SUMMARY. An earlier study (see *SHM*, 16, 3, pp. 481-509) has provided an analysis of 29 surviving examples of the folded almanac, a group of small, late medieval manuscripts which have been of considerable interest to medical historians. It has been demonstrated that the folded almanac was an English innovation designed in part to cater to the needs of medical practitioners and other professionals with an interest in astrological medicine. This article extends the discussion by considering the date, provenance and audience of the folded almanac and analyses what these manuscripts can reveal about the role of astrology, medicine and the calendar in the worldviews of their owners and users. It is argued that astrological medicine, as reflected in the folded almanac, is likely to have been a key force in the wider dissemination of astrology in late medieval English society. The folded almanac can be seen as the progenitor of all later compact-format diaries, calendars and electronic organisers.

KEYWORDS: astrology, medieval medicine, iatromathematics, manuscripts, calendar, almanac, phlebotomy

In an earlier article,¹ I analysed the 29 surviving examples of the folded almanac, a group of compact, late medieval manuscripts of English origin, a number of which provide a textual toolbox for the practice of medical astrology.² This article considers the history of the association between astrology and medicine in medieval Europe and investigates the owners and users of the folded almanac. Although small in size, these manuscripts can be unfolded to reveal something about the working practice of medicine and astrology in later medieval England.

*Medicine and Astrology*

In order to understand the folded almanac, it is necessary to consider the wider history of astrology and its relationship to medicine in the middle ages. An association between medicine and astrology is one of the most familiar features of medieval medical and astrological practice and one that distinguishes medieval medicine from its Hellenic predecessors. Galen, like most classical medical theorists, believed firmly
in the influence of heavenly on human bodies but was suspicious of the slick predictions of the ‘horoscope-casters’ (*genethliako*ī*).* His ambivalence toward astrology was shared by Arabic authorities, such as the Egyptian physician Ibn Ridwan. In his autobiography, Ibn Ridwan describes his education after noting that the astrological signs at his birth indicated that he would choose a career in medicine. He explains that his training in medicine and philosophy was hampered by ‘obstacles and difficulties’, so that on occasion he was forced to earn his livelihood from the practice of astrology, something which was less than ideal. Nevertheless, astrology clearly formed a backdrop for the practice of medicine.

In the Latin West, despite the reservations of some Greek and Arabic authorities, astrology was confirmed in its partnership with medicine on the basis of the corpus of Arabic and Greek astrological works translated into Latin in and around the twelfth century. Further support for astrology came from the widespread acceptance and distribution of pseudonymous astro-medical tracts ascribed to Hippocrates, Galen and the great authorities of classical medicine which were also translated into the vernacular and supported a popular tradition of simple astro-medical ideas. Astrology’s key role in medicine was affirmed in the major technical treatises on astrology, such as Albumasar’s *Introductorium in astronomiam*, or the popular textbook by Alcabitius, and in works of a general introductory sort and collections of aphorisms, such as the *Liber novem iudicium*, the *Centiloquium* attributed to Ptolemy, and the *Secreta secretorum*. Core areas of astrological theory appear to have been designed to accommodate medical inquiry. Hence, of the twelve houses into which a horoscope was divided, Ptolemy had designated the fourth and sixth as having special governance in matters of illness and death and for the posing of judicial questions on medical matters. Even the humbler divinatory practice of geomancy allowed for matters relating to illness to be governed by the sixth house. A more specialised Latin literature developed in the later middle ages, and the astrological needs of medical scholarship are reflected in manuscripts which draw together medical and astrological extracts from a range of authorities. To give just two examples, Bodl. Lib. Digby 29 is a medical and astrological manuscript bequeathed to Balliol College Oxford by Richard Stapilton, Master of the College in about 1430. Written mostly in Stapilton’s
own hand, it includes a collection of short tracts on herbs, medicines, urines, and ointments, (f. 74v), and longer, traditional medical writings such as the *Regimen Salernitatum* (f. 145v), and Trotula (f. 278), together with an extensive collection of astro-medical texts, such as pseudo-Hippocrates on observing the signs of the planets for the curing of the sick (f. 167), a tract on the virtues of the two signs and the seven planets in regards to medicine (ff. 179-81), and other items. Another fifteenth century manuscript in the Bodleian Library, Ashmole 393.i, also contains medical, astronomical and astrological texts bundled together, indicating the way in which the disciplines supported each other, at least in the minds of some compilers.

By the thirteenth century, Latin writers were echoing the sentiments of their Arabic authorities as to the need for medical practitioners to have knowledge of astrology, though it is less clear to what extent astrology was being employed in medical practice. Roger French has argued that Arabic astrology exerted its influence on English medicine very quickly and that, in the twelfth century, was already evident in the writing of Roger of Hereford. Nevertheless, in the *Opus Majus*, written in about 1266, Roger Bacon lamented the low understanding of astrology by medical practitioners, presumably referring in the main to the countries he knew best, England and France: ‘But few physicians of this time know astronomy, and therefore many of them neither understand their own authors nor can they understand them, and for this reason they neglect the better part of medicine.’ It may be that statements of this type had become traditional, for Bacon’s lament is echoed in discussions of the importance of astrology to medicine by writers of the thirteenth and fourteenth century summarised by Thorndike, including Michael Scot, Raymond Lull, Peter of Abano, Augustine of Trent, and Nicholas of Hungary.

The practical need to educate medical practitioners in astrology was met in a variety of ways. At the most sophisticated level, a number of Italian and French universities established joint faculties of medicine and astronomy. Even at the universities of Oxford and Cambridge, where astrology does not seem to have acquired the same level of recognition in the medical curriculum, astrology was studied as part of the arts degree that necessarily preceded postgraduate studies in medicine. At Bologna in the early fifteenth century, students attending lectures in arts and medicine studied basic...
astronomy and learnt to read the Alfonsine tables and use the astrolabe in their first and second years, before advancing to the standard textbook by Alcabitius on astrology and Ptolemy’s Centiloquium in the third year, then addressing Ptolemy’s Quadripartitum and William of England’s digest on astrological medicine, De urina non visa, in their fourth and final year. As a result, Italian astrologer-physicians were probably the most astrologically proficient in Europe and this may have been one factor in creating a demand for their services.

