

10 Diagnostic Performance and Diagrammatic Manipulation in the Physician's Folding Almanacs

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Bodleian MS Ashmole 6 (Figure 10.1) is one of around 30 known physician's folding almanacs – small manuscripts of medical reference material in Latin, all (save one) made in England around the fifteenth century.¹ The folding almanacs are compact, most ranging from five to ten folios, with each folio devoted to a single element used for diagnosis or prescription: calendars, astrological tables, and medical canons. These manuscripts probably served many of the same diagnostic functions as other late medieval medical books, though with abbreviated contents – their calendars, tables, and diagrams were used to determine the appropriate timing of treatments,

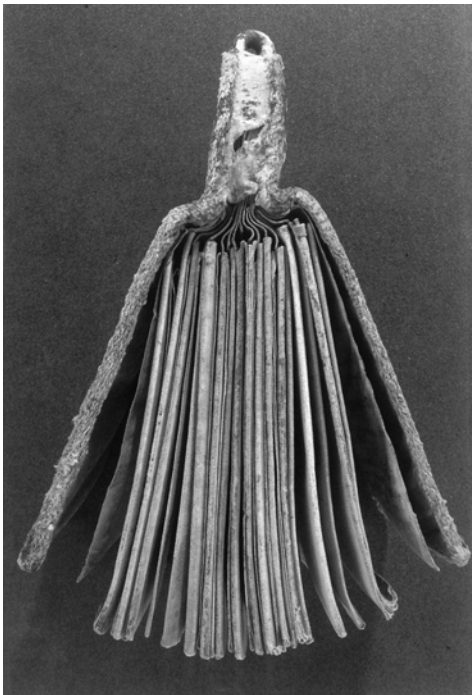


Figure 10.1 Folding Physician's Almanac, showing structure of folded folios with leather cover, overall length 15 cm England, fifteenth century. Oxford, Bodleian Library, MS Ashmole 6.

including the administration of medicine as well as purging, bleeding, and cautery.² What distinguishes the folding almanacs is their form: rather than a codex with quires sewn into a binding, each folio of the almanac is folded in half, and then again in thirds or sometimes fourths. Each sheet of parchment has a small, extended tab along one edge; when the folded sheets are stacked together, the tabs are gathered and stitched, often into a fabric or leather cover. With the folios folded this way, almanacs are also small in size: they are long and narrow, with folded dimensions averaging around 13 × 5 centimeters. This format, and the unusual binding, made the almanacs extremely portable. Some, such as Lambeth Palace MS 873, have been preserved along with leather cases, which may have protected them inside a purse;³ others, such as Ashmole MS 6, still have their strong leather covers and a thick tab with an attached loop, to hang directly from its owner's belt.⁴ To use the information in the almanacs, a practitioner would detach the manuscript, turn to the relevant section, partially or fully unfold, refold, and unfold again. Rather than simply read as a diagnostic tool, the almanac requires manual handling: the images, charts, and texts were neither fixed nor held still in the hand, and in the process of treatment the almanac *moved* in the space between doctor and patient. Folding almanacs should thus be seen as part of a complex network in which patient, doctor, and book are all active, and in which the materiality of the almanac is instrumental.

As historians of science have shown, the content of the folding almanacs is critical to understanding the practices of late medieval medicine, in particular the role of astrology in diagnosis and treatment.⁵ The almanacs have also been briefly studied in art historical scholarship, primarily in terms of the iconography of Zodiac Man.⁶ But our concern is different: to understand the efficacy of the almanacs as located not only in their medical texts, their representational rhetoric, and their diagnostic functions, but also in their materiality. Almanacs were not simply a collection of useful texts: they were worn on the body, touched habitually, and manipulated like astrolabes and other scientific instruments, and this aspect of the almanacs has so far had little investigation. Our project considers the multiple social discourses in which almanacs were implicated: not only the prestige and practice of medieval medicine, but also issues of affect, shared space, bodily contact, wonder, secrecy, revelation, and memory. Our attention is on the 'objectness' of almanacs, the networks in which they acted, and their potency within the spaces of treatment.

Unfortunately, there is no direct textual or visual evidence for how doctors – or patients – used folding almanacs.⁷ Our proposals about the use and reception of the almanacs are based on careful examination of the manuscripts themselves, and on our own experiences manipulating them: holding, unfolding, turning, and opening. We draw on material evidence of wear and use, along with textual evidence of how itinerant doctors worked, to reconstruct the ways that almanacs were active in the encounter between doctor and patient. By closely examining the material aspects of almanacs – their structure, layout, and condition – we argue that this movement engaged both doctor and patient physically and affectively in the technology of treatment. This approach relies on both the intermateriality of almanacs (that is, their associations with other portable, personal objects imbued with efficacy, such as jewelry, amulets, and charms) and on their performative manipulation: gazing, fingering, opening, and closing. Folding almanacs, rather than simply a newfangled reference book, can be understood as a participatory space of knowledge in late medieval England.

