the name by which Muslims were first known already had a considerable history in European thought; Islam was never new, since Saracens, Ishmaelites and Hagarenes were already old and explained’.⁴ ‘Ishmaelite’ signified that Arabs were descended from Ishmael, Abraham’s firstborn son by Hagar, his wife Sarah’s handmaiden, who was cast out by Sarah after the birth of Isaac. In Genesis 21:10 Sarah states, ‘Cast out this bondwoman, and her son; for the son of the bondwoman shall not be heir with my son.’ ‘Hagarene’ was a corrupted term, also used to denote the Ishmaelite, as they descended from Hagar and not Sarah. Certainly,

‘Saracen’ was the most popular term used throughout the Middle Ages in theological, polemical and literary works. However, Chaucer describes the Syrians in terms of their country of origin, not their putative racial origin, with all the sense of illegitimacy that entails. By the fourteenth century the term ‘Saracen’ was ‘the preferred term for the pagan Lithuanians’. In Jean Jehan Cabaret d’Orville’s biography of Louis II of Bourbon, who fought as a crusader in the Baltic and the Islamic sultanates like Chaucer’s Knight, the term *Sarrasins* is used to describe both the pagan Lithuanians and the Moors in Granada. Moreover, ‘The location of a castle in Prussia is described in a crusading petition to the papal court at Avignon as being in the land of the Saracens: “in confinibus Sprucie in terra Sarracenorum videlicet regis de Letto”.’

Similarly, Mandeville describes a journey across the Baltic ‘to passe from Prusse to the lond of sarazin habitable’. Indeed, Mandeville uses the term interchangeably to denote both groups:

> Since Mandeville does not distinguish the ‘Saracens’ of Lithuania from those of the Near East in any way other than by their place of habitation, most of his readers would assume that the former were Muslims like the other Saracens mentioned.

Moreover, the term *mescreans* ('unbelievers') was also applied to Lithuanians and Muslims, most notably by Guillaume de Machaut, who accompanied John of Luxembourg, king of Bohemia on a crusade to Prussia, ‘Et puis il s’en ala de la / Droit eu roiaume de Cracoe / Et par les glaces en Letoe. / Crestienner fist en une ville / Des mescrëans plus de sis mille.’ In her bid to convince her council against converting to

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2 Murray, ‘Saracens’, p. 6.
5 Murray, ‘Saracens’, p. 416.
Christianity, the Sultaness reminds them ‘For we reneyed Mahoun our creance?’ (II. 340, p. 92). In questioning the implications of the Sultan’s conversion, she states that by renouncing their belief in Muhammad, they will be enslaved by the New Law of Christianity, and condemned to damnation:

What sholde us tyden of this newe lawe
But thraldom to oure bodies and penance,
And afterward in helle to be drawe. (II. 337-9, p. 92)

The term is also used in the Shipman’s Tale, where the verbal form, creaunceth (VII. 303, p. 206) and ‘creanced’ (VII. 366, p. 207), is explained as a commercial activity, to borrow money and obtain credit, ‘We may creaunce whil we have a name / But goldless for to be, it is no game’ (VII. 288, p. 206). However, according to Wallace, the use of the term in relation to mercantile activity bolsters the virtue of the Syrian merchants, ‘No sultan could have complete faith in a pilgrim from Rome, nor could he trust a mere shipman. But he could, it seems, believe a merchant, because a merchant’s entire business depends on creauncing, the ability to attract capital by being trustworthy’.

In this context, it is significant that Chaucer eschews the use of the term ‘Saracen’ in the Man of Law’s Tale, but uses the terms ‘creaunce’ and ‘lawe’ to denote Islam. Given that the term ‘Saracen’ was a byword for paganism, applied to the pagan Lithuanians in contemporary Europe, it would undermine the credibility of Chaucer’s characterization of the Syrian merchants, who play such as pivotal role in the fortunes of Custance, as trustworthy.

