The Decline of Astrology in the Jonathan Dove Almanac Series

RYAN J. STARK

The Pennsylvania State University

Cet article montre comment les imprimeurs de Cambridge ont transformé les almanachs de Jonathan Dove en incluant graduellement les nouvelles tendances empiriques et en abandonnant les tendances ésotériques qu'ils contenaient, et ce pendant plusieurs décennies au-delà de la mort de l'auteur. En 1692, Dove, disparu à cette date, confesse sur un ton mélancolique que ses anciennes « prédictions astrologiques » étaient des vanités mensongères, aveux tardifs en regard des progrès de l'empirisme. Cet article offre une étude inédite de la démission de l'astrologue à travers l'histoire complète d'une série complète d'un almanach précis, d'autant plus que c'est précisément le caractère graduel de cet effondrement — qui s'avère ardu, complexe et confus — qui rend ce processus si instructif et fascinant.

Except for the Bible, no body of documents had a larger circulation in seventeenth-century England than astrological almanacs.¹ Moreover, almanacs played an important role in popularizing learning's advancements on several fronts, including medicine, historiography, and cosmology. The Jonathan Dove series (1627–1709) is particularly interesting along these lines, though it remains neglected. Critics have tended to discuss almanacs and new learning in a piecemeal fashion, discovering moments of innovation in various series and then generalizing that almanacs forwarded modernity.² This is an accurate claim, broadly speaking, but readers are left only with snapshots of key episodes in diverse texts, rather than a rich understanding of intellectual reformation as it runs its course—however leisurely and haphazardly—through an entire series, which is what this study seeks to accomplish. I show in particular how the Cambridge Printers and the London Stationers transform the Dove almanacs over a span of decades, steadily incorporating newly experimental ideas (in rudimentary ways) and slowly abandoning esoteric tendencies. Finally, in 1692, the long-dead “Dove” confesses that his previous “astrological predictions” were “lying vanities.”³ While readers do not discover an orderly moment in the series where the *Zeitgeist* shifts from an occult mentality to a scientific one, Dove's disavowal of astrology comes close.⁴ The 1692 almanac nonetheless contains num-

erous occult references, as do the subsequent almanacs through 1709. Like most changes in sensibility, this one involves a drawn out collection of adjustments in momentum and trajectory, big and small. The astrological worldview lingers, but it lingers more and more in the margins as the century progresses.

Several scholars have demonstrated how academic astrology was debunked in seventeenth-century England. Ann Geneva and Michael Hunter, for example, credit the emergence of latitudinarian science for the astrologer's demise, while Patrick Curry and Peter Wright point to the related phenomenon of Carolean politics as a significant culprit.⁵ My analysis highlights an additional and more peculiar catalyst. In an effort to keep pace with the times, the Printers and the Stationers—through the character of Dove—undercut the credibility of their own astrological almanacs, in what amounts to an extended period of textual drift toward the new empiricism. In the case of the Dove series, the astrologer gradually self-destructs.⁶

A Note on the Dove Almanacs

The Dove almanacs are typical of the genre in terms of content and style. They are relatively brief, of low print quality, and sold for pence, not shillings.⁷ While readers might categorize the material in a variety of ways, it is probably best to say that the Dove almanacs contain three essential elements: (1) a calendar listing days and months, accompanied by observations about astrological conjunctions, phases of the moon, seasons, and eclipses; (2) basic and rather general prognostications concerning the weather, marriage, travel, husbandry, etc., based upon natural and judicial astrology; and (3) hodgepodge, including tables of weights and measurements, diagrams of the body's relationship to the zodiac, charts of movable feasts, defenses of astrology, models of the cosmos, and chronologies of the history of the world. Of these components, the hodgepodge fluctuates most often, which in turn most clearly shapes the nature of the given almanac. The other sections remain predictable. The calendar is always the calendar, and the prognostications always sound similar: one should not marry or perform medical procedures under certain conjunctions, especially those involving Saturn; eclipses and comets are to be treated as cautionary signs, and so on. In fact, the vagueness of predictions frustrated many critics of astrology at the time. As the author of *The Starr-Prophet anatomiz'd and dissected* announced in 1675, astrological prognostications are made "so cunningly and equivocatingly that, be the event what it will, still the words shall be capable of intimating it."⁸ The anonymous writer of *Poor Robin's Almanac* takes a more satirical approach, predicting in January of 1664 that readers should "this

month [...] expect to hear of the death of some man, or woman or child in either Kent or Christendom.”⁹

In contrast to the unsurprisingly vague prognostications, the hodgepodge in the series changes dramatically over the decades. The chronologies of the history of the world are of particular interest in this regard, and my argument foregrounds them. Almost all of the Dove almanacs contain a timeline that records important events in Western civilization, often going back to the Garden of Eden. These chronologies function in the same tradition as John More’s *A Table from the Beginning of the World* (1593), Christopher Helvicus’s *Historical and Chronological Theatre* (1609), and Anthony Munday’s *A Brieve Chronicle of the Successes of Times from Creation* (1611). And, as Robert Markley explains, such catalogues reveal “a master narrative [...] demonstrating the providential ordering of history,” a point amplified by Anthony Grafton, who characterizes Renaissance chronologies as providing a visual scheme of a metaphysical order.¹⁰ The Dove timelines are especially provocative in light of such arguments, because they are regularly modified. Consequently, the ontology of the series changes, a process that ultimately undermines the astrologer’s authority. What follows is a discussion of how the almanacs change over a span of several decades, focusing first upon alterations in the historical chronologies, and secondly upon broader shifts in the cosmological framework.¹¹