Gestures of Diagnosis

As Hilary Carey, Peter Murray Jones, and Faith Wallis have each argued, almanacs were most likely taken out in the field by trained doctors whose practices were not in court or urban settings, but rather around busy towns such as Norwich, Durham, and York.⁸ Whereas London doctors might be regularly employed in gentry households, provincial practitioners like Thomas Fayreford and John Crophill treated a range of patients in the town center and also in outlying areas: merchants, titled landholders, laborers; men, women, children.⁹ Not all doctors of this sort were university-trained physicians; Crophill, for example, was primarily employed as a bailiff of Wix priory, and was also a part-time ale taster.¹⁰ More often they had some professional training and a lot of practical, empirical knowledge about remedies and prognosis; most probably had a fair to good grasp of Latin, enough to comfortably use the almanacs' charts and tables, alongside a general familiarity with lunar astrology.¹¹ The small size, portable format, and abbreviated texts of the folding almanacs provided the basic reference material for diagnosis of common complaints, and would have served the needs of itinerant doctors who were neither treating complex medical conditions nor performing surgery. Along with headaches and fevers, the ailment most often treated by Fayreford, for example, was 'suffocation of the womb': shortness of breath, anxiety, and seizures attributed to the swelling of the uterus.¹²

Medical care began with an understanding of timing – the time of day, season of the year, or part of the lunar cycle at which a patient fell ill – and so the calendar is the most basic component of all folding almanacs.¹³ It includes both liturgical feasts and detailed astrological information, and is typically arranged over three or four folios. The calendar was used in conjunction with charts of solar and lunar eclipses (Figure 10.2) to determine in which sign of the zodiac the sun or moon resided for any day of the month; it was also used with the table of planets, to calculate their locations throughout the day and assess their influence on the human body.¹⁴ This information was further coordinated with the Zodiac Man, which showed at a glance which stars ruled over which limbs, organs, and bodily fluids. Equipped with the proper astrological context for patient, location, and complaint, the practitioner could move on to diagnosis.

Most of the almanacs also include the most common diagnostic tool, uroscopy, as a canon text or in some of the more richly decorated examples as a vividly colored wheel of urine flasks. Patients brought their urine to the doctor, who compared it to the descriptions or images: red urine with mucus, for example, was a sign of an overheated liver. Following diagnosis, the doctor prescribed treatment, which could include medicines, herbs, charms, and bloodletting to balance the bodily humors. Nearly all the folding almanacs include texts on bloodletting, and often a diagram of Vein Man, showing the places on the body to tap for various conditions. Some of these prescriptions might be carried out by the diagnosing doctor, especially in more remote areas, but in larger towns a specialized apothecary mixed the medicines, and bloodletting was performed by a barber-surgeon.¹⁵

The diagnostic operations with the folding almanacs required a series of hand and even body movements, some sequential, some repeated: first, the almanac would be removed from the purse or case, or detached from the belt. Folded folios were thumbed or fanned or rifled until the proper calendar page was located. Then began a series of openings, turnings, and unfoldings. There is no fixed or standard arrangement of the pages of almanacs: calendars could be organized over three