The Syrian merchants relay the singular beauty and inherent goodness of Custance back to the Sultan ‘with every circumstance’ (II. 152, p. 89):

‘In hire is heigh beautee, withoute pride,
Yowthe, withoute grenehede or folye;
To alle hire werkes vertu is hir gyde;
Humblesse hath slayn in hire al tirannye.
She is mirour of alle curteisy;
Hir herte is verray chambre of hoolynesse,

1 Chaucerian Polity, p. 186.
Hir hand, minstre of fredam for almesse’. (II. 162-8, p. 89)

Here, it is worth noting that Chaucer locates Custance’s innate piety in her heart, which according to Aristotle, endorsed by Avicenna, also houses the intellect, ‘The soul reigns over the body by means of the heart’.¹ We are reminded of the description of Arcite in the Knight’s Tale, ‘Oonly the intellect, withouten moore, / That dwelleth in his herte syk and soore’ (I. 2803-4, p. 62). Thus Custance is possessed of the very traits which characterise her as the good, rational Christian, able to overcome all manners of worldly evils. The Sultan is moved to love on hearing of Custance’s virtuous nature, a typical motif of fin’amors:

That this Sowdan hath caught so greet plesance  
To han hir figure in his remembrance,  
That al his lust and al his bisy cure  
Was for to love hire while his lyf may dure (II. 186-9, p. 90)

For Siobhan Bly Calkin, the manner in which the Sultan hears of Custance’s beauty is indicative of the basis of their union; as in the case of Frankish East, ‘mercantile interests take precedence over the preaching of Christianity in East-West engagements’.² However, it is the impression of Custance’s beauty, so vividly recounted to the Sultan by the merchants, embedded in the Sultan’s memory, which moves him to love. As we have seen, it is the imaginative faculty, which receives and stores sense data from the external senses, including sight, and the faculty of memory that enables ‘hir figure’ to remain ‘in his remembrance’, which can lead to lovesickness. This is precisely the Sultan’s ailment, which causes him to abandon his faith. Yet, from a contemporary Christian perspective, the Sultan’s subsequent conversion to Christianity is an exemplary instance of the convert renouncing the irrational heresy of Islam for the rational bounty of Christianity.

The Man of Law understands that arranging a marriage between Custance and the Sultan is problematic because of the ‘diversitee’ between Islam and Christianity. As Beichner has demonstrated, Chaucer’s phrasing echoes the judicial terminology of

canon law, notably the *disparitas cultus* between two religions, which constitutes ‘an invalidating impediment’.¹ According to Beichner, Chaucer’s use of the term ‘diversitee’ points to his understanding of the ‘distinction between *disparitas cultus* understood strictly and *disparitas cultus* in its broad sense—the impediment which prohibits but does not invalidate marriage with heretics or schismatics’.² The difference between Christianity and Islam, in this case, is so great that the Sultan needs to be baptised in order for the marriage to be valid, as his private council informs him. Chaucer does not need to discuss the terms of the conversation because ‘as all the pilgrims knew’, any ‘impediment ceases with the reception of baptism’.³ Instead, Chaucer focuses on the Sultan’s final answer and his reasons for agreeing to be baptised:

And he answered, ‘Rather than I lese  
Custance, I wol be cristned, doutelees,  
I moot been hires; I may doon oother chese.  
I prey yow hoold youre argumentz in pees;  
Saveth my lyf, and beth noght recchelees  
To geten hire that hath my lyf in cure  
For in his wo I may nat longe endure. (II. 225-31, p. 90)

Here, Chaucer makes it abundantly clear that this is hardly a marriage of convenience that the Sultan agrees to with passive equanimity, because he knows it makes good business sense. Rather, he acquiesces to baptism in order to save his life, threatened as it is by *amor hereos*. We are reminded of Troilus, who also considers his affliction life-threatening: ‘Ek I nye nat ben cured; I wol deye’ (I. 758, p. 483). The only way in which the Sultan will able to cure his lovesickness is by marrying Custance, which involves the necessary conversion to his bride’s religion. It is the Sultan’s *amor hereos* which motivates his conversion, rather than any inherent desire to become a Christian.

By contrast, the Sultaness is not driven by the compelling force of lovesickness; she has no love for Custance in any form, and views her son’s conversion, however

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¹ ‘Chaucer’s Man of Law and *Disparitas Cultus*, *Speculum* 23 (1948), 70-5 (p. 72).
² ‘Chaucer’s Man of Law’, p. 72.
necessary to prolonging his earthly life, in terms of apostasy. Consequently, she
describes the sacrament of baptism in derisive terms:

‘We shal first feyne us cristendom to take-
Coold water shal nat greve us but a lite!-
And I shal swich a feeste and revel make
That, as I trowe, I shal the Sowdan quite.
For thogh his wyf be cristned never so white,
She shal have nede to wasshe awey the rede,
Thogh she a font-ful of water with hire lede’ (II. 351-7, p. 92)