Chronologies of the History of the World

The 1627 Dove almanac contains a one-page catalogue of historical episodes entitled “A Brieve Chronologie of sundry Memorable Accidents.” Events include the following:

Since the worlds creation	5576
From the Creation to the Flood	1656
From Adam, until Christ	3949
The Passion of our Savior	1594
Since the building of Rome	2378
Since Brute entered into Brittain	2734
Since William the Conqueror	561
Since Martin Luther opposed the Pope	110
Since the Invention of Printing	181
Since the whole heavens seemed to burne	53
Since the last greate frost	19
Since the last blazing Starre	9 ¹²

The chronology helps to establish Dove's credibility. He appears as an erudite astrologer, a well-studied intellectual who has surveyed the history of the universe. Indeed, the timeline—though truncated—creates the impression of comprehensiveness, placing the astrologer in the laudable role of civilization's memory.¹³ English society in turn appears as the ordained heir of Western culture. The supernatural markers in the timeline are also notable: the burning heavens, a great frost, and a blazing star, occult portents that call for astrological interpretation. They presumably signal the unfolding of significant events, which astrologers have always claimed to be in a unique position to explicate.

Alongside the chronology, the Printers also supply a one-page chart of English kings and queens, beginning with William the Conqueror and ending with Charles I, "whom God grant long to reigne."¹⁴ This section, which complements the broader timeline, points to the astrologer's longstanding function as an advisor to the court. The royal chronology reinforces Dove's ethos and recalls in the readers' collective memory—however faintly—those more famous court astrologers and magicians in England's history, for example, Merlin and John Dee. And while these timelines are perhaps the most intriguing parts of the 1627 hodgepodge, other sections also support the astrologer's expertise. For instance, Dove discusses how planetary conjunctions persuade the human temperament and how the moon's cycles affect the tides, and he provides instructions on bloodletting, which should always be performed in strict accordance with astrological markers.¹⁵ In short, the Printers devote the entire hodgepodge to astrological and cosmological topics.

In 1631, the Printers alter the chronology in a couple of interesting ways. Recorded events now include the following:

Since the creation of the world	5580
Since the general deluge, called Noahs Floud	3924
Since the passion of our savior	1598
Since the destruction of Jerusalem by Titus	1561
Since S. John wrote his Revelation	1537
Since the first mayor of London	441
Since Martin Luther opposed the Pope	114
Since the massacre of Protestants in France	59
Since the whole heavens seemed to burn	57
Since our deliverance from the powder treason	26
Since the last blazing star	13 ¹⁶

The presence of John's revelation is new, and is probably the most significant addition to the timeline, because it strengthens the astrologer's oracular ethos. The Printers locate Dove in the righteous tradition of Christian *furor propheticus*, a

type of comparison that was commonplace in Renaissance divination. The anti-Catholic sentiment, too, is more robust in this version, given the new references to the massacre of Protestants in France and to the “powder treason.” While much tension existed between Anglicans and nonconformists in early seventeenth-century England, they also perceived a common enemy, Catholicism, and the new timeline underscores this point.

Additionally, the Printers supply for the first time in 1631 an impressive diagram of the body’s relationship to the zodiac—one full page—where astrological signs are shown to correspond to different parts of the human anatomy (Aries, head and face, Gemini, arms and shoulders, Sagittarius, thighs, etc.).¹⁷ The attractive chart, a familiar item in early modern astrology, helps Dove to offer medical advice based upon celestial configurations, which obviously bolsters his standing as an astrological advisor.

In 1636, the Printers expand the chronology in a most impressive way, producing nearly six pages of events in the history of the Western world.¹⁸ This catalogue—“A brief Chronological description of many things worthy of memory”—begins not with the creation of the world, however, but rather with “1764 [B.C.]: Gyges in Attica,” a reference to an ancient king who often consulted the oracle at Delphi. The reference to Gyges is perhaps a subtle attempt by the Printers to connect Dove to the renowned oracle.¹⁹ The timeline also contains additional forays into Greek and Roman history and mythology, not to mention references to important biblical episodes, though all of the biblical events arrive after the birth of Christ. In other words, stories from ancient Europe function as historical markers prior to Christ:

- 1314: Amphion the rare Harper about this time.
- 1270: Sphinx and Œdipus.
- 1238: Hercules kills the giant Cacus.
- 1221: The Labyrinth in Crete built by Dedalus.
- 1185: The Destruction of Troy.
- 1183: Aeneas Comes to Italy.
- 1108: Brute arrives in this Island, and soon after buildeth London.
- 989: York built about this time.
- 913: Homer Died.
- 772: The birth of Romulus and Remus.
- 300: Cambridge built about this time.²⁰

“God was Born of the Virgin Mary” occupies the middle of the list, and the chronology ends with such incidents as

- 33: The year was the death and passion of our Savior.