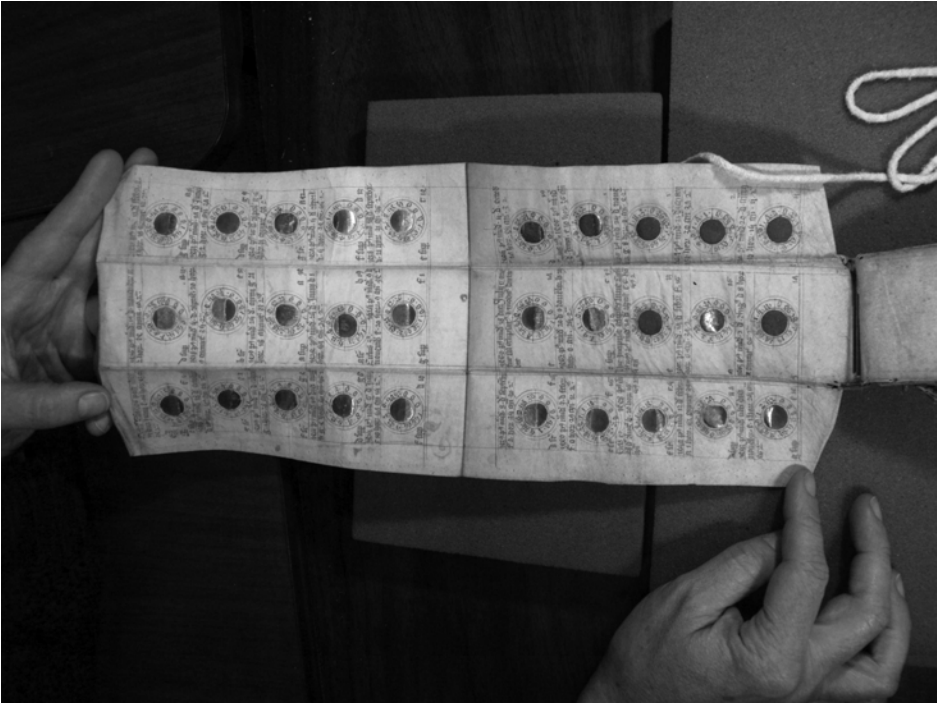


Figure 10.2 Charts of solar and lunar eclipses *Almanach, tabula festorum, mobilium ab anno 1364 usque annum domini 1462*, York, England, between 1406 and 1424. Philadelphia, The Rosenbach, MS 1004/29, fol. 7.

folios or four; canon texts on bloodletting and planetary influences sometimes cover a full folio and sometimes are abbreviated to a single column of text; some almanacs have interpolated material, such as illuminated lunar eclipse charts or elaborate tables of moveable liturgical feasts. These eccentric layouts meant that the gestures of diagnostic performance were personal gestures, unique to each doctor as he consulted his well-worn almanac.

To identify the proper astrological context for a patient's particular complaint, for example, the practitioner might first consult a calendar page: he would flip the almanac to the correct month, unfold the page, scan the text for the appropriate date, and close the page along the familiar creases. Next he might consult the lunar eclipse chart, with a similar series of unfoldings, openings, skimmings, and refoldings, and perhaps also again for the planetary tables. Most likely only one folio was opened at a time – the manuscript otherwise becomes cumbersome and difficult to hold – and so the manipulations could have become rather elaborate. (We found, for example, that it was not possible to hold a folio in just one spot to open it fully: it was necessary to take hold of a corner, lift up, change position with both hands, grasp again, and open.) Physicians who used the almanacs must have become deft at locating information and working the pages.

For the doctor, the gestures of unfolding would no doubt have become habit after a while, especially once the parchment had softened, become worn and pliable. Many of

the manuscripts are stained along edges and at corners, from use and accident; many exhibit small tears where they have been folded over and over. Over time, the almanac, rather than needing to be fully *read* for each diagnostic encounter, could have become (to borrow a phrase from Mary Carruthers) a 'retrieval structure': a mnemonic device for choosing and recombining stored information.¹⁶ Individual visual features would also have served mnemonic functions. Most of the calendars and texts are highly abbreviated, and the outermost fold of each folio is a title page – blank, except for the names of the months or of the contents (*octobri nouembri decembri* in Morgan MS G.47, fol. 3, for example, or *eclipses lunae* in Rosenbach MS 1004/29, fol. 7). These title pages were certainly indexical; they could have functioned in the way of a decorated initial, as a trigger for reading and organization. Similarly, as for other medieval manuscripts, the distinguishing colors of red and black in the calendars, and the diaper patterns and grids of the planetary hours and lunar-zodiacal correspondences (as in Bodl. Rawl D928, Figure 10.3), are at once engaging visualizations and practical configurations of knowledge for easy retrieval, especially in the practiced movements of unfolding diagnosis. In some cases, simply manipulating the folded pages might have been enough to activate the physician's stored memory of data and diagnosis, in a gesture not unlike the fingering of rosary beads – another personal, tactile memory device, hung from the belt to be both displayed and handled.

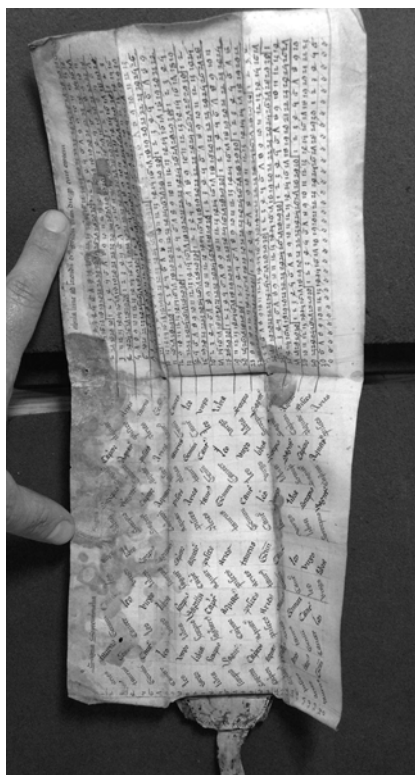


Figure 10.3 Table of planetary hours. Oxford, Bodleian Library, MS Rawlinson D928.