In England, astrological education for university-trained physicians does not seem to have been as thorough it was in Bologna. However, the case of medical malpractice tried in 1424 against John Harwe, free surgeon, and his barber-surgeon assistants, John Dalton and Simon Rolf, shows that for the university-trained physicians such as Gilbert Kymer, Thomas Southwell, and others who heard the case an understanding of the astrological mitigating circumstances was sufficient to absolve the surgeons from blame. It cannot, however, be assumed that astrology was invoked by Dalton and Rolf themselves when performing their botched operation though it seems likely enough.

Outside the universities and the training offered barber-surgeon apprentices by their masters, the need for astrological references could be supplied by specially commissioned books. The Wellcome Library has recently (2002) acquired a manuscript of this type. The ‘Physician’s Handbook’ (Wellcome MS 8004), is a lavishly illustrated collection of calendar, medical, astrological and other texts, tables and diagrams that was probably prepared for a prosperous medical man who may have come from the east of England. According to the opening calendar, it was compiled in 1454, but the data for two cycles of eclipses and four cycles of lunations is complete from 1444. With some slips, this lunar data matches that for the ‘fourth instalment’ continuation of the calendar of John Somer, which had originally covered the four lunar cycles from 1387-1462. As with the English version of the calendar of John Somer, BL Harley 937, Wellcome 8004 has data for the time of the new moon (primacio) only, not the full moon. In addition to other unusual items, such as a guide for pilgrims to Jerusalem, the Latin calendar of the Wellcome manuscript has some handy astrological data which appear to the right of the usual lunar details. For each degree of the sun in the signs, the calendar pages indicate the faces and terms of
the planets, with their sex (masculine or feminine), and qualities. In combination with other tables and calculations to establish the ascendant, the positions of the planets, and the astrological houses, this additional astrological data would have assisted in the preparation of more complex astro-medical assessments. Without knowing more about the library and instruments of the owner of Wellcome 8004, we can not be certain that he ever attempted this. The commissioning of manuscripts such as Wellcome 8004, or the even more elaborate Egerton 2572 (Guild Book of the York Barber-surgeons) was possible only for the wealthy few. While they are a valuable indication of the aspirations of the most successful practitioners or medically-minded individuals, a more accessible version of the key astrological data they contain was available through the more modest medium of the folded almanac. Indeed, it is likely that many people obtained their astrological learning through works of this kind.

Despite the eventual triumph of astrology in continental medieval medical training and practice, there remained some disagreement as to how extensive a physician’s knowledge of astrology needed to be, even for those who undertook university training in medicine. Working with European sources, Danielle Jacquart has explored the views of three celebrated medical practitioners, all contemporaries of each other: Jacques Despars (1380-1458), Antonio Guaineri (died after 1466) and Michele Savonarola (1385-1458). Despars, the sceptic, observed that among astrologer physicians, some paid greatest attention to the phases of the moon, others observed ‘Egyptian days’ and others observed not only the moon but also the courses of the planets. Others felt that this gave too much significance to causes distant from the body and that astrology need only consider the disposition of the moon when calculating times for bleeding; the rest was superfluous.

An understanding of the calendar and the timing of medical procedures, from the collection of drugs to the administration of medicine, purges, fasting, bleeding andcautery, was another portal through which medical practitioners were exposed to the principles of astrology. This has been demonstrated by Faith Wallis in her original and important work on computus manuscripts and medicine. Wallis notes that a concern with ‘calendar time and its medical effects’ can be dated from well before judicial astrology begins its program of association with medicine. By the fourteenth century more specialized calendrical instruments were created to cater for the requirements of
practitioners of astrological medicine. In France, there was at least one attempt to create an astro-medical almanac, discussed by Thérèse Charmasson. In the end, various kinds of medical almanacs were produced which supplied information at a variety of levels of astrological expertise to meet the needs of physicians. In summarising the French situation, Jacquart observes that followers of astrology could be divided into those experts who used the great almanac, which supplied full details of the planetary positions for all days of the year; a middle almanac, which showed the entry of the moon into the signs of the zodiac, together with the full and new moons and ‘favourable days’ for bleeding and purging; or, simplest of all, the small almanac which only showed the entry of the moon into the signs of the zodiac. The English folded almanac, together with other simple calendars and almanacs with lunar and medical data, falls into the last-named category.

In England it was recognised that calendars and almanacs were important tools for medical practitioners particularly those who wished to make reference to astrological times and causes. Literary evidence seems to support this. Chaucer’s physician is said to have been ‘grounded in astronomye’, although the ‘General Prologue’ goes on to indicate that his main use of his skill in this area was to prepare astrologically potent talismans or images for his patients. This has not discouraged scholars from seeing parallels between the medical practice of Chaucer’s physician and that reflected in the calendars of Nicholas of Lynn or John Somer. The contrast, noted by Jacquart in France, between an astrology which made reference only to the moon, favourable days and so on, and the more sophisticated astrology which included the calculation of planetary longitudes, is canvassed by Nicholas Lynn in the extensive astro-medical canons to his calendar, which was composed in 1386. Lynn provides a good explanation of how to take note of the position of the moon in the signs and the planetary hours when calculating the time for giving medicine or purges or other treatments. But he was aware that astrological medicine could be much more sophisticated than this:

If anyone however has an almanac and wants to get closer to the truth, he ought to calculate all the planets for the hour at which the illness began, and to place their calculated longitudes in the houses which he has calculated, and having done this he should consider at least seven issues: namely, in the first place, the location of the
moon in the figure; secondly, the ascension and its lord; thirdly, the mid heaven, which is the tenth house; fourth the angle of the earth, which is the fourth house and its lord; fifth the sixth house and its lord; sixth the eighth house and its lord; seventh the birthday of the patient and his lord.\[^{34}\]