- 93: John banished to the Pathmos, where he received his Revelation.
- 177: Lucius began his reign about this year.
- 324: Constantine [...] the first Christian Emperor.
- 635: Cambridge made a University.
- 1066: England conquered by Duke William.
- 1517: Martin Luther writes against the Pope.
- 1605: The powder treason discovered.
- 1607: The Great Frost.
- 1630: On the 29 of May our young Prince Charles was born.
- 1633: The progress into Scotland by our gracious King Charles.²¹

The learned nature of the timeline certainly yields a clue about the almanac's intended audience, or at least one of the intended audiences. The Printers produce material for educated patrons. They assume sophistication in their readers, as is also evidenced by the regular use of Latin inscriptions throughout the series. "*Parve Eclipses parvum nocent*," Dove regularly advises: small eclipses cause little harm. Also notable is the timeline's accommodation of a variety of types of happenings, some "real" and some "mythical," some mundane and some supernatural. These distinctions, of course, are difficult to make in early seventeenth-century history writing, if not impossible. A modern science of history writing had not yet emerged, which is further exemplified by the poetic nature of the chronology. The early Dove timelines embody that mode of eclectic rhetoric so common in Renaissance historiography, a form of history writing driven by an epic outlook, one closer to Homer's and Dante's sensibilities than to Isaac Newton's. The 1636 chronology is a world away from the more empirically minded tradition of historiography anticipated in Newton's *Chronology of Ancient Kingdoms Amended* (1728), for example, which begins with the axiom that the ancient world is full of poetical fictions.

Also of note in the 1636 timeline is the new reference to Lucius, the legendary first Christian king of England and a figure who predates Constantine. The Printers now situate England not only as the heir of Western civilization, but also as the cradle of Christian Europe. Dove continues to serve as the memory of this lineage.

A lengthy epic chronology appears through the 1646 almanac. Beginning in 1643, however, the focus of the timeline changes, most probably because the London Stationers take control of the publication—a temporary shift of venue. This list of "Memorable Accidents" begins once more with the creation of the world, rather than "Gyges in Attica":

- 3948: The Creation of the World.
- 2292: In this year was Noah's Flood.
- 1864: In the beginning of the year, Abram received the promise.

- 1551: The birth of Moses.
- 1081: The destruction of Troy.
- 751: The building of Rome.
- 278: The Interpreters translate the bible.²²

Dove documents Christ's birth in the middle of the timeline, and the narrative ends with recent events:

- 95: About this time St. John writes his Revelation.
- 177: Lucius began his reign and in his time England received the Christian faith.
- 324: Constantine: he was the first Christian Emperor.
- 1066: England conquered by Duke William.
- 1190: The first Mayor of London.
- 1440: The invention of Printing.
- 1517: Martin Luther first teaches against the Pope's Indulgences.
- 1565: The Royal Exchange in London.
- 1572: The Massacre of Protestants at Paris.
- 1574: The whole heavens seem to burne. A great Blazing Star.
- 1607: The Great Frost.
- 1630: On the 29 of May our young prince Charles was born.
- 1635: The death of Old Thomas Parr.
- 1643: A note that on the 29 of March begins 19 yeare of our king.²³

From a rhetorical standpoint, the significance of this chronology—and those through 1646—is similar to the significance of the 1627 and 1636 catalogues. The device remains integral to the astrologer's ethos. It also operates as the most impressive aspect of the almanac's hodgepodge, though other sections continue to support Dove's credibility (e.g., a diagram of the body's relationship to the zodiac, medical advice based upon astrological conjunctions, etc.). The religiosity of the 1643 timeline, however, warrants interpretation, because it replaces the classical chronology, which the Stationers opt not to use—though they happily reprint various other sections from Cambridge. Perhaps the decline of a certain type of humanism in England has something to do with the change. Also, and on a related note, many intellectuals in the early 1640s were mindful of Puritan concerns about demonic practices in the popular culture. The Stationers more than likely preferred a detailed religious chronology because of the growing pressure to differentiate between astrology and demonic divination. In other words, there was a need, or even a demand, to verify Dove's pious context. William Lilly, the leading nonconformist astrologer of the period, felt this same pressure, causing him in 1646 to distinguish between his natural methods of fortune-telling and those preternatural practices found among diabolical sorcerers:

“All the Antagonists I meet mistake the ground of [the astrologer’s] Art” with “the darke Sentences of Oracles, [...] Sorcerers, Necromancers, Magicians” and “call us figure flingers” and “Stargazers,” but “what have we to do with Oracles? Do we raise the dead? Do we invoke Spirits, or consult with them? Do we use more than nature?”²⁴ Many theologians lumped astrologers and witches together as suffering from the same wicked impulse to communicate with demons, a diagnosis that has deep roots in Augustine, where most forms of prognostication and stargazing fall under the category of idolatry.²⁵ By highlighting the Judeo-Christian framework in which Dove functions, the Stationers guard against such connections between astrology and nefarious sorcery.

In 1647, the Stationers reduce the length of the almanac’s chronology, returning to a version of the one-page format last seen in the early 1630s. Concomitantly, they change other parts of the hodgepodge, in what amounts to a re-envisioning of the entire text, an alteration that holds in the 1650s and beyond, when the series returns to the Cambridge Printers. This is the first substantial modification in the almanac’s hodgepodge, and it sharply alters Dove’s ethos. The 1647 chronology includes the following citations:

Since the creation of the World	5657
Since Noah’s flood	4001
Since the Writing of the Revelation of St. John	1553
Since Cambridge was made University	1012
Since England was conquered by Duke William	583
Since the invention of Printing	207
Since the whole heavens seemed to burn	73
Since the powder treason	42
Since the great frost toward the end of this year	40
Since the last Blazing Star	29
Since Prince Charles was born	17
Since Tho. Par dyed, being 152 years old	12 ²⁶

Epic chronologies on a grand scale (i.e., several pages of citations) never again appear in the Dove series. And although the timeline continues to set the astrologer in the context of providential history since the beginning of the world, this history’s reduction in complexity—along with new additions to the hodgepodge—reveal a significant change in the arrangement and style of the almanacs. Empirical and analytical prose replace the other nine pages of the chronology eliminated in the 1647 hodgepodge. The Stationers, for example, add a new four-page section entitled “A Table of all the Shires, together with the number of Parishes contained in every Shire, both in England and Wales.”²⁷ As the title suggests, the table is a quantita-

tive list of parishes per shire, and it appears to have no connection to the practice of prognostication. Because the table supplants part of the epic chronology, an implication follows: Dove now values knowledge based upon utilitarian description more than knowledge based upon enchanted history. The Stationers condense the chronology because Dove's reputation begins to depend upon his ability to supply practical measurements, not upon his ability to keep track of numerous dramatic stories. That is, the astrologer's ethos is now tied more obviously to quantitative geographical exposition. Presumably, too, the parish count serves military and economic purposes. Documenting the number of orthodox congregations per region, Dove conveys useful knowledge for those in charge of defending Anglican interests against nonconformist advances.