An Affective Network

This familiarity on the part of the doctor would have made the performance of diagnosis quite a spectacle – the images, charts, and texts were not held still in the hand, but rather opened out, turned around, over, and sideways, moving quickly in the space between doctor and patient – a space which we assume to be fairly intimate, close enough to take the pulse and inspect a urine sample.¹⁷ There are no images of these encounters, but we can imagine physician and patient standing near to each other, perhaps with the almanac opened (or opening between them).¹⁸ For diagnostic uroscopy, for example, the urine flask must have been, at some point, held close to the color wheel – probably in the hands of the patient, while the doctor compared the color to that in the manuscript; holding both at once would be difficult.¹⁹ Prescription, too, could have involved some sharing of the almanac's contents: if bloodletting, for example, was to be performed by a surgeon other than the consulting physician, the patient might be shown the illustration of Vein Man and advised just where on the body the blood would be let.

There are wonderful rhythms to the mathematics and geometries of the pages, and for the patient, the practiced, manual operations could make the almanac magical, ritualized, and talismanic – particularly if the patient was not Latin-literate, or when the folding and unfolding was rapid, and the images flashed by quickly. While the folding almanac may have been a novel medical technology in late medieval England, it would have been familiar in its performativity and affectivity, as medieval medical practice combined academic instruction in medical theory and in the science of astrology with hands-on training in herbs, charms, and talismans. Doctors could recommend prayer or a visit to a saint's shrine along with apothecary medicines; gemstones with healing powers and charms written on pieces of parchment were not only in common use, but even recommended by medical practitioners alongside other, more scientific treatments.²⁰ It was not only doctors who understood these relationships: healers and housewives made use of herbal remedies, prayers, and charms, and both folk medicine and saints' cults employed what we might call sympathetic magic, such as laying gemstones with healing attributes on afflicted parts of the body, or wearing talismanic jewelry. The late-fifteenth-century gold engraved Coventry Ring (British Museum AF.897), for example, displays the risen Christ and the five wounds on the outside, and has inscribed on the inside: 'The five wounds of God are my medicine, the holy cross and passion of Christ are my medicine, Caspar Melchior Baltazar ananyzapta tetragrammaton.' *Ananyzapta* and *Tetragrammaton* are relatively common magical 'nonsense' words in late medieval inscriptions, and the names of the three Magi were regularly invoked in healing rituals. When the ring was worn on the finger, the prayer was in direct contact with the skin, and could be rubbed or touched constantly, amplifying the potency of the medical invocation. Such jewelry, which was visible to others while it was simultaneously handled by the wearer, contributed to perceptions about the owner's access to knowledge and healing potential; folded almanacs likely conjured similar associations.

Rather than separate categories of treatment, these were all part of the repertoire of medieval doctors. The *Rosa Medicinae*, for example, a fourteenth-century medical treatise written by the Oxford-trained court physician John Gaddesden, contains a wealth of amuletic and ritual therapies, including gestures, drawings, herbal recipes, and verbal charms, such as a Latin incantation to cure nosebleed.²¹ Relatively few of

these ephemeral products of health treatment survive; one that does, however, is a piece of parchment (Figure 10.4) that includes prayers and an image of St Margaret. Presumably so that it could be used repeatedly, this scrap was stored in a cylindrical leather-covered wooden box with incised and painted images of St Margaret, John the Baptist, and the Apostle Peter. The presence of St Margaret is in line with many of the textual references to such charms, due to her role as patron saint of childbirth and motherhood.²² That this image of Margaret has been vigorously rubbed attests to the extra potency its tangibility offered; it must have been touched, over and over, by many patients seeking cures. Healing remedies like this worked through a combination of tactility, gesture, and manipulation that could have provided a context for the movements of the almanac. Doctor, patient, and parchment are all implicated in the exchange – what Jane Bennett calls a ‘temporary working assemblage,’ a locus of ‘affection and allure.’²³

Performing the Space of Knowledge

During the doctor’s operations with the folding almanacs, the patient would have seen the reverse of whatever folio the physician opened: text, images, or charts often upside down, or sideways. (In the Morgan almanac, for example, when the doctor held up the



Figure 10.4 St Margaret emerging from the Dragon. *Vie de Sainte Marguerite*. France, probably Paris, 1491. New York, The Pierpont Morgan Library, MS M.1092, Recto.

diagram of Vein Man and the texts on bloodletting, the image of Zodiac Man would have faced the patient, with the top of the head at the bottom of the page.) Some of these must have been familiar – a landholder with a good income, for example, may have owned a Book of Hours with a calendar, and had enough practical literacy to make out some of the headers.²⁴ Even a patient without textual literacy, however, could have recognized the images of Zodiac Man and Vein Man; with their contemporary hair styles, even inverted, they must have at least been recognizable as bodies, relatable to his or her own body.²⁵ Patients (who had certainly come to the encounter with the expectation of being diagnosed and treated, if not eventually cured) might therefore have eagerly received the seemingly magical manipulations of the almanac as a kind of gestural charm, and even taken the glimpses of planetary tables to be a fortune-telling game or divination chart – information visualizations that they might have recognized, other popular kinds of prognostication, and ones which also had cosmic significance.