Clearly, this would involve considerable effort, more than most medieval medical practitioners were likely to have bothered to expend. This level of astrological practice required special books and tools, such as the ‘Alfonsine’ Tables or one of its northern editions that appeared in some numbers from the early fourteenth century.\[^{35}\] In the absence of fully worked ephemerides for the particular time and location of the querant, it also required the (rare) capacity to calculate planetary positions. On the astrological side, it required an understanding of how to determine the lords of the astrological houses from an assessment of the various planetary dignities. For the calculation of the time of death from a nativity, the astrologer needed to understand such mysteries as the ‘hylech’ or the place of life, and ‘alchochoden’ the signifier of life, in a nativity, as outlined by Alcabitius and other authorities.\[^{36}\] In the passage quoted above, Lynn shows that he was aware that most medical practitioners, or indeed laypeople, who consulted his calendar for medical purposes would not have this level of expertise. Most would go no further than the first step, namely to consider the location of the moon which, as Saintyves demonstrates for the early fifteenth century, was the core of astrological medicine.\[^{37}\]

As a group, all the folded almanacs provide data needed for the practice of lunar astrology without making provision for a full medical astrology that included the consideration of longitudes for planets other than the moon. One or two manuscripts, including Harley 5311 and Ashmole 6, include additional astrological tables and texts that allowed for the establishment of the lords of the houses if the planetary longitudes were known.\[^{38}\] There is no reason, however, to conclude that this simple type of astrological medicine was scorned even by university-trained physicians, who might have known better. Carole Rawcliffe’s studies of London-based medical practitioners, as well as standard works of medical prosopography, have made clear that medical practitioners, from barber-surgeons and university-trained physicians to skilled laywomen, undertook a wide variety of training regimes.\[^{39}\] Most of those who considered themselves medical professionals would have aspired to no more than the
lunar astrology of the folded almanac. Referring to the fifteenth-century notebook of the Essex physician John Crophill, Talbert emphasized the evident imperfection of Crophill’s understanding of the finer points of astrological theory. But Crophill probably understood as much as he needed to. For everyday diagnosis and treatment, it was not necessary to be able to perform calculations of the kind later accomplished by Simon Forman.

It is important not to expect too much when looking for direct evidence of the way in which astrology was employed by late medieval practitioners. But it is tempting to stretch the evidence since a fuller appreciation of astrology can provide insight into the clinical practice of the medieval physician and surgeon that is available from few other sources. Nevertheless, it must be acknowledged that, in the absence of detailed case books or patient notes it is unlikely that our understanding of English medieval astro-medical practice will ever match that emerging from the investigation of Renaissance practitioners. This is because, even where they have survived, medieval astrological charts are devoid of the interpretations that make them so illuminating a source for understanding the mindset of the doctor intent on providing astrologically-informed service to his patient. In England, the earliest sets of horoscopes in a medical context may be those found in a manuscript compiled by the consultant astrologer Richard Trewythian in the 1440s and 1450s where they appear alongside medical items. Although it is generally assumed on the basis of his notebook that Trewythian had a medical practice, North notes that his horoscopes appear to be non-medical in nature. Astrological items, but no horoscopes, also appear in British Library, Harley 1735, which is the late fifteenth-century notebook of the Essex physician, John Crophill. Ernest Talbert makes the observation that this is likely to reflect the limited astrological learning of busy rural practitioners like him.

Rather more astrological learning might have been expected from university-trained physicians and those with access to the more technical books produced in London or other major book production centres such as Oxford. Even this however is no guarantee of astrological proficiency. Thomas Fayreford, described by Peter Murray Jones as ‘the medical practitioner about whom we can learn the most in fifteenth-century England’, appears not to have used astrology in his regime of treatment, despite having spent some time at Oxford where astrology formed a standard part of
the curriculum. In the absence of direct clinical notes, it is necessary to make assumptions about astrological medical practice based on more indirect evidence, such as books, medical instruments and textbook accounts of principles and procedures.

Whatever the elaboration of the astrological principles on which medieval medical practitioners conducted their art, they nearly all placed central importance on the timing of their actions. Medical treatment often began with inquiries about when a patient fell ill, at what time in relation to the lunar cycle, the time of the day or the season of the year. The pseudo-Ptolemaic Centiloquium supplied aphorisms to assist in reconciling the indications of a nativity, or natal horoscope, with that of a later illness for the same individual. If the ascendant of the illness conflicted with that of the individual’s nativity, and it was not impeded by the signs for that particular year, then the prognosis was most grave. The administration of medicine, poultices and other treatments was nearly always specified for particular times, as was the gathering of plant and other material that constituted the pharmacopoeia. This concern with time in relation to medicine is reflected in the large body of manuscripts that concern the computus and other calendrical issues in more or less loose conjunction with medicine. There is thus some justification for the assumption that, by the late fourteenth century, medieval physicians perceived the need for specially designed astro-medical calendars, and this was a factor in the development of some versions of the folded almanac.

The Folded Almanac

Turning to the manuscript evidence, it is necessary to determine as much as possible about the dating, provenance and ownership of the folded almanacs before attempting to speculate about their use in astro-medical practice.