Here, the Sultaness is familiar enough with biblical exegesis and the sacramental
theology of baptism, to crack a ghoulish joke at Custance’s expense. Although
Custance was ‘cristned never so white’, the Sultaness will give her cause to ‘wasshe
awey the rede’, even though she brings ‘a font-ful’ of baptismal water with her. There
would seem to be a blasphemous allusion to Isaiah 1: 18, ‘if your sins be as scarlet, they
shall be made as white as snow: and if they be as red as crimson, they shall be white as
wool’. In a Christian context this red is the colour of sin which is washed away by
baptism, but this implies that Custance will be immersed once more in the blood of her
own martyrdom. However, the speech also reflects such polemical tracts as Peter the
Venerable’s Contra sectam Sarracenorum, where the ritual of ablution, which Muslims
practise in the forms of wudu and ghusl, is presented as a ‘false baptism, or imitation of
baptism’, pointing out that ‘what was really required was penitence, or interior, not
exterior cleanliness’.¹

The Sultan’s conversion to Christendom is witnessed by prominent representatives
of Church and State:

I seye, by tretyys and embassadrie
And by the popes mediacioun
And al the chirche, and al the chivalrie,
That in destrucccion of mawmettrie
And in encrees of Cristes lawe deere,

¹ Daniel, Islam and the West, p. 236.
They been accorded, so as ye shal heere.  (II. 233-8, p. 90)

Here, the contemporary polemics of crusading are reflected in Chaucer’s discourse: the ‘dstrucccion of mawmettrie,’ which is deliberately suggestive of pagan idolatry, is dependent on the ‘encrees of Cristes lawe deere’. In the Via veritatis, Urban V embodies the power of the Church, supported by such members of the ‘chivalrie’ as Pierre de Lusignan and Edward Despenser, who are dedicated to the ‘encrees of Cristes lawe deere’, which is the only road to true salvation, by force. This is balanced by the adjoining representation of the Dominican mission to extirpate heresy, whereby the ‘dstrucccion of mawmettrie’ is achieved by persuasion, rather than coercion. Here, Peter Martyr preaches to one group, while Thomas Aquinas argues the case of Christianity through the written word with another group. His text is taken from Aquinas’ Summa contra gentiles: “‘Veritatem meditabitur gutter meum et labia mea detestabunter impium” (“My mouth shall meditate truth; and my lips shall hate wickedness”)’ (fig. 3).1 As Joseph Polzer points out, the group of heretics under Aquinas seem to be more susceptible to his means of conversion, ‘two kneel submissively before him in prayer and others seem deeply affected by his arguments, one ripping the heretical books to shreds’.2 One of the kneeling figures wears a kippah, identifying him as a converted Jew, representing Aquinas’ conversion of two Jews at Molaria.3 Another figure wears a turban, identifying him as a converted Muslim, who tears a page in his book, which probably represents the Qur’ān.4 Similarly, in the Triumph of St Thomas Aquinas on the opposite wall, the figure of Averroes is wearing a turban, which identifies him as a Muslim. In fourteenth and fifteenth-century iconography, Muslims were generally portrayed wearing turbans, though sometimes Jews, who were increasingly depicted as Orientalized figures, synonymous with Muslims, wear them also.5 In Benozzo Gozzoli’s Triumph of St Thomas (Paris: Louvre, 1468-84), the figure of the vanquished Averroes at the feet of Aquinas, is identifiable only by his turban, which ‘identifies him as a Mohammaden’.6