This kind of correspondence is exactly the point: that is, correspondence itself is central to the efficacy of the almanacs, and indeed of all medieval medicine, which lay out the correlation of macrocosm and microcosm, and assessed the effects of stars, planets, and elements on the body and mind. Diagnosis depended on a multivalent understanding of the relations between the human body and heavenly bodies. As Luke Demaitre puts it, ‘everything, including the human body, was connected in the vastness of the universe and in the cycle of life,’ and so understanding celestial influences was key in preventative medicine, useful for diagnosis of chronic conditions, and even employed for acute complaints like headaches and broken bones.²⁶ The content of the folding almanacs, like other medical manuscripts in codex form, is primarily made for figuring out these microcosmic correspondences.

But the almanac – in contrast to other medieval medical sources – was more than just a reference for these concordances. It *moved* in the space between doctor and patient, opening, turning, coming close, pulling away – creating an active and activated space of healing between the body of the doctor and the body of the patient. Physical manipulation of diagnostic tools was not unique to folding almanacs. Moving information wheels or volvelles are found in other late medieval medical and scientific manuscripts, including the well-known Guild Book of the Surgeons of York (BL Egerton 2572, fol. 51r), dating to the last quarter of the fifteenth century. The York volvelle was used, like the tables and calendars of the folding almanacs, to calculate the position of the sun and moon in the signs of the zodiac, and to determine whether a particular procedure was astrologically auspicious. In comparison to volvelles, the almanacs – with their complicatedly folded folios and multiple manual gestures – offer a much less economical, more unwieldy way to calculate information: a few turns of the disc wheels could accomplish the same readings as a whole series of foldings, unfoldings, scannings, and shufflings. But the requirements of the almanac implicate the body in the diagnostic process to a much greater degree than do the volvelles. This might be understood as a simple distinction between a bound codex and a folding book. But we want to suggest a more agential difference, and a difference in spatial expectation of the user. Through the operations of the almanac, both patient and doctor are engaged visually, physically, and perhaps even emotionally in the negotiation of image, space, and animation. Lynda Nead has argued that for early motion pictures, especially those in which things like speeding trains are depicted, there was a kind of ‘synergy between the viewer and the image’; as a ‘display of the spectacle

of movement,' the films elicited 'highly motivated physical responses from their audiences, who themselves became part of the spectacle.'²⁷ Folding almanacs can perhaps be understood as a similar kind of participatory spectacle, one in which physician, patient, and parchment are all active. Affect and wonder, then, are not only part of the reception of almanacs, but integral to their very workings, and part of their efficacy.

Of course, all kinds of medieval images suggest movement and multidimensional perception, and implicate the body in the cognitive process. Perspective, for example, often required mental manipulation to effect spatial reorientation. As Linda Neagley has argued, the doors and windows of the Bayeux Embroidery lead to interior scenes which we should understand as turned perpendicular to the picture plane; these architectural representations fostered an embodied sense of space that allowed the viewer to 'envision himself as a witness to an event in real time and space.'²⁸ A similar process of imaginative manipulation leading to the beholder's spatial self-awareness operates in late medieval devotional wall painting, such as in the parish church at Stoke Dry, Rutland, which is roughly contemporary with the almanacs. In the image of the martyrdom of St Edmund (Figure 10.5) the archers are surely not meant to be piercing the saint directly from each side. The visitor to the chapel must imaginatively 'fold' the image into three dimensions so that the archers stand in front of Edmund and, in an



Figure 10.5 Martyrdom of St Edmund. Wall painting at St Andrew's Church, Stoke Dry, Rutland.

anagogical collapse of time, also occupy the space of the medieval worshipper. This kind of visual and mental exercise – a sort of virtual reality machine, or 3D generator – put viewers into active, constructive encounter with images and their meanings, and required (or even nurtured) an active, constructive subjectivity.²⁹

The somatic experience of the almanacs, we propose, could incite the beholder to an analogous mental practice, in which the manipulation of image and memory encouraged consideration not of historical or teleological position, but of cosmic position: the relationship of human body to celestial bodies, of microcosm to macrocosm. This contemplation is grounded both in the medical content of the almanacs and in their intermateriality – their associations with a range of popular objects and images, from talismans to gambling games. Through that network of associations, both material and spatial, the manuscripts produced the space of treatment itself; the field of doctor, patient, and almanac can be understood as a space of macrocosmic connection, a node of knowledge. Within that field, the almanac functions as a moving diagram, an animated version of the complex mnemonic images based on Alain of Lille's *De sex alis cherubim*, or of the cosmic visualizations of Byrthferth of Ramsey's computational treatises. The twelfth-century illumination of the latter (in BL Harley MS 3667, fol. 8r), for example, superposes the Ages of Man, the cardinal directions, the bodily humors, the four winds, and the four gospels to demonstrate the unity of heaven and earth. In the almanacs, various aspects of cosmographic knowledge are collected – we might even think of them as layered together, when the almanac is folded closed – and reconstituted around the bodies of patient and doctor. Thus the performance of diagnosis and cure is also a performance of the cosmically balanced body.