The Stationers also add to the 1647 almanac a three-page section entitled "A brief touch concerning astrology."²⁸ For the first time, Dove becomes self-reflective about the tension between astrology and the new astronomy. The term "touch" softens the apologetic nature of the essay, which reads like a careful defense of astrology in light of scientific advances. "Astrology is an Art," Dove concludes, "which teacheth to know the mind or meaning of the Starres," in addition to the "motion" of the stars.²⁹ Dove distinguishes between astronomers and astrologers, noting that the former group merely investigates celestial motion, while the latter considers both "mind" and "motion." Astrologers, in other words, must first become practiced astronomers, before they interpret the mind of the stars, which in this case denotes the rhetoric of celestial movements, or what prognosticators throughout the Renaissance described as the speech of the stars, a characterization that should interest everyone who studies early modern rhetoric. In short, Dove insists that advances in science do not threaten but complement a more comprehensive astrological framework, an argument made by defenders of astrology in every era of scientific advancement, including our own. The London Stationers and then the Cambridge Printers make the argument even more adamantly in subsequent almanacs, where the "brief touch" concerning astrology is renamed. The new title, beginning in 1649, is "Astrology Defined and Defended."³⁰

The pruning of the 1647 chronology also leaves room in the almanac's hodgepodge for a new and interesting one-page section on astrology and medicine, where Dove contends, "Although Physicke is a perfect Science of it selfe, yet a physician cannot be perfect in his work without Astrologic."³¹ Discussing contemporary medicine, presumably, is more important than cataloging epic history. The privileging of Thomas Parr's death as the last great historical event in the reduced chronology of 1647 also points to a new interest in medical science. The death of Parr—the oldest

living Englishmen at 152 years—was a well-known episode in late Renaissance England. At the behest of Charles I, the royal physician William Harvey autopsied the body and attributed Parr's long life to the "purity" of country air, as opposed to the "filth" of city air, a reasonable diagnosis.³² Albeit subtle, Parr's prominent role in the reduced chronology provides more evidence that the Stationers take a new interest in scientific topics, however basic in scope.

Most leading physicians, of course, had already abandoned the astrological paradigm. Harvey strikes the vital blow in *The Circulation of the Blood* (1628), by grounding the impetus of the human circulatory system not upon planets and stars, but rather upon the internal configurations of individuals themselves. Discovering a new model of circulation, Harvey calls upon scientists to reject "the poet's tales and the rabble's absurdities," a reference mainly to astrological concepts of human biology.³³ For Harvey, the heart pumps the blood, not the sway of stars and planets, a discovery that begins the process of destroying the occult paradigm by which the body's circulatory system, and society's circulatory system, prove vulnerable to astrological motifs.

The brief 1647 chronology reappears in the almanacs through 1650. In 1651, however, the Printers omit the chronology. A sparse timeline re-emerges in 1655, but the absence of it in the early 1650s is notable. The omission signals that the metaphysical order embodied in the previous catalogues is no longer viable in the middle of the seventeenth century. For a short stretch, the Printers do not value the chronology as an important device for establishing Dove's ethos. What becomes more important in the 1651 almanac is the astrologer's ability to represent numerically the distances between towns in England. The Printers add to the 1651 almanac's hodgepodge a seven-page section entitled "The Geographical description of Wayes, from one notable Towne to another, over all England."³⁴ The lengthy section simply lists distances between major towns in England. No longer portraying the astrologer as the memory of Western civilization—perhaps the most important rhetorical function of the earlier chronologies—the Printers instead set Dove in the measured context of current English geography. The world shrinks. Moreover, the astrologer appears in this smaller world as a civil engineer of sorts, a proto-empiricist who has quantified his immediate surroundings in order to speak with more dispassionate objectivity about them.³⁵ In order to maintain the almanac's role as an authoritative document, Dove now emphasizes quantification and plain description.

A scant chronology reappears in the 1655 almanac. It is not much to behold. It occupies less than one half of a page, contains no references to occult portents

(unless we count the “Flood”), and provides no anti-Catholic remarks. The focus is somewhat unusual, in fact, especially when set against the earlier timelines:

Creation of the World	5659
Flood of Noah	4002
Building of London	2762
Death of Alexander the Great	1978
Constitution of the Julian Year	1699
Passion and Death of Christ	1622
Correction of the Kalender by P. Gregory	73 ³⁶

A case could be made that the Printers long for some type of high church unity against nonconformism and fanaticism in England, given the seemingly neutral treatment of Catholicism through the references to Julian and Gregory, and given as well the absence of a powder-plot citation, a reference to the massacre of Protestants in France, a note on Luther, and so forth. Still, the limited evidence invites other speculations. The terse chronology might simply be an attempt to evade controversy altogether, while still maintaining Dove’s role as the memory of Western history. After all, the horrors of civil war loomed in the imaginations of readers, and the Printers—no doubt—were mindful of the very real punishments that accompanied hints of troublemaking and sedition. The intellectual circumstances of the time favoured caution. The Printers would have seen little advantage in stirring up intrigue by referring to contemporary politics, a point that goes by the wayside a few years later, when Dove begins regularly to characterize 1649 as the year in which “His Royal Majesty” was “most barbarously murdered.”³⁷