Dating and Provenance

Folded almanacs are satisfyingly straightforward to date since it can usually be assumed that the data on the cycles of lunar conjunctions (prime) and oppositions (full moons) and eclipses, where these are present, were up-to-date at the time the manuscript was compiled. However, it is not always this easy. A number of manuscripts include eclipse diagrams that do not correspond to the Metonic cycles of their new and full moons. Since eclipses were not so important for the currency of a
calendar as its lunar cycle data, it can be argued that in cases where the eclipse and lunar data does not entirely correspond, the almanac is more accurately dated from the lunar data. The out-of-date eclipses were, presumably, included for their decorative function and because the calendar-maker did not have the technical or financial resources to update them. Taking considerations of this kind into account, it would appear that the earliest of the surviving folded almanacs is Laud Misc. 753, which includes data for full and new moons and lunar and solar eclipse tables for 1387-1462, complete versions of the cycles as calculated originally by John Somer. This was probably produced and used from about 1387. If accurate, this would appear to indicate that the folded version of the calendar of John Somer was created almost as soon as this popular text became available in the original codex format.

Although the folded almanac had its origin in the fourteenth century, almost all surviving examples date from the fifteenth. The users of the folded almanac continued to refer to the lunar data calculated by Somer as long as they could, occasionally extending the useful life of the almanac by supplying data for one or two additional nineteen-year cycles. At some point however, one or more un-named calendarists undertook the exacting task of re-calculating the almanac for the four cycles of new and full moons beginning in 1463, and a limited number of eclipses, usually no more than two cycles. Whereas we have two slightly different sets of calculations, by Nicholas of Lyn and John Somer, for the four cycles beginning in 1387, the lunation data for the next four cycles seems to have circulated in only one version. Most of these fifteenth-century almanacs include the obit of John of Beverley (d. 7 May 721), celebrated nationally in England from 1416 at the order of Henry V who ascribed his victory at Agincourt to the saint’s intercession, but some, which must on other grounds be dated after 1415, do not. There is just one surviving folded almanac which was produced in the sixteenth century, Crouch 4. This is an imperfectly executed example of what must have been by this time a somewhat old-fashioned object. It has lunar data which date from 1508.

The provenance of the folded almanacs is rather more challenging to determine than their dates. Almost all appear to have been produced in England, with the exception of Leiden, UB, Vulc. 100 C. This manuscript has a calendar featuring northern French saints and has a slightly different format to the other, English, almanacs. Professor
Gumbert has observed that Vulc. 100 C is French only in terms of its saints. Data for the height of the sun at noon corresponds to the latitude of Oxford. We might hazard that this almanac was copied from an English model for use in northern France. Most other folded almanacs feature southern English saints, although a small number can be associated with the more northern dioceses of York or Durham. In general, there is no variation in the lunar, solar and eclipse data from the original Oxford-based calculations of John Somer and his successor for later cycles. Most educated people were aware that the length of day, the time of astronomical events, and the angle of the sun varies according to latitude and longitude and that it was necessary to adjust for this, but we can suspect that few took the trouble to do so.

Beyond these general parameters of country and meridian, the particular localities in which the almanacs were used prove somewhat elusive to establish. There is a ‘generic’ feel to their lists of saints when these are compared with the more specific requirements of liturgical calendars where it is often possible to identify the specific monastic house or religious order for which they were produced. Folded almanacs were designed as personal objects, and beyond a certain core of international and nationally venerated saints, individuals seem to have had considerable freedom in compiling feasts for devotion in their own dioceses. It is possible, however, to point to a number of patterns that might hint more strongly at a particular provenance. Edinburgh RO C. 2.20/2 contains local Oxford feasts and may be associated with an Oxford graduate who retained his affection for Saint Frideswide, even if the almanac itself was not made in an Oxford workshop. M.R. James suggested that the almanac in the Pepys Library was from Durham on the basis of the number of northern and, in particular, Durham saints it contained. A northern provenance may also be suggested for Harley 3812, which includes the feast of Wilfred, bishop of York (12 Oct.), but devotion to York saints was not exclusively restricted to the northern dioceses. A better case for a northern provenance can be made for Crouch 4, which would seem to have been commissioned by an ardent enthusiast for the saints of York and for others celebrated by Bede, who is himself commemorated on 27 May. The same manuscript also includes Frideswide on the feast of her obit (19 October), but not her translation. A final clue to ownership of Crouch 4 might be the appearance of Pantaleon, physician, martyr and patron of physicians on his feast of 28 July. It might,
very tentatively, be concluded from this that Crouch 4 was owned by a medical practitioner who had some Oxford connections, possibly as a graduate, but who was based somewhere in the York diocese when he commissioned the almanac which records the saints of his devotion. It might also be observed that if a physician did commission this manuscript, he did not ensure that it contained the additional medical items found in the deluxe medical versions of the almanac, such as Harley 5311 or the Talbot manuscript.

Owners and Users of the Folded Almanac

In attempting to determine the context in which the folded almanac was produced and employed, it is frustrating that the manuscripts themselves provide almost no contemporary marks of ownership. Language provides some additional clues about the unknown owners. Only one folded almanac, Harley 937, is written in English, and this manuscript omits all the more technical astro-medical items such as the lunar tables, Zodiac Man and canons, while including the eclipse diagrams, perhaps for their decorative effect. It has a highly abbreviated set of saints ranging from as few as three (April) to eight for individual months which suggests a lay owner. Perhaps Harley 937 was commissioned for use by a woman. In support of this thesis, we might take note of the opening text of the calendar canon, which includes an address to ‘My soverayne maistress’. Unfortunately, this invocation is no more than a translation of the corresponding address in the calendar of John Somer intended for Joan, princess of Kent. It says nothing specific about this particular manuscript or its owner or creator.

The other folded almanacs were written in Latin though not, it must be acknowledged, Latin of any great complexity. Nevertheless, the employment of Latin suggests that they were written for people with some claims to formal education. By the second half of the fifteenth century English had emerged as a scientific language. Yet the folded almanac continued to be produced in Latin until as late as 1508, the likely date, as we have seen, of Crouch 4. Means observes that the Middle English lunar prognostic, with which the folded almanac shares some features, seems to have been owned by families of quite modest circumstances. If so, they may have been intended for people without the Latin and scientific expertise to operate the folded almanac. In addition, the illuminated diagrams with which the folded almanac was
sometimes embellished, as well as their special format, is likely to have made them rather more expensive than conventional calendars, putting them out of the reach of many. It seems reasonable to suggest that the folded almanac was intended for a wealthier and better educated group. Such a group would, of course, have included professionals such as physicians.