As with the St Margaret parchment and the paintings at Stoke Dry, the instrumentalization of the folding almanac requires active participant beholders, manipulating image and memory to locate themselves within space and time. The almanac becomes a space of knowledge, not only through its astro-medical content, but also (and, we argue, especially) through its constructive encounters with patient and doctor. While certainly the Latin texts and scientific information were central to specific medical learning, authority, and competence, the performative operations of the almanac should be seen as another 'instrument' of that science. Patient and doctor are located within the cosmographic system of celestial influences, bodily humors, and healing actions – all of these multiple and complementary modes of knowledge move in and through the space at the hands of the doctor.

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Notes

- 1 31 English folding almanacs are currently known. For terminology, general description, discussion of the debates surrounding function, and a list of known English almanacs as of 2003, see Hilary M. Carey, 'What is a Folded Almanac? The Form and Function of a Key Manuscript Source for Astro-medical Practice in Later Medieval England,' *Social History of Medicine*, 16 (3) (2003): 481–509; see also Hilary M. Carey, 'Astrological Medicine and the Medieval English Folded Almanac,' *Social History of Medicine*, 17 (3) (2004): 345–363. Carey dates the almanacs on the basis of calendar information; the earliest is Oxford, Bod. Lib. Rawl. D 938 (1348) and the latest Ballarat, Victoria, Fine Art Gallery Crouch 4 (1508). In the most recent study, J. P. Gumbert lists 30 English almanacs from among 63 books in total using this format; Gumbert, *Bat Books: A Catalogue of Folded Manuscripts Containing Almanacs or Other Texts* (Turnhout: Brepols, 2016). Gumbert leaves out National Library of Scotland MS Acc.12059.3. We thank Jessica Legacy for her observations in this regard.
- 2 Carey, 'Astrological Medicine,' 350. They have also been compared to other folded and/or portable manuscripts, such as folded calendars and folded books, although in England the folded format was used almost exclusively for medical almanacs; see Carey, 'What Is the Folded Almanac?' 486ff, 488. An example of a non-medical folding almanac is London, BL Egerton 2724; BL Egerton 828 is a medical manuscript with similar content (including a zodiac man) but in codex form.
- 3 Some images of physicians with purses, which have usually been assumed to be for money, may be for portable reference books like the folding almanacs; see for example C. H. Talbot, 'A Medieval Physician's *vade mecum*,' *Journal of the History of Medicine and Allied Sciences* 16 (1961): 213–33, at 213–14.
- 4 Carey, 'Astrological Medicine,' 358.
- 5 Carey, in both 'What Is the Folded Almanac?' and 'Astrological Medicine,' gives a thorough review of the scholarship. See also Cornelius O'Boyle, 'Astrology and Medicine in Later Medieval England: The Calendars of John Somer and Nicholas of Lynn,' *Sudhoff's Archiv*, Bd. 89, H. 1 (2005): 1–22.
- 6 This work includes Peter Murray Jones, *Medieval Medical Miniatures* (Austin, TX: University of Texas Press, in cooperation with the British Library, 1985), revised as *Medieval Medicine in Illuminated Manuscripts* (London and Milan: Centro Tibaldi, 1998); Peter Murray Jones, 'Image, Word, and Medicine in the Middle Ages,' in *Visualizing Medieval Medicine and Natural History, 1200–1550*, eds Jean A. Givens, Karen M. Reeds, and Alain Touwaide (Aldershot, UK and Burlington, VT: Ashgate, 2006): 1–24; Sara Öberg Strådal, 'Medieval Medical Diagrams: meanings, audiences, and functions,' *Hektoen International*, 5 (3) (2013) <http://www.hektoeninternational.org/> (accessed 5 November 2015); K. B. Roberts and J. D. W. Tomlinson, *The Fabric of the Body: European Traditions of Anatomical Illustrations* (Oxford: Clarendon Press, 1992).
- 7 In several satirical *bas-de-page* scenes of a copy of the Decretals of Gregory IX (BL Royal 10 E IV, fols 53v and 54), Reynard the Fox appears dressed as a physician who pretends to treat his enemy Isegrim the wolf; Reynard wears a belt with suspended pouches; other examples of a physician with books or pouches hanging from a belt include Copenhagen, Kongelige Bibliotek, MS GKS 227 2o, fol. 28r, and Heidelberg Cod. Pal. germ. 644, 94v. While these images are suggestive of how folding almanacs were likely carried, none can be definitively identified as representations of their use. Talbot discusses the practice of wearing books in