The 1657 almanac contains a slightly larger and more detailed chronology, occupying one full page. It includes events such as the “Creation of the World” 5665 years past, the “Flood of Noah” 4004 years past, and the “Building of London” 2764 years past, an event which precedes the building of Rome.³⁸ But the absence of occult portents remains noticeable, and the focus remains peculiar:

Building of the Tower in London	2066
Death of Alexander the Great	1980
Building of Cambridge	1957
Conquest of Britain by Julius Cesar	1710
Constitution of the Julian year	1701
Baptisme of Christ	1635
Death of Christ	1627
Destruction of Jerusalem by the Romans	1587 ³⁹

The destruction of Jerusalem is an unexpected stopping point, primarily because it is so far removed from contemporary life in England. Again, perhaps the Printers desired to avoid intrigue. Or, maybe the Printers used the destruction of Jerusalem as a cryptic allegory against Oliver Cromwell's ascension, where Jerusalem functions as a metonym for London under Charles I. This reading may seem strained, but it is certainly not out of the question. The connection between Jerusalem and London is commonplace in early seventeenth-century British political allegory, and it seems reasonable that the Printers might make use of the trope in order to lament the King's fall. In either case, the historical timeline ends abruptly and at a safely distant moment.

The timelines are similar from 1657 to 1661, all ending with the destruction of Jerusalem, but in 1662 the Printers add new references to the chronology's conclusion:

Birth of Christ, by true account	1666
Birth of Christ, by common account	1662
Baptisme of Christ	1636
Death of Christ	1632
Destruction of Jerusalem by the Romans	1592
Lucius the First Christian King	1485
Constantine the first Christian Empereur	1339 ⁴⁰

The Christian kings are probably not invoked by happenstance. The Printers, I speculate, prepare an ancient context for the return of Charles II. And immediately following a similarly brief chronology in 1663, Dove finally celebrates the monarch's homecoming: "And note that on the 30th day of January the fifteenth year of our royal King CHARLES the second beginneth, Whom God preserve."⁴¹ In what amounts to an Anglican erasure of Cromwell, the astrologer commemorates the King's continuous rule, now in its second decade. The Restoration appears to be secure.

It should also be noted that the Printers continue throughout the 1650s and 1660s to supply sections organized around quantitative description and analysis. While they stop documenting the number of Anglican parishes per shire in the 1650s, they add new explanations on how to calculate percentages of interest to be charged for loans, how to exchange currency, how to measure various distances, how to determine the day upon which Easter falls in the foreseeable future, and so forth. These types of discussions also frequently appear in the later almanacs of the 1680s and 1690s, and they help to solidify the modern utilitarian aspects of Dove's sensibility.

From 1663 to 1673 the Printers provide one-page chronologies, though the content fluctuates in some notable ways. The 1665 and 1666 chronologies end with the citation “A great and terrible destructive wind—1662.”⁴² This reference arrives immediately after Lucius and Constantine, the standard and very distant stopping points in the previous chronologies from 1657–1664. More than a millennium separates the new citation—”destructive wind”—and the old ones. Why add the recent event? The Printers’ rationale is obviously occult. From the standpoint of both judicial and natural astrology, highly unusual events in the weather almost always foretell calamity, an ancient idea that Shakespeare aptly exploits (e.g., *Macbeth*, *King Lear*, etc.), as do most Renaissance writers of drama and poetry, a large number of whom believed in some version of astrology. In the case of the Dove chronologies, the Printers use the storm as a portent foreshadowing the plague of 1665. For a similar reason, Dove—in the 1667 timeline—calls attention to a “Blazing Star” in 1664, which presumably portended London’s great fire.⁴³ While these references are obviously belated, they nonetheless support the general mode of astrological history at work in the texts. The Printers once again abandon the conventional chronology in the 1668 and 1669 almanacs, and instead produce a list of English kings and queens, starting with Charles II and going back to William the Conqueror in 1066.⁴⁴ While these are timelines of a type, they serve a decidedly provincial function, reinforcing Charles II’s rule and figuring the astrologer as the memory of the English court, not as the memory of Western civilization writ large. The Printers return to a complete though brief chronology in the early 1670s, and so the courtly timeline is temporary. The fluctuation is nonetheless significant, because it shows a degree of indifference toward epic history, or at least a degree of inattentiveness. We should not make too much of these temporary lapses, but the fact that they exist at all reveals a less than ironclad commitment to the grand and poetic dimensions of historiography contained in the earlier timelines.

Brief chronologies appear once again from 1670–1672, beginning with the creation of the world and stopping with recent events such as “The Powder Treason” 67 years past, “The Great Frost” 65 years past, and “the lamentable Fire which burnt London” six years past.⁴⁵ Absent (temporarily) are references to destructive winds and blazing stars, although the “Great Frost” invites judicial observations. The main point to be noticed in the timelines of the early 1670s, however, is the return of an anti-Catholic sentiment. Charles II’s telling alliance to Catholic France was coming to light, and the emphatically Catholic James II loomed in the background as the heir to the kingdom. Put simply, the English Reformation was in peril, and the Printers responded by producing Protestant minded timelines.