Although the folded almanac appears to have been intended as a work of quick reference, something consulted on a daily basis, most surviving examples display surprisingly little in the way of personal additions and modifications. It is important not to judge the group as a whole on the basis of the more elaborate and expensively produced examples, such as Harley 5311. At its most pared down, such as Sloane 807, the almanac consists of nothing more than a basic calendar with mobile feast and eclipse tables and an incomplete set of lunar tables. Crouch 4, Harley 3812 and Ashmole Rolls 6 have discarded the eclipse tables, though in some cases they may simply have gone missing in the course of time.

Despite their generally utilitarian form and function, no two examples of the folded almanac are entirely alike; they demonstrate the individual character, omissions and slips typical of well-used objects produced prior to the mechanical age. Additional 28725 is a good example of the plainer type of folded almanac. It has a dirty vellum cover with a green lining and still bears the remnants of the red stitching that once decorated its edge. It has a number of small additions to the standard contents that include, in this case, diagrams of both the Zodiac Man and Vein Man. At the bottom of the calendar page for each month, there are prognostics for agricultural and other activities in the event of thunder. The almanac section of Additional 17358 matches that of Harley 5311, although the eclipse diagrams are very incomplete and the diagram of the Zodiac Man appears rather hastily executed. One curious feature of Additional 17358 is the inclusion of the astrological domiciles of the planets in the liturgical calendar. Hence, 3 January is marked Domus Saturni, 11 February Domus Iouis and so on. Ashmole Rolls 6 is also undistinguished and is probably the scruffiest example of all the surviving almanacs. Another Oxford folded almanac, Laud Misc. 753 is not much better, though it does have red and blue eclipse tables. One interesting addition to Laud Misc. 753, and testimony to the confidence which its owner may have had in its longevity, is a Paschal Table on fol. 8 which is calculated to
run from 1387 to 1890. This is another folded almanac, like the English Harley 937, in
which all astro-medical tables and diagrams, including that of the moon in the signs,
has been omitted. Harley 3812 has one medical diagram, the Vein Man, but no
eclipses and the Zodiac Man is replaced by a table outlining the relationship of the
planets to the parts of the body (fol. 5). In summary, folded almanacs range in
appearance from highly decorated and handsome, to roughly executed, business-like
tools. It can be assumed that their owners spanned a social range similar to that
reflected in the appearance of their books.

Of all the folded almanacs, that which most reflects the exuberant attention of its
owner is Ashmole MS 6. This fat little book is the one folded almanac that does
appear unequivocally to have been intended to swing directly from its owner’s belt. It
has a strong leather cover, lined inside with red silk, ending in thick tab with a loop for
the insertion of a cord. In spaces available after the completion of the core business of
the almanac, the owner appears to have taken the trouble to insert a number of
astrological and prognostic verses and tables. Each calendar month includes a little
verse on the effect of thunder, inc. *Januarius Tonitruum. Ventos validos et
habundantium significat*. Other additions include the astro-medical warnings against
bleeding in the signs, inc. *In Ariete. In isto signo caue ab incisione in capite*; a table in
English of evil days; a table giving the qualities of the planets and a statement of the
number of years from the origin of the world to the birth of Christ (5199). All this
information appears together with the usual calendrical data, new and full moons,
Dionysian tables, lunar tables giving the degree of the moon in the signs and solar and
lunar eclipses, with a canon but no diagrams. It feels like the companion book of
someone with an active interest in astrology, but not necessarily medical astrology for
it does not contain any of the usual medical diagrams.

If we are to judge solely by their contents, only five of the 29 surviving folded
almanacs can be identified as astro-medical in character on the basis of their inclusion
of a wider range of medical diagrams and canons, such as the Vein Man and Urine
tables, in addition to the commonly encountered Zodiac Man. These specialist medical
almanacs include the privately owned manuscript originally described by Talbot, in
addition to Pepys 1662; Add. 28725; Cotton Charter VIII.26 and Harley 5311. Of
course, other larger-format calendars also suggest that they were produced with the
specific needs of medical practitioners in mind. These include Egerton 2572 (Guild Book of the York Barber-surgeons) and Wellcome 8004, considered earlier. The similar contexts of both unfolded and folded astro-medical almanacs indicate that these were the texts and diagrams which their owners found useful, perhaps forming something of an astro-medical canon.

The Folded Almanac as a Tool for Astro-Medical Practice

There are good reasons why all 29 folded almanacs appear to have been constructed to a common plan. In the first place, many are modelled closely on the Calendar of John Somer. However, beyond this textual source, the various sections of the folded almanac fit together to form a working tool for astro-medical observation and practice. Table 2 provides a summary of the six major components that constitute most complete versions of the folded almanac, namely: A. Calendar; B. Lunar tables and canon; C. Zodiac man diagram and captions; D. Eclipse diagrams and canons; E. Vein man and other medical elements; F. Other astrological and divinatory elements.