pouches, suggesting this is how some almanacs were worn and noting that this is similar to how clerics carried small breviaries: Talbot, 'A Medieval Physician's *vade mecum*,' 213–33, at 214. For small books carried on belts, see Emily Diane Pietrowski, '*Multum in parvo*: The Miniature Hours of Edith G. Rosenwald as Woman's Devotional Book and Amulet,' Master's Thesis, University of Texas at Austin, 2013. Carey, 'What is the Folded Almanac?' also considers how they were worn. For additional suggestions regarding use and wear, see Gumbert, *Bat Books*, 19–24. For more on the satire of physicians, see Linda Ehrsam Voigts, 'Fifteenth-Century English Banns Advertising the Services of an Itinerant Doctor,' in *Between Text and Patient: The Medical Enterprise in Medieval and Early Modern Europe*, eds Florence Eliza Glaze and Brian K. Nance (Florence: SISMEL, 2011): 245–77. Good accounts of practice and training include Faith Wallis (ed.), *Medieval Medicine: A Reader* (Toronto: University of Toronto Press, 2010): 195–204; Nancy Siraisi, *Medieval and Early Renaissance Medicine: An Introduction to Knowledges and Practice* (Chicago: University of Chicago Press, 2009); Carol Rawcliffe, *Medicine and Society in Later Medieval England* (Stroud, Gloucestershire: Sutton, 1995): 58–81; and Katherine Park, 'Medical Practice,' *Cambridge History of Science, Volume 2: Medieval Science*, eds Michael H. Shank and David C. Lindberg (Cambridge: Cambridge University, 2013): 611–29.

- 8 Harry Bober suggests that folding almanacs 'accompanied the doctor on his calls' while the codex form of medical calendars were intended for 'home use'; see 'The Zodiacal Miniature of the *Très Riches Heures* of the Duke of Berry: Its Sources and Meaning,' *Journal of the Warburg and Courtauld Institutes*, 11 (1948): 1–34, at 24. There is a debate regarding who used the almanacs; Carey, 'Astrological Medicine,' 355–60 argues for a range of users, including physicians but also people generally interested in astrology. See also Peter Murray Jones, 'Information and Science,' in *Fifteenth-Century Attitudes: Perceptions of Society in Late Medieval England*, ed. Rosemary Horrox (Cambridge: Cambridge University Press, 1994): 97–111, at 109; and Talbot, 'A Medieval Physician's *vade mecum*,' 218–19. Another possibility is that they were used by doctors, but that the exact medical information was less important than the appearance of learned medical authority conveyed by wearing the book. Until the mid-fifteenth century in England the profession was primarily made up of clerics; the almanacs coincide with the rise in non-clerical practitioners, the 'scramble for patronage,' the growth of vernacular medical texts, and an increasingly specialized medical hierarchy; see Rawcliffe, *Medicine and Society*, 105–26. The almanacs certainly gave prestige and authority to doctors, particularly to itinerant practitioners, at a time when 'licensing procedures and other institutional markers of competence' were a subject of public concern; see Park, 'Medical Practice,' 624.
- 9 Both Fayreford (fl.1400–50) and Crophill (d.1485) are known through their surviving manuscripts – not folding almanacs, but commonplace books that include medical treatises and records of patients treated: BL Harley 2558 (Fayreford, in Latin) and Harley 1735 (Crophill, in English). See Peter Murray Jones, 'Thomas Fayreford: An English Fifteenth Century Medical Practitioner,' in *Medicine from the Black Death to the French Disease*, ed. Roger French (Aldershot, UK and Burlington, VT: Ashgate, 1998): 156–83; E. W. Talbert, 'The Notebook of a Fifteenth-Century Practicing Physician,' *Studies in English*, 22 (1942): 5–30; and James K. Mustain, 'A Rural Medical Practitioner in Fifteenth-Century England,' *Bulletin of the History of Medicine*, 46 (1972): 469–76.
- 10 Mustain, 'A Rural Medical Practitioner,' 471; Voigts, 'Fifteenth-Century English Banns,' 259.
- 11 Most almanacs have basic rather than specialized astrological information, similar to what was available in popular, vernacular scientific literature. See Carey, 'What Is a Folded Almanac?' and 'Astrological Medicine.'
- 12 Jones, 'Thomas Fayreford,' 170–3. This ailment, discussed by Classical authors including Hippocrates and Galen, was most often treated by placing sweet-smelling substances near the vagina and foul-smelling substances near the nostrils.
- 13 Carey, 'Astrological Medicine,' 363.
- 14 The calculations possible with the almanac are not as specific as those made with astrolabes and other measuring devices (which could account more precisely for meridians and geographic locations) but presumably they were good enough for calculations in the field and would meet the basic computational needs of medical astrology. See Lynn White, Jr, 'Medical Astrologers and Late Medieval Technology,' *Viator*, 6 (1975): 295–308, and Wallis, *Medieval*