From the middle 1650s to the early 1670s, the Printers furnish short timelines. In 1673, they introduce once more a detailed five-page chronology of events entitled “A brief account of the most remarkable passages which have happened in England since the year 1640, the year begin at Jan. 1.”⁴⁶ This is by far the longest catalogue of history in the hodgepodge since the 1640s. But unlike the earlier epic chronologies, the focus here is upon recent and mostly “realistic” English history:

- 1640: The long Parliament began.
- 1641: The Prince of Orange was married to the lady Mary.
- 1645: The Arch-bishop of Cant. beheaded.
- 1649: His Royal Majesty most barbarously murdered, Jan. 30.
- 1651: King Charles II crowned at Schoon in Scotland, Jan. 1.
- 1652: A great sea fight between the English and the Dutch, wherein the Dutch were worsted.
- 1656: The River Thames ebbed and flowed twice in hours.
- 1658: Oliver died, September 3.
- 1661: King Charles II crowned at Westmin.
- 1664: Three comets appeared in a short time.
- 1665: The great Plague of London began 1665.
- 1666: The sad fire in London.
- 1673: Several Sea fights between the English and the Dutch.
- 1674: A Peace concludeth between the English and the Dutch, Feb. 9. ⁴⁷

A few astrological markers persist. Dove takes note of “three comets” in 1664, and in 1656, he notices strange ebbs and flows in the Thames. Nonetheless, this chronology is different in kind from the earlier ones. The “brief account” no longer sets England at the centre of a rich and supernatural narrative going back to the beginning of the world, or even back to Gyges in Attica. Rather, the timeline provides a more or less ordinary representation of the social situation in England over the past three decades. History shrinks. This is not an anatomy of the world, to echo John Donne, but rather an anatomy of contemporary England, where little interest is paid to the long and charmed history that gave rise to the present circumstances.⁴⁸ The ontological order embedded in the earlier chronologies now seems utterly antiquated. The replacement of a comprehensive mystical narrative, even in its reduced form, with this instrumental story of English politics since 1640 reveals the most profound shift in the chronologies and in the overall mood of the series. The designs of the chronologies after 1673 are best described as parochial and limited. And while the idea of deism had not yet fully emerged in English theology (e.g., John Toland’s *Christianity not Mysteriorious*, 1696), one nonetheless gets the feeling of an increasingly disinterested cosmos while perusing these later Dove timelines, which are driven primarily by

the rudimentary tenets of newly empirical and provincial historiography, a mode far removed from the epic outlook discovered in the earlier catalogues.

The final shift in the Dove timelines occurs in 1686. Rather than starting in 1640, as had been the custom between 1673–1685, the Printers now return to the date of 1558, beginning with the rise of Elizabeth and ending with the crowning of James II in 1685.⁴⁹ These chronologies portray recent and mostly down-to-earth English history, and they do so from a resolutely Protestant standpoint. In fact, the main intrigue with the new starting date is a matter of theology and politics. The Printers—like most English Reformers—undoubtedly felt anxiety about James II's Catholicism, and so the invocation of Elizabeth should be read as an argument. The Printers reframe English history in order to highlight the importance of the Reformation, especially as it was solidified through Elizabeth—the English Helena—a figure commensurable with Lucius and Constantine. Given the widespread circulation of almanacs, it is fair to assume that the Dove series played an under-appreciated role, if appreciated at all, in supporting William and Mary and disparaging James II and his advocates (e.g., John Dryden, Thomas Southerne, etc.). Regardless of this new religious and political intrigue, however, the timelines remain decidedly parochial, especially when compared to the earlier grand chronologies.

Cosmology

Dove defends Tycho Brahe's geo-heliocentric model of the universe in 1636. This is the first definitive statement of cosmology in the series, even though numerous Tychonic measurements appear in the earlier almanacs. Tycho preserves the earth's place, and so too humanity's, at the centre of the cosmos, while moving beyond Ptolemaic inaccuracies, which is why many Renaissance astrologers were attracted to his model. In a section entitled "An Eclipse of the Moon visible in our Horizon," Dove predicts lunar eclipses "according to the accurate observations of the noble Tycho."⁵⁰ In support, he produces a crude one-page diagram entitled "A figure of the Spheres."⁵¹ The diagram illustrates the basic shape of geo-heliocentrism, where the sun revolves around the earth and the planets revolve around the sun, but the graphic provides no technical details. Most notably, it lacks a realm of fixed stars, which is to say that it lacks an absolute frame of reference. Dove takes little interest in the mechanics of Tycho's system. He simply clarifies that the renowned astronomer refutes the "opinion which some maintain about the motion of the earth."⁵² Acknowledging Copernican thought in 1636, Dove dismisses it without argument,

using the fourth book of John Swan's *Speculum mundi* (1635) as evidence.⁵³ He does not discuss how Swan defeats Copernicanism, just that he does.

The reference to Swan shows that the Printers were up-to-date regarding advances in geo-heliocentric astronomy, though for many new philosophers, and for some astrologers, Tycho's system had already fallen out of favour. In 1576, Thomas Digges defended Copernicanism in his father's (Leonard Digges's) *Prognostication*, and by the 1630s, heliocentrism had gained the upper hand in many scientific circles.⁵⁴ Still, there were serious scientists who continued to defend Tychonic cosmology through the 1650s, while others expressed ambivalence. Thomas Browne, for example, refers to the possible truth of the "Copernican hypothesis" in *Religio Medici* (1645).⁵⁵ Browne's remark, less than purely ironical, comes more than a century after Copernicus published *On the Revolutions of the Heavenly Bodies* (1543), and to some of his readers it must have seemed nostalgic. Milton's willed geocentrism in *Paradise Lost* (1667), however, is of an entirely different sort. By the late 1660s, Tycho's system had collapsed, along with other variations of geocentric thought, a point that Milton probably accepted as a matter of cosmology, but not as a matter of aesthetics.