2 ‘Via veritatis’, p. 270.
3 Cf. Meiss, Paintings in Florence, p. 98.
The Dominican approach to conversion through preaching and engaging in rational argument is echoed in the Man of Law’s Tale. Here, the Sultan is told by his council that a Christian would never allow his daughter to marry a Muslim, ‘By wey of reson’ (II. 218, p. 90). Indeed, the rational nature of Christianity is contrasted to the irrationality of the Sultan’s amor hereos, which can only be cured through his conversion and subsequent union with Custance, ‘I wol be cristned, douteless’ (II. 226, p. 90). In spite of the Latin West’s appropriation of Arabic literature, philosophy, science and medicine, the contrast between the rational Christian and the irrational Muslim, is a consistent trope in polemical tracts, and such iconographic programmes as that of the chapterhouse of Santa Maria Novella. This is clearly demonstrated in the writings of the thirteenth-century Dominican, Riccoldo di Monte Croce, who calls Muslims ‘carnal’ and ‘irrational’ and who focuses on the laws of polygamy and the Islamic descriptions of paradise as indicators of their irrationality.1 Riccoldo also ‘reproaches the Koran for being confusing, contradictory, unorganized, violent - in a word irrational’.2 Yet the Dominicans also encouraged the study of Arabic and the Qur’an in particular, presumably with the aim of highlighting the irrationality of Islam. In 1248, the study of Arabic for missionary purposes was given the papal seal of approval by Innocent IV, when he ordered ten boys ‘skilled in Arabic and other oriental languages t to be trained in theology at Paris in order to go out as missionaries to convert the East’.3 In 1250, eight Dominicans were tasked with studying Arabic in Toledo, with a purpose that would have been entirely recognizable to Peter the Venerable in the previous century: the refutation of this faith and the conversion of Muslims to Christianity.4 The Catalan Franciscan, Ramón Llull, was also an impassioned advocate of studying Arabic for missionary purposes. In 1276, James I of Aragon founded a school in Majorca explicitly for the study of Arabic, at the behest of Llull. This was followed by the establishment of a school of Arabic in Valencia in 1281.5 In a letter to the University of Paris of 1289, Llull emphasized why the study of oriental languages must be pursued by Latin scholars:

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1 See Riccoldo de Monte Croce, Libellus contra legem Sarracenorum, ed. J. Mérigoux, MD 17(1986), 1-144.
2 Tolan, Saracens, p. 252.
4 Thorndike, University Records, p. 125; cf. CUP, I, p. 212.
5 Thorndike, University Records, p. 125.
Here at Paris, where the fountain of divine wisdom rises, where the light of truth shines on Christian peoples, there should be founded study of Arabic, Tartar and Greek, that we, having learned the languages of the adversaries of God and ourselves, by preaching to and teaching them may overcome their errors in the sword of truth and render the people acceptable unto God and convert enemies into friends.1

The influence of Llull is also palpable on the eleventh decree of the Council of Vienne (1311-12), which ratified the establishment of two teaching posts respectively in Greek, Arabic, Hebrew and Chaldean or Syriac, not only at the universities of Avignon, Paris, Salamanca, Oxford and Bologna, but also at the papal Curia. However, the teaching positions at Oxford did not materialize, even though the Vienne decree was reissued by the nineteenth session of the Council of Basel (1434).2

We may also note the profound influence of ‘Peter Alfonce’ (VII. 1188, pp. 223-4), who had first-hand, detailed knowledge of all aspects of ahl al-Kitāb, being a Jewish convert to Christianity from al-Andalus. Petrus Alfonsi used his wide-ranging knowledge of all three Abrahamic faiths, as well as the learning of the convivencia, to polemical ends. In his Dialogi contra Iudeos (‘Dialogue against the Jews’), he used the Talmud and the Qur’ān to demonstrate the irrationality of Judaism and Islam compared to Christianity, to significant effect. The Dialogi contra Iudeos was disseminated widely, surviving in one hundred and sixty extant manuscripts throughout Europe. According to Petrus Alfonsi, Christian learning encompassed the fullest revelation of rational philosophy, in the sense of Aristotelian natural philosophy, in stark contrast to the lack of astronomical and scientific material in the Talmud and the Qur’ān.3 As Tolan notes, he uses ‘reason’, by which he means ‘both logic and science’, as ‘the ruler against which the tenets of these religions are gauged’, but he did not advocate forced conversion.4 Similarly, Roger Bacon echoed Peter the Venerable in his belief that the

followers of Islam and Judaism could only be converted through scientific and philosophical reasoning, not through the threat of forced conversion. He called for an understanding of the similarities between the faiths in order to refute them, and convert their followers to Christianity. It is notable that Roger calls for the conversion of Muslims through philosophy, the very same philosophy which he encourages his fellow schoolmen to develop through Arabic sources. In Book Seven of the *Opus maius*, Roger emphasizes the importance of the Arabic philosophers, with a special note on the relevance of Avicenna, in understanding Christian revelation. Moreover, Roger makes the startling claim that such Arabic philosophers as Avicenna, implicitly refute the teachings of Islam through their philosophy. He states that Avicenna ‘proves Muhammad in error because he has set forth only physical delights and not spiritual ones’.