In his ‘Canon for discovering the apt time for giving blood’, and ‘Canon for giving and receiving medicine’, Nicholas of Lynn explained the significance of the moon in relation to the balance of the humours in the body. Citing Ptolemy in his Centiloquium and the commentary by Haly, Lynn observes: ‘there is a universal rule that it is always good to have in mind, because all the wise among astronomers are in agreement on it; that generally when the moon and the ascendant lord are impeded, the sign is troublesome, because one should always fear death or a relapse, but when they are fortunate and with many strengths, the sign is praiseworthy and toward life.’ To establish these key parameters, the first, and most essential component of the folded almanac is the calendar with its canon and associated tables of indications and mobile feasts. The calendar appears in all manuscripts except Welcome 39 and Crouch 4, both of which are incomplete. The second component comprises the two lunar tables and their canon which showed how to establish the ruling planet for any (unequal) hour of the day or night, and also the degree and sign of the zodiac of the moon for any specified day. These tables occur in every manuscript except Crouch 4 and Laud Misc. 753.
The third section of the almanac is the Zodiac Man with the associated captions which warn against bleeding in the various parts of the body when the moon was located in its associated sign. This diagram is usually placed directly after the lunar tables and is associated with them in the calculation of astrological times for bleeding, purging and other therapies. The Zodiac Man occurs in eleven out of the 29 surviving manuscripts, and was probably intended for inclusion in another three. Usually this iconic image of medieval astro-medical practice is inserted in an arrow-shaped space left by the text of its captions. In Edinburgh RO Cr.2.20 and Stowe 1065 the arrow space and its usual text is present, but the image itself is not. The use of a text arrow to surround the Zodiac man is encountered in other, non-folded manuscripts, though it does allow an economical use of limited space. The same text and figure complete with arrow text box occurs, for example, in Bodleian Library manuscripts such as Ashmole 789 and Digby 48, where together it forms an addition to the calendar of John Somer, and Savile 39, fol. 7.71

Fourthly, the almanacs contain the solar and lunar eclipse diagrams and canon. The eclipse canon appears to have been considered an expendable item as it occurs in only four manuscripts. The eclipse diagrams, on the other hand, occur in most manuscripts but it is rare to find a full set of eclipse calculations extending for the three or four cycles that are typical for lunar data. Most eclipses in the later edition of the almanac continue no further than 1500, which may have seemed like a natural time to lay down the burden of calculation. The fifth section, medical items, occurs in half or eleven of the surviving manuscripts. However, the Vein Man is the only additional medical item in the majority of these. Only three manuscripts include the prognostic known as the ‘Sphere of Apuleius’, and, of these, only two include the item that can be associated most directly with the physician, namely the urine vessel diagram with its captions. These are Pepys Library 1662, Harley 5311 and Talbot’s manuscript and they include the three most lavishly produced manuscripts in the group. Another seven manuscripts contain additional astrological, prognosticatory or other items. Of these various components, Talbot has provided an adequate description of most of the tables and diagrams mentioned above. However, a little more needs to be said about the lunar tables to demonstrate their key importance to astro-medical practice.

*Time and the Calendar in Astrological Medicine*
Knowledge of propitious times, particularly the need to pay attention to the moon’s position in relation to the signs of the zodiac, was widely distributed in vernacular scientific literature, and should generally be seen as a part of popular rather than learned culture. At all levels of medical learning, however, there appears to have been a strong desire to tabulate, translate, make diagrams, and even versify this basic information about the relationship of the signs of the zodiac to the body, the main veins, and the good and evil days for bleeding.\(^{72}\) There were effects on the outcome of illness depending on the planet which rules the hours, or the sign which governed the moon, information which could be obtained from the tables in the folded almanac. For example, according to an English tract on the election of times, the hour of the sun was seen to be unfortunate for most activities, and it was not advisable to let blood at this time and if a man fell sick, he was most likely to end up with a fever.\(^{73}\)

The folded almanac provided the texts, tables and diagrams required by any practitioner or patient who wished to consider the planetary hours and the place of the moon in the signs before undertaking a medical procedure. This level of practice constituted the most elementary form of medical astrology. Nevertheless it was a considerable intellectual advance on the more popular regimen of noting good and evil days of the month.\(^{74}\) In fact, the small size of the folded almanacs belies their sophistication. The lunar tables, for example, required the reader to have some familiarity with the layout and meaning of tables of this kind, perhaps through having access to the more discursive canon included with the calendar of Nicholas of Lynn.\(^{75}\) In addition, the planetary hours were not the modern equal or ‘clock’ hours, which could be determined relatively simply on the basis of a shadow scale, but the seasonally fluctuating unequal hours. In most version of the folded almanac, the columns of the unequal hours, which vary according to geographic location and the sun’s longitude in the signs, are given the label ‘planetary hours of the day and/or night’.\(^{76}\) The determination of the temporal boundaries of the unequal hours was one of the first steps required in any astrological investigation. Besides their significance for astro-medical purposes, knowledge of the planetary hours was required to determine the boundaries of the twelve astrological houses. It can be argued, therefore, that the practice of lunar medicine is likely to have facilitated the spread of astrological expertise of a more demanding sort. All it required to push the lunar
medicine of the folded almanac in the direction of the more complete astrological practice of Simon Forman was the arrival of fully-worked ephemerides for the local meridian - and these begin to appear in the fifteenth century.

**Conclusion**

Although, under the influence of Arabic theory, European medicine was closely associated with astrology from at least the twelfth century, astrological theories appear to have taken a long time to make a significant impact on English medical practice. The evidence of medical training, surviving manuscripts, and the practice books of medieval physicians, even those with knowledge of astrology such as John Crophill and Richard Trewhitian, suggests that few medical practitioners employed the more complex forms of astrology to make diagnoses and prescribe treatment. This situation appears to have begun to change in the fifteenth century, and one factor in bringing about this change may have been the employment of the texts, tables and diagrams of the folded almanac.

The folded almanac was an instrument, or a crib, which could be used to assist in the practice of lunar medicine in the later middle ages. The dating, provenance, and language, Latin, of 28 of the 29 surviving examples indicates that although these cleverly constructed almanacs were first developed in the later fourteenth century, most were probably produced and used by educated professionals in southern England throughout the fifteenth century. A number were used in northern English dioceses and at least one was made for use in northern France. They appear to have been used by people from a wide range of social backgrounds, including some medical practitioners. Although folded almanacs reflect a relatively simple kind of medical astrology, I have argued that they facilitated the development of the more sophisticated astro-medical practice of the later age. At least five surviving examples of the folded almanac contain medical and astrological additions which link them more directly with medical practitioners and allowed them to select astrologically propitious times for astro-medical therapies and diagnosis. These specialised tools indicate an environment for medical practice in which patients and practitioners were increasingly familiar with the significance of the planetary hours, the moon in the signs, and the signs over the body. Compared with both France and Italy, English medicine was somewhat conservative in regard to the extent to which astrology was fully integrated.
into medical training, diagnosis and therapeutics. However, the folded almanac, an English design, shows that in this field at least the English were the innovators.