The Stationers amplify the astrologer's Tychonic commitments in 1649, adding a new table of measurements entitled, "Of the bigness of the superior bodies, compared with the Earth, according to Tycho Brahe, Phoenix of Astronomers."⁵⁶ The chart displays the sizes of the seven planets in relation to the earth, and it is important because for the first time Dove fully articulates the mathematical dimensions of Tycho's cosmology: the sun is 140 times "greater than the earth" (as opposed to 666 times, which is the occult number reported in the 1634 almanac).⁵⁷ Saturn is 22 times and Jupiter 14 times "greater than the earth."⁵⁸ Mars is 13 times "less than the earth," while Venus is 6 1/2 times, Mercury "19" times, and the moon 42 times "less than the earth."⁵⁹ The sphere of the fixed stars hovers "3951400 miles" above the earth, and the globe of the earth has "of square cubical miles 170043768595."⁶⁰ Tychonic measurements pervade the 1649 almanac, situating the astrologer as a believable authority in a universe built upon non-magical numbers. Whether the numbers are completely accurate is beside the more important idea. The Stationers now tie Dove's ethos more fully to quantitative exposition. Recall, too, that beginning in 1647 the Stationers reduce the size of the epic chronology in order to make way for more empirically minded sections, of which the 1649 discussion of Tychonic mathematics is one.

The Printers add to the 1655 almanac another argument reinforcing Tycho's cosmology: "A Brief description of the world, shewing what it is, and of what parts it consisteth."⁶¹ This three-page section covers a host of cosmological issues, including an explanation of "the Christalline heaven, the first mover which once in 24 houres

carries [the stars] round about the earth.”⁶² Regarding the fixed stars, Dove provides the standard Thomistic thesis that the “celestial bodies [...] commend the wisdom and goodness of the glorious God.”⁶³ The astrologer’s role is “to search the abstruse mysteries thereof.”⁶⁴ The description ends with an epideictic note about “Trenoble” Tycho, whose “unparalleled instruments” and “infallible observations” offer the best model for astrologers and astronomers.⁶⁵ Dove idealizes geo-heliocentric mathematics to the extreme. The description of Tycho’s “infallible observations,” in particular, has a powerful religious resonance. By the standards of Catholic doctrine, the Pope is said to make infallible theological judgments. Dove claims a similar type of infallibility on matters of cosmology for the Tychonic astronomer, who now seems above reproach.⁶⁶ After the apotheosis of Tycho, the Printers also offer a full diagram of Tychonic cosmology. Unlike the crude graphic in 1636, this one contains an illustration of the entire cosmos, including the fixed stars, and so the Printers supply for the first time an image of the cosmological framework whereby the earth’s place at the centre of the universe is unequivocally verified, preserving the mathematical starting point of ancient astrology: an immovable globe.

Tycho’s cosmology remains intact in the 1673 almanac—the one in which the most important shift in the chronology occurs. In a section entitled “Some Observations on Planets,” Dove favourably refers to Tycho seven times, continuing to praise his infallible observations.⁶⁷ Geo-heliocentrism, of course, had by now become a curiosity among mainstream scientists, though one would not get this impression while reading Dove, and neither would one get this impression while studying several seventeenth-century university curriculums, as John Gascoigne demonstrates.⁶⁸

The firm Tychonic commitment on the part of the Printers holds throughout the 1670s. In 1680, however, the Printers show the first signs of anxiety regarding Tycho’s cosmology, as is evidenced by a new section entitled “A brief and Rational account of the Natures, Qualities, and Sexes of the Planets.”⁶⁹ Most of the passage concerns itself with the astrological connotations of planets, but near the end of the section Dove raises the possibility of heliocentrism, an idea not discussed since it was rejected in the 1630s: “The Sun the fountain and original of heat and light is placed by late Astronomers in the center of the world moving about his own axis; and by virtue of this motion are the rest of the planets moved.”⁷⁰ The astrologer blandly comments upon this development: “I shall not now show the reasons that induced some to count the sun to be the center of the universe.”⁷¹ Dove neither endorses nor rejects heliocentrism, and this wishy-washiness—by its very nature—represents a significant step forward from the earlier and unambiguous defenses of Tychonic cosmology. Tycho’s infallibility now seems questionable.

Four years later, in what amounts to another small step toward the new experimentalism, Dove describes the appearance of the moon's "sinking cavities" and "swelling Protuberances" as seen through a "telescope."⁷² In comparison to other almanacs, the Dove series is late in mentioning the telescope. In 1624, John Rudston published descriptions of the moon and Jupiter as perceived through Galileo's device.⁷³ Dove does not discuss this technology in any detail, but the mentioning of the telescope in 1684, like the mentioning of heliocentrism in 1680, adds to the overall development of his modern scientific ethos.