It is clear that Chaucer is particularly aware of the influence of Arabic learning on the educational development of the Latin West, which continued into his own century due to the proselytizing impulses of Clement V and the council of Vienne. This awareness is evinced by his engagement with medicine, natural philosophy, astronomy and astrology, and alchemy, but it is coupled with a condemnatory attitude toward the religious milieu which gave rise to Arabic learning. This is exemplified in his portrayal of the Sultaness as a ‘Virago’, who is ‘Semyrame the secounde’ (II. 358, p. 92). Here, he compares the Sultaness to Semiramis, generally defined by such writers as Dante by her sexual depravity, most notably incest, and her transgressive viraginity. Dante places the Assyrian Queen, Semiramis, in the second circle of Hell, reserved for those who engaged in carnal lust:

La prima di color di cui novelle
Tu vuo’ saper’ mi disse quelli allotta,
‘fu imperadrice di molte favelle.
A vizio di lussuria fu si rotta,
Che libito fè liceito in sua legge

3 John Livingston Lowes was the first to suggest Chaucer derived his depiction of the Sultaness from the *Divine Comedy*, cf. ‘Chaucer and Dante’, *MP* 14 (1916), 705.
Dante’s depiction of Semiramis focuses on the carnal lust which came to dominate her portrayal. Married to King Ninus of Assyria, Semiramis was believed to have tricked Ninus’ army into following her into battle, pretending to be her son Ninyas. Following Ninus’ death, she seized the throne and reigned across Asia for almost half a decade. The tale of Semiramis was first recorded by Diodorus Siculus, who emphasized her treachery and militancy. By the time Dante was writing the *Divine Comedy*, the legend of Semiramis had developed to include the attributes of wanton sensuality and carnality. However, Johnstone Parr suggested that Chaucer’s view of Semiramis may owe a direct debt to such sources as Plutarch’s *Moralia* and Boccaccio’s *De claris mulieribus*. These texts emphasise Semiramis’ militancy and deceitfulness, particularly her usurpation of her husband as ruler. Significantly, Chaucer does not depict the Sultaness as lustful, but stresses her deviousness and treachery. As in the legend of Semiramis, the Sultaness calls on the men of her country to usurp the Sultan’s authority:

They sworen and assenten, every man,
To lyve with hire and dye, and by hire stonde,
And everich, in the best wise he kan,
To strengthen hire shal alle his frendes fonde. (II. 344-7, p. 92)

Chaucer illustrates her strength as a military leader in inspiring and leading her people, but her refusal to accept baptism demonstrates her irrationality from a Christian perspective. According to Sheila Delany the binary opposition between Occident and Orient is manifested in the characterisation of the Sultaness as a type of Semiramis,

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1 *Inferno*, V, 53-60, *Divine Comedy*, pp. 74-5: “The first among those of whom thou wouldst know” he said to me then “was Empress of peoples of many tongues, who was so corrupted by licentious voice that she made lust lawful in her law to take away the scandal into which she was brought; she is Semiramis, of whom we read that she succeeded Ninus, being his wife, and held the land which the Soldan rules’.


which accords with Chaucer’s depiction of Orientalised women in the *Legend of Good Women*.\(^1\) In the *Legend of Thisbe*, Semiramis is identified with Babylon and lechery, ‘At Bablyon whilom fil it thus, / The whyche toun the queen Semyramus’ (II. 706-7, p. 606). However, as Brenda Deen Schildgen points out:

By eliding the differences between the Sultana and Semiramis, the Man of Law turns Syria into Assyria, connecting ancient Babylon, the emblematic decadent city in the Judaeo-Christian imagination, to contemporary Islam, a connection designed to recall an unregenerate history of interconnected sexual-political conspiracy and betrayal and to support it with biblical authority.\(^2\)

We are also reminded of the representation of Islam in the Christian polemical tradition, which often represented Muhammad as a sexual deviant, spearheading a militant religion.\(^3\) Thus it is hardly surprising that it is the Sultaness, the epitome of militancy, with a suggestion of transgressive sexuality through her equation with Semiramis, who goes to such lengths to remain a Muslim.

The dichotomous attitude in the Latin West toward Arabic learning, and the religious milieu that gave birth to it are clearly elucidated in *The Triumph of St Thomas Aquinas* (fig. 6). Following the canonization of Thomas Aquinas in 1323, his works became essential reading in Dominican circles, as well as being incorporated into the *studium generale*. Here, Thomistic Aristotelianism is framed in the context of defeating heresy, while the great Aristotelian commentator, Averroes, whose work had a profound influence on that of Aquinas, is depicted as part of an unholy trinity of arch heresiarchs. In the *Triumph of St Thomas Aquinas* we are presented with the *magister* enthroned as the Dominican embodiment of universal wisdom at the centre of the composition. He is flanked by Job, David, Paul, Mark and John the Evangelist to his left, while on his right sit Matthew, Luke, Moses, Isaiah and Solomon. Significantly, three heresiarchs, Arius,

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\(^2\) *Pagans, Tartars, Moslems and Jews*, p. 62.