**TABLE 1. List of Folded Almanac Manuscripts and Abbreviations**

1. Ballarat, Victoria, Fine Art Gallery, Crouch 4 [Crouch 4]
2. Cambridge, Magdalen College, Pepys Library 1662 [Pepys 1662]
3. Chicago, Newberry Library, Case 127 [Case 127]
4. Edinburgh, Royal Observatory Cr.2.20/2 [Edinburgh RO Cr.20/2]
5. Edinburgh, Royal Observatory, Cr. 2.20/3 [Edinburgh RO Cr. 20/2]
6. Leiden, UB, Vulc. 100 C [Vulc. 100C]
7. London, BL Add. 17358 [Add. 17358]
8. London, BL Add. 28725 [Add. 28725]
10. London, BL Harley 937 [Harley 937]
11. London, BL Harley 3812 [Harley 3812]
12. London, BL Harley 5311 [Harley 5311]
13. London, BL Landsdowne 331 [Landsdowne 331]
15. London, BL Sloane 2250 [Sloane 2250]
16. London, BL Stowe 1065 [Stowe 1065]
17. London, Lambeth Palace 873 [Lambeth 873]
19. London, Wellcome 40 [Wellcome 40]
24. Oxford, Bod. Lib., Laud Misc. 753 (R) [Laud Mis. 753 (R)]
29. Talbot [private collection]
TABLE 2. Content Summary of Folded Almanac

A. Calendar items

1. Calendar Canon. Incipit varies but includes, *Ad noticiam in tabularum kalendarij sequenciam* and *Ad noticiam huius kalendarii est sciendum quod prima linea descendente secundum longitudinem ponitur numerus dierum.*

2. Table of indications and mobile feasts

   - Type 1 (Edinburgh RO, Cr. 2. 20/2)
   - Type 2 (Harley 5311); Type 2 English (Harley 937)
   - Type 3 (Ashmole MS 6)

B. Lunar tables and canon

4. Table of the planets, headed *Tabula ad sciendum quis planeta regnet in qualibet hora.*

5. Canon for the table to find the degree of the moon for every day, inc. *Tabula ad sciendum gradum lune omni die*

6. Tables of the moon, headed, *Tabula lune ad sciendum omni signum omni die; Gradus signi pro omni die.*

C. Zodiac man (*Homo signorum*)

7. Zodiac Man diagram

8. Zodiac Man captions, inc. [*Aries*] *Caue ab incisione in capite.*

D. Eclipse elements

9. Solar Eclipse diagrams

10. Lunar eclipse diagrams


E. Vein Man (*Homo venarum*) and other medical elements


F. Astrological and divinatory elements

15. Prognostics: thunder, good and evil days etc.

16. Astrological tables and texts
1 Social History of Medicine, 16, 3, pp. 481-509.

2 I again acknowledge the generous assistance of Prof. J.P. Gumbert, who, prior to the publication of his own study of the full class of folded manuscripts, alerted me to the existence of an additional eight examples of the folded almanac previously unknown to me, sent me copies of his unpublished descriptions of manuscripts in Europe and the United States I had been unable to consult directly, and saved me from numerous errors on points of fact and interpretation (though I am responsible for those that remain). I also thank the journal readers.


5 The most important of these is the tract discussed by P. Kibre, ‘“Astronomia” or “Astrologia” Ypocratis’, reprinted in Studies in Medieval Science (London, 1984), XIV, 133-56.


7 For a succinct review of medicine in major astrological authorities (which he notes was not evident in the notebook of John Crophill) see E. W. Talbert, ‘The Notebook of a Fifteenth-Century Practising Physician’, University of Texas: Studies in English 22 (1942), 16-30.


Thorndike, *History of Magic*, II, 323-24 (Michael Scot); II, 871 (Raymond Lull), II, 890, 894 (Peter of Abano); III, 226 (Augustine of Trent); III, 890, 894; IV, 247-8 (Nicholas of Hungary). For additional references see Talbert, ‘Fifteenth-Century Practising Physician’, 22-23 and notes.


L. Thorndike, *University Records of Life in the Middle Ages* (New York, 1971), pp. 281-82. Students also read texts on geometry, astronomy and astronomical instruments.

See discussion in H. M. Carey, *Courting Disaster* (London, 1992), ch. 8 for Italian astrologers active at the English court in the fifteenth century.

19 Wellcome Library: Online Manuscript Catalogue Entry for MS 8004. I consulted the digital facsimile of Wellcome MS 8004 available at:

20 For example, the fourth column of the calendar pages have an extraneous column of Metonic cycle numbers. The correct Metonic series numbers are given on the right.

21 With a number of slips, the time of ‘Primacio’ (new moon) is the same as that found in other ‘fourth instalment’ calendars such Sloane 807, Lambeth 873 and Stowe 1065 for the relevant cycles.


23 For the late medieval rise of technical writing on medicine and its role in medical education, see N. Siraisi, Medieval and Renaissance Medicine (Chicago, 1992), pp. 52-55.


26 Ibid., 148-9.


29 Charmasson, ‘L’establissemment d’un almanach médical’.

31 F. N. Robinson (ed.), *The Works of Geoffrey Chaucer* (Boston, 1933). Canterbury Tales, General Prologue, 410-18: ‘With us ther was a doctour of phisyk/ In al this world ne was ther noon hym lyk,/ To speken of phisyk and of surgerye./ For he was grounded in astronomye./ He kepte his pacient a ful greet deel/ In houres by his magyk natureel./ Wel koude he fortunen the ascendent/ Of hise ymages for his pacient.’