- Medicine*, 317–34. On the use of almanacs for medical astrology, see Carey, 'Astrological Medicine,' and O'Boyle, 'Astrology and Medicine.' Astrological and calendrical tables were also essential for selecting propitious times for practices, including bleeding, purging, and medicating, as well as for picking herbs and preparing various talismans.
- 15 For discussions of types of medical practitioners (physician, barber, surgeon, apothecary, leech) and their various training and practices, see Vern L. Bullough, 'Medical Practice in the Middle Ages, or Who Treated Whom,' in Bullough, *Universities, Medicine and Science in the Medieval West* (Aldershot: Ashgate, 2004), 277–288; Carole Rawcliffe, 'The Profits of Practice: The Wealth and Status of Medical Men in Later Medieval England,' *Social History of Medicine*, 1 (1988): 61–78; and Rawcliffe, *Medicine and Society*, 105–215.
 - 16 Mary Carruthers, 'Ars oblivionalis, ars inveniendi: The Cherub Figure and the Arts of Memory,' *Gesta*, 48 (2) (2009): 99–118, at 111.
 - 17 Reynard (as physician) and Isegrim (as patient) are close to one another in the images from BL Royal 10 E IV (see above, note 7), and Bod. Lib. Ashmole 399 fol. 34v depicts patients holding their urine flasks as they wait to see the physician. For more on physician–patient interactions, see Michael R. McVaugh, 'Bedside Manners in the Middle Ages,' *Bulletin of the History of Medicine*, 71 (2) (1997): 201–223.
 - 18 While a codex would likely have rested on a table, we found the almanac to be more awkward to handle if it is *not* held in the hands.
 - 19 This speculation presumes that the colours in the uroscopy wheels were considered practical and diagnostic, and that chromatic accuracy was both desirable and possible; other interpretations of the uroscopy wheels are surely possible. We appreciate discussions of this problem with Carly B. Boxer, who generously shared some research in progress.
 - 20 See Lea T. Olsan, 'Charms and Prayers in Medieval Medical Theory and Practice,' *Social History of Medicine*, 16 (3) (2003): 343–366 and Peter Murray Jones, 'Amulets: Prescriptions and Surviving Objects from Late Medieval England,' in *Beyond Pilgrimage Souvenirs and Secular Badges*, ed. Sarah Blick (Oxford: Oxbow, 2007): 92–107.
 - 21 Tony Hunt, *Popular Medicine in Thirteenth-Century England: Introduction and Texts* (Woodbridge: D. S. Brewer, 1990), chapter 1, and Olsan, 'Charms and Prayers,' 344–55; both discuss Gaddesden. Many astro-medical texts from this period were accompanied by charms. See Rawcliffe, *Medicine and Society*, 94–5, 218; Linda Ehrsam Voights, 'What's the Word? Bilingualism in Late-Medieval England,' *Speculum*, 71 (4) (1996): 813–26; Lea T. Olsan, 'Marginality of Charms in Medieval England,' *The Power of Words: Studies on Charms and Charming in Europe*, eds James Kapalo, Eva Pocs, and William Ryan (Budapest: Central European University Press, 2013): 135–64; and Olsan, 'The Corpus of Charms in Middle English Leechcraft Remedy Books,' *Charms, Charmers and Charming: International Research on Verbal Magic*, ed. Jonathan Roper (Basingstoke: Palgrave Macmillan, 2009): 214–37.
 - 22 Don C. Skemer, 'Amulet Rolls and Female Devotion in the Late Middle Ages,' *Scriptorium*, 55 (2001): 197–227.
 - 23 Jane Bennett, 'Systems and Things: A Response to Graham Harman and Timothy Morton,' *New Literary History*, 43 (2) (2012): 225–33, at 231.
 - 24 It has been estimated that around 40 percent of male householders in late medieval London had some knowledge of Latin; Stanford E. Lehmberg, *A History of the Peoples of the British Isles*, vol. 1 (London: Routledge, 2002): 137.
 - 25 Stråland points out this detail in 'Medieval Medical Diagrams.'
 - 26 Luke Demaitre, *Medieval Medicine: The Art of Healing, From Head to Toe* (Santa Barbara, CA: Praeger, 2013): 15.
 - 27 Lynda Nead, 'Velocities of the Image c.1900,' *Art History*, 27 (5) (2004): 745–69, at 756.
 - 28 Linda Elaine Neagley, 'Portals of the Bayeux Tapestry: Visual Experience, Spatial Representation, and Oral Performance,' in *The Bayeux Tapestry: New Approaches*, eds Michael J. Lewis, Gale R. Owen-Crocker, and Dan Terkla (Oxford: Oxbow Books, 2011): 136–46, at 146.
 - 29 On subjectivity and active reading of images, see Suzanne Lewis, *Reading Images: Narrative Discourse and Reception in the Thirteenth-Century Apocalypse* (Cambridge: Cambridge University Press, 1995) and Carruthers, 'Ars oblivionalis, ars inveniendi.'