Averroes and Sabellius, are placed below his feet.\textsuperscript{1} It is hardly a surprise to find Arius and Sabellius represented as arch heresiarchs, as their writings gave rise to the heretical groups named after them, as we have seen. What is striking here is that it is not Muhammad who is denounced as a heretic, reflecting the classification of Islam as a Christian heresy, but Averroes. The prominence accorded to Averroes can only be understood in the context of the pivotal role played by Thomas in reconciling Aristotelianism with Christian theology, following the Controversies of the 1270s. As we have seen, Étienne Tempier’s formal condemnations of Averroes in 1270 and 1277 rocked the University of Paris. Then came the scholarly refutations of what Ernst Renan termed Latin Averroism, most notably De Unitate Intellectus contra Averroistas (‘On the Unity of the Intellect Against the Averroists’), by Aquinas himself. By the fourteenth century, Averroes had become a symbol of Christian heresy, as opposed to the heresy of Islam per se. In this context it is worth returning to Gozzoli’s panel, the \textit{Triumph of St Thomas Aquinas}, where Averroes holds an open book, in which the text reads, ‘Et faciens causas infinitas in primum librum Aristotelis physicorum’. As Polzer points out, this ‘refers not only to Aristotle, but particularly to Averroes’ doctrine of the existence of the world in eternity which Thomas refuted’.\textsuperscript{2}

The representation of Averroes as symbol of Christian heresy, defeated by the rational intellect of Aquinas, is not unique to Bonaiuto’s fresco in Santa Maria Novella. We find a similar depiction in a panel ascribed to the circle of Lippo Memmi (Pisa: Santa Caterina, c. 1323). Here, the abject, turbaned figure of Averroes, who is identified by name, reclines below the saint, adopting a position most usually associated with \textit{acedia}, having abandoned his overturned book. He is flanked by a congregation, who receive the light of wisdom emanating from the Bible and the work of Aquinas, resting on the lap of the saint above (fig. 7). As Polzer points out, this congregation reflects the fact that the mural was ‘painted for a Dominican audience, which is depicted in meditative thought and devotion in the lower section’.\textsuperscript{3} However, Urban VI is depicted in the congregation also, celebrating the elevation of Thomas Aquinas and the condemnation of Averroes. Aquinas himself is flanked by the twin pillars of classical

\begin{itemize}
\item \textsuperscript{2} ‘Triumph of Thomas’, p. 49.
\item \textsuperscript{3} \textit{Via veritatis}, p. 287; cf. ‘Triumph of Thomas’, pp. 56-62.
\end{itemize}
philosophy, Plato and Aristotle, who are also named. As in Bonaiuto’s *Triumph of St Thomas Aquinas*, this condemnatory portrait of Averroes is deployed in a specific theological context. Such figures of Averroes illustrate the dichotomous attitude towards Arabic learning throughout the fourteenth century. This attitude is underscored in the *Triumph of St Thomas Aquinas* by the depictions of the seven sacred and secular sciences, over which Aquinas presides. Since at least the time of Martianus Capella, the secular sciences of the Trivium and Quadrivium, the sevenfold path to wisdom enshrined in the medieval university, have been depicted in terms of feminine, abstract personifications, as is the case here.¹ This system of abstract personification was expanded to include the sacred sciences. Typically, these feminine, abstract personifications are embodied by male historical authorities, as is also the case here. In terms of the sacred sciences, Civil Law is embodied by Justinian; Canon Law by Clement V or Innocent IV; Holy Scripture by Jerome, and Theology by Plato, Dionysius the Aeropagite, John of Damascus and Augustine. In terms of the secular sciences of the Quadrivium, Arithmetic is embodied by Pythagoras; Geometry by Euclid; Astronomy by Ptolemy, and Music by Tubalcaín. Finally, in terms of the Trivium, Dialectic is embodied by Aristotle; Rhetoric by Cicero, and Grammar by Donatus. Here, it is telling that the three classical Greek authorities, whose works were transmitted to the West primarily through Arabic sources: Aristotle, the embodiment of Dialectic; Ptolemy, the embodiment of Astronomy; and Euclid, the embodiment of Geometry, share the same space as the condemned Averroes (fig. 6). Moreover, it would not have been lost on Chaucer that these figures were known through the Arabic translations. Yet, the religion which fostered the intellectual spirit which produced this learning, is deemed heretical.