34 Lynn Kalendarium, 217: ‘Siquis autem habuerit almanak et magis ad veritatem accedere voluerit, ad horam inicii egritudinis planetas omnes adequare debet, eosque equatos, in domibus adequatis constituere; quo facto, ad septem adminus respicere debet: primo scilicet locum lune in figura secundo ascensionem et dominum eius; tercio medium celi, que est decima domus; quarto angulum terre, que est quarta domus et dominum eius; quinto sextam domum et dominum eius; sexto octavam domum et dominum eius; septimo nativitatem pacientis et dominum eius.’


36 *Alchabitius ad magisterium iudiciorum astrorum* (Venice, 1512). For the definition of Hylech, Alchochoden and Almutaz, see diff. 4, f. 16v – 17v.

38 Harley 5311, fol. 10a, has a short tract by Robert Grosseteste including a table for determining the ‘dignities’ of the various planets in their houses.


41 For an important collection focussing on medieval medical practice, see L. G. Ballester et al. (eds.), *Practical Medicine from Salerno to the Black Death* (Cambridge, 1994), especially the article by R. French, ‘Astrology in Medical Practice’, pp. 30-59.


43 Even deluxe, royal horoscopes came without aids to interpretation, medical or otherwise. E. Laird, ‘Astrology in the court of Charles V of France, as Reflected in Oxford, St John’s College, MS 164’, *Manuscripta* 34 (1990), 167-76, does not discuss the royal horoscopes and suggests they were not a part of the original manuscript. They appear on fols. 158-160. E. Poulle has argued that the schemes may have been calculated for medical


48 *Liber centum verborum ptholemei cum commento Haly* (Venice, 1485), f. 110v. Verbum 44. In significatione ascendentis infirmatis contrarij figure natiuitatis: Cum fuerit ascendens infermitatis contrarij figure natiuitatis, et non peruenit annus reuolutionis ad illam figuram natiuitatis: pessimum erit.

49 For example the tracts (TK 1301, 1503) copied by Richard Stapilton into Digby 29: ‘De virtutibus duodecim signorum et septem planetarum quoad medicinam, cum tabula et regula ad sciendum in quo signo et gradu luna sit omni die’ (ff. 179-181), and ‘De infirmis si morientur vel vivent, de flebotomia, de temporibus dandi medicinas, per astronomiam’ (f. 184v).

50 Only Harley 937 includes a date for the actual composition of the calendar in its preface indicating it was written in 1430, the year before the date of the first eclipse. See A. G. Watson, *Catalogue of Dated and Datable Manuscripts, c. 700 - 1600 in the British Library*, vol. 1 Text (London, 1979), no. 639 [Harley 937], p. 120.


52 For example: Edinburgh RO Cr. 2.20, Sloane 807 or Sloane 2250.


54 See Table 1, *Social History of Medicine*, 16, 3, Table A.1, pp. 506-7 for indication of folded almanacs which include the feast of John of Beverley.

I thank Prof. Gumbert for supplying me with his description of this manuscript which I was not able to consult directly.

For an analysis of the saints listed in the fifteen manuscripts of the calendar of Nicholas of Lynn, see Lynn, *Kalendarium*, 45-46. Eisner notes that no two manuscripts in his sample had an identical list of saints, and no two had less than a 30 per cent correspondence.


M. R. James, *Bibliotheca Pepysiana*, vol. 3 (London, 1922), no. 1662, pp. 31-36. James describes the manuscript as a ‘Folded Kalendar for hanging at the girdle.’

Bede was in general better remembered in northern England, especially York, throughout the middle ages. Other saints from the York calendar include Wilfred, bishop of York (24 April); William, bishop of York (8 June); Oswald (5 Aug.); Wilfred, bishop of York (12 Oct); Botulph, Abbot (17 June); Paulinus (10 Oct.); Hild (17 Nov.). For a fuller list, see Sinclair, *Medieval and Renaissance Western Manuscripts*, 275, who states: ‘The provenance is certainly northeast England.’

Ashmole 6 has a later inscription: R. Targette, ‘My brother Richard Bataille told me her that Thomas Mery of Bisshop is diseased.’


65 Manion and Vines and Sinclair all date the manuscript as fifteenth century. But Gumbert (personal communication) notes that the first conjunction cycle does not begin until year eight of the Metonic cycle, suggesting the manuscript was prepared in around 1508.


67 Watson, Catalogue of Dated and Datable Manuscripts, vol. 1, n. 37 where it is dated c.1451 and, for no clear reason, called ‘a girdle book’; vol. 2, no. 483 (Ashmole Rolls 6, fol. 1v).


69 Lynn, Kalendarium, pp. 220-21.

70 C.H. Talbot, ‘A Mediaeval Physician's Vade Mecum’, Journal of the History of Medicine, 16 (1961), 213-33, p. 222. The evolution of the arrow shaped text around the zodiac man is discussed by K. L. Scott, Later Gothic Manuscripts 1390-1490, vol. 2, (London, 1996), p. 98 referring to two folded almanacs, Edinburgh, Royal Observatory Cr. 2.20/2 and Pierpont Morgan, Glazier 47. It is curious she does not mention Edinburgh, Royal Observatory Cr. 2.20/1 which is held in the same box.


75 Lynn, Kalendarium, pp. 198-99 (Canon 9).

76 Compare Chaucer in his Treatise on the Astrolabe (1391) where he provides a ‘Special Declaracioun of the Houres of Planetes’ from the first unequal hour of every Saturday, which belongs to Saturn and thence the other planets in their turn. Further discussed by L. R. Mooney, ‘The Cock and the Clock: Telling Time in Chaucer’s Day’, Studies in the Ages of Chaucer 15 (1993), 91-109, esp. p. 92.