The dichotomy presented by the Islamic contribution to the scholarship of the Latin West is mirrored in Chaucer’s use of astrology in the Man of Law’s Tale. The astrological signs are clearly unfavourable at the time of Custance’s departure for Syria. We are told that ‘At the bigynnynge of this fiers viage / That cruell Mars hath slayn this marriage’ (II. 300-1, p. 91). The Man of Law then exclaims, ‘Imprudent Emperour of Rome, alaas! / Was ther no philosophre in al thy toun?’ (II. 309-10, p. 91). Here, it would appear that he holds the proponents of Arabic astronomy as highly as his creator,

in his treatise on the astrolabe. Yet in spite of the Man of Law’s apostrophes, the inscrutable workings of Christian providence triumph over the paths of the stars determined by Arabic astronomers, just as Aquinas triumphs over Averroes in the history of Aristotelianism in the Latin West. Here, it is important to note that these hagiographic images of the triumph of Thomism over the curse of Averroism were produced at a time when the work of Averroes was experiencing a revival in the universities of Padua and Bologna. As Meiss observes, these representations of the ‘humiliation of Averroes’, commissioned for Dominican churches and institutions, were ‘thus quite topical and pointed’.¹ The figure of Averroes not only represents Islam as a heresy, but all Christian heresies, not just those which sparked the Condemnations of the 1270s. Meiss points to the rise of mysticism in the fourteenth century, particularly, those mystics whose theories on the soul were far from orthodox. Significantly, the very fabric of the chapterhouse itself reasserts the Dominican mission to extirpate heresy, in a space where many alleged heretics, including Catherine of Siena, were interrogated.

To conclude, Chaucer displays an informed knowledge of Islam, albeit from an orthodox, Christian viewpoint of the fourteenth century. As the Man of Law’s Tale demonstrates through the image of the Navicella, most likely borrowed from the chapterhouse of Santa Maria, ecclesia est navis, and outside the barque of the Church, there is no salvation (fig. 8). Custance’s peregrinations in the various ships of faith that bring her from Rome to Syria, from Syria to Northumberland, and back again to Rome, echo the depiction of the faithful in the Navicella in the vault above the Via veritatis. Similarly, the Sultan of Syria is representative of the Good Muslim, whose conversion to Christianity finds a visual analogue in the ripped and overturned Qur’âns of fourteenth-century Dominican art. From an orthodox, Christian perspective of the fourteenth century, heaven remains closed to such starry intellects as Averroes and Avicenna. Although Dante might admire Siger of Brabant’s Averroism, Averroes remains consigned to Limbo until Doomsday. Although Chaucer might admire Arabic learning, unregenerate Muslims like the Sultaness remain the ‘roote of iniquitee’ (II. 358, p. 92) consigned, like Dante’s Muhammed, to ‘depe in helle’ (II. 361, p. 92).

¹ Meiss, Paintings in Florence, pp. 103-4.
CONCLUSION

It is significant that with regard to the Hispano-Arabic origins of fin’ amors, it was literary medievalists, most notably Denomy, who engaged wholeheartedly with the possibility of cross-cultural influences between the Islamic East and Latin West, codified in the verses of the Provençal troubadours. This engagement stands in marked contrast to such critics as Stern, who vehemently denied this possibility. It was the literary reception of the medical and metaphysical ideas of love found in Arabic learning that intrigued Denomy, which led him to suggest these ideas were discernible in troubadour poetry, and came to influence the Condemnations at the University of Paris during the last decades of the thirteenth century. However, given that the debate over the Arabic origins of fin’ amors ceased to interest scholars during the latter half of the twentieth century, with more recent attention being focused on the notion of a postcolonial Middle Ages, Chaucer’s engagement with Arabic learning in this context has been hitherto overlooked. Certainly, the influence of Arabic medicine on amor hereos has been diligently explored by Wack, although her focus increasingly veered away from the literary reception of these texts. Moreover, the only documented transmission of Arabic learning to the Latin West was through the translations of Arabic scientific material, discernible in the writings of Gerbert of Aurillac and Petrus Alfonsi. Chaucer explicitly cites Petrus Alfonsi and paraphrases the Disciplina clericalis in the Tale of Melibee, which combined with his particular interest in astronomy and scientific instruments to measure the stars, suggests he was influenced by Latin translations of Arabic mathematical astronomy.

The Arabic sources for the Treatise on the Astrolabe and the astronomical computations in Chaucer’s oeuvre, which some critics have suggested included the Equatorie of the Planetis, have been familiar to literary scholars since the early twentieth century. However, as this study has demonstrated, the influence of Arabic learning on Chaucer’s oeuvre far exceeds the technical astronomical components, and in the case of the Canon’s Yeoman’s Tale, a significant degree of alchemical knowledge. It is only through his ongoing engagement with the cause and nature of fin’ amors that the full range of influences derived from Latin translations of Arabic learning can be discerned. As the preceding chapters have illustrated, Chaucer’s depiction of love and loss was informed by both a medical and a psychological dimension, creating sufferers whose symptoms, diagnoses and cures mirror those discussed in Latin scholasticism,
albeit grounded in the Islamic East. This is most clearly demonstrated by Chaucer’s almost forensic depiction of melancholia, under the helm of Saturn, which draws a great deal of technical material in the related spheres of astronomy and alchemy, ultimately derived from translations of Arabic natural philosophy. Moreover, throughout Chaucer’s oeuvre, we are presented with the first instances of English terms derived from the Arabic. In the Treatise on the Astrolabe, we find ‘almycaneras’ (I. 18. 2, p. 667), from the Arabic al-muqantarath, referring to a circle on the celestial sphere parallel to the horizon; ‘almury’ (II. 21. 89, p. 669) from al-murzî, the term for the pointer on the rete on an astrolabe; Ptolemy’s ‘Almageste’ (III. 183, p. 107), and as we have seen, ‘alnath’ (V. 1280-3, p. 184) from the Arabic nataha.

Therefore, Arabic learning is as embedded in Chaucer’s knowledge of medicine, faculty psychology, judicial astrology, alchemy and mathematics as the Consolation of Philosophy is embedded in the ‘Firste Moevere of the cause above, / Whan he first made the faire cheyne of love’ (I. 2986-7, p. 65). Moreover, Arabic learning informs Chaucer’s depiction of Islam, a fact which has been largely overlooked by Chaucerian scholars. As we have seen, Chaucer’s depiction of Islam in the Man of Law’s Tale is overtly scholarly, and is derived from medieval Christian perceptions of Islam based on the Latin translations of the Qur’ān, and a number of theological and pseudo-theological Islamic texts. Moreover, there are significant parallels between Chaucer’s condemnatory attitude toward Islam, and the depictions of Arabic philosophers in the visual arts throughout the fourteenth century. Ultimately, Chaucer acknowledges the profound importance of Arabic learning to the intellectual development of the Latin West, while paradoxically deriding the religious milieu which gave rise to it.

This study has demonstrated the degree to which Arabic learning permeates Chaucer’s oeuvre as a whole, and it can only be hoped that his Arabic sources will come to be considered as fundamental to an understanding of the development of his entire oeuvre, in the same manner as his knowledge of classical writers, or more contemporary French and Italian sources. Certainly, there is still much more to be said and done on the subject. However, even in this initial consideration of the influence of the writings of Avicenna, Averroes, al-Rāzī, Haly Abbas and Senior Zadith across the span of Chaucer’s writing career, we can begin to see the full extent of their influence, and engage more fully with many of the ideas he presents to us as already known ‘to Arabiens in Arabik’.
Appendix I

Fig. 1. Andrea di Bonaiuto, *Via Veritatis* (c. 1365-99, Florence, Santa Maria Novella)
Fig. 2. Andrea di Bonaiuto, *Via Veritatis* (c. 1365-9, Florence, Santa Maria Novella)
Fig. 3. Andrea di Bonaiuto, *Via Veritatis* (c. 1365-9, Florence, Santa Maria Novella)

Fig. 4. Andrea di Bonaiuto, *Via Veritatis* (c. 1365-9, Florence, Santa Maria Novella)
Fig. 5. Andrea di Bonaiuto, *Triumph of St Thomas Aquinas* (c. 1365-69, Florence, Santa Maria Novella)

Fig. 6. Andrea di Bonaiuto, *Triumph of St Thomas Aquinas* (c. 1365-69, Florence, Santa Maria Novella)
Fig.7. Lippo Memmi, *The Triumph of St Thomas Aquinas* (c. 1340-5, Pisa, Santa Caterina)
Fig. 8. Andrea di Bonaiuto, *Navicella* (c. 1365-9, Florence, Santa Maria Novella)
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