A new section entitled "Arguments proving the Motion of the Earth" appears in the 1689 almanac—out of the blue. Dove adjudicates two views of the earth's place in the cosmos: geocentrism and heliocentrism.⁷⁴ Inexplicably, Tycho's geoheliocentrism has disappeared. The problem with geocentrism, Dove argues, is the idea that the fixed stars make a full revolution every 24 hours, through "spaces incomprehensible," as Adam notes to Raphael in *Paradise Lost* (8.20).⁷⁵ After explaining that it takes Jupiter twelve years and Saturn 30 years to revolve around the sun, Dove observes,

But the Sphere of the fixed Stars being almost infinitely higher than the Sphere of Saturn, and so consequently so much greater, either must move not at all or else slowest of all; so that it seems very absurd to attribute the swiftest motion to the Sphere, supporting it to complete its Revolution in a day.⁷⁶

Consequently, the astrologer announces, "none can imagine it possible, that a Physical body [i.e., a fixed star] should run through such a vast space, in so little time."⁷⁷ The inevitable conclusion is that the earth rotates on its axis and revolves around the sun. For the first time in the series, Dove acknowledges that the earth is in motion. The starting point of ancient astrology is now untenable, though this fact does not deter Dove from making astrological references in other sections of the almanac.

The final cosmological shift in the series occurs in 1692. The Printers add a peculiar one-page section entitled "Of the efficacy of the Stars," where the astrologer confesses the following: "It were indiscretion, and a discommendable thing, to give too much credence to the motion and disposition of the stars, especially concerning the foretelling thereby, what shall be the future estate of men and things on earth in time to come."⁷⁸ Near the end of the same paragraph, the now old-fashioned Dove refers to his previous "astrological predictions" as "lying vanities."⁷⁹ While the 1692 almanac contains several astrological references, the Printers obviously no longer hold in high regard the practice of judicial astrology. The stars do not speak to the world, which probably explains the section's gloomy tone. The principles and at-

titudes of the new empiricism form a critical mass in the 1692 almanac, definitively undercutting the astrologer's credibility.

Conclusion

A cursory examination of the Dove almanacs reveals how the Cambridge Printers and the London Stationers altered key sections in the texts as the century progressed, moving the series from an oracular sensibility in the 1630s to a mostly utilitarian sensibility by the mid-1670s. Dove finally accepts heliocentrism in 1689, a peculiar moment of belated revelation. In 1692, he disavows divinatory astrology altogether, announcing with confidence that his own previous prognostications were "lying vanities." At this point, for all practical purposes, Dove's astrology collapses. The lesson of this collapse, however, is a bit more difficult to identify. Astrological almanacs continued to be hugely successful in the Age of Reason. While the Dove series met its demise in 1709, the Company of Stationers secured large audiences for other books throughout the eighteenth century (e.g., the John Partridge almanacs).⁸⁰ In fact, astrology has survived and thrived in every age, as have many other forms of *esoterica*: chiromancy, witchcraft, theurgy, natural magic. One would be hard pressed to discover in Western history an era in which astrology did not flourish, and this includes our own. Therefore, we should be cautious when approaching the decline of the astrologer's ethos in seventeenth-century England, because this decline only happens among certain groups and within certain publications, some of them unexpected, for example, the Dove almanacs.

Notes

1. Bernard Capp reports that one of every three English households in the middle of the seventeenth century owned an almanac (*Astrology and the Popular Press: English Almanacs, 1500–1800* [London: Faber, 1979], pp. 22–23). This statistic informs Keith Thomas's description of almanacs as "the most widespread form of fugitive literature in early modern England" (*Religion and the Decline of Magic: Studies in Popular Beliefs in Sixteenth and Seventeenth-century England* [London: Weidenfeld and Nicholson, 1971], p. 292).
2. This piecemeal method marks the watershed arguments of Capp and Thomas, and, more recently, of Louise Hill Curth. See, for example, Curth, "The Medical Content of English Almanacs 1640–1700," *Journal of the History of Medicine and Allied Sciences* 60 (2005), pp. 255–82.

3. Jonathan Dove, *An Almanack for the year of our Lord God 1692* (Cambridge: Printed by John Hayes, 1692), p. C4^v. Dove was more than likely a cobbler who sold his name to the Cambridge Printers. See Capp, p. 358; *The Roxburghe Ballads*, ed. J. Woodfall Ebsworth, 9 vols. (Hertford: The Ballad Society, 1871–1897) vol. 7, p. 634. Tim Feist, however, argues that no such person existed, characterizing Dove as one more bird-themed fictional character invented by clever publishers, along with Fly, Swallow, and Robin (“Stationer’s Voice: Almanacs in the Early Eighteenth Century,” *Transactions of the American Philosophical Society* 95 [2005], p. 44). Regardless of Dove’s existence, this much is clear: the Cambridge Printers and the London Stationers—who take hold of the series for a brief stretch in the 1640s—were in charge of content. I believe that Dove existed, and while I have yet to determine when he died, the fictional Poor Robin provides a useful clue, noting in 1675 that Dove wrote almanacs “thirty years” after his passing, which places the namesake’s death in the 1640s (*An Almanack after a new fashion* [London: Printed for The Company of Stationers, 1675], p. A1^v).
4. On the distinction between scientific and occult mentalities, including the continuums contained therein, see Brian Vickers, “Introduction,” in *Scientific and Occult Mentalities in the Renaissance*, ed. Vickers (Cambridge: Cambridge University Press, 1984), pp. 1–56. See also Stuart Clark, *Thinking with Demons: Ideas of Witchcraft in Early Modern Europe* (Oxford: Clarendon Press, 1997), pp. 214–94; Frances A. Yates, *The Rosicrucian Enlightenment* (London: Routledge, 1972).
5. Ann Geneva, *Astrology and the Seventeenth-Century Mind: William Lilly and the Language of the Stars* (Manchester: Manchester University Press, 1995); Michael Hunter, *Science and Society in Restoration England* (Cambridge: Cambridge University Press, 1981); Patrick Curry, *Prophecy and Power: Astrology in Early Modern England* (Cambridge: Cambridge University Press, 1989), and “Saving Astrology in Restoration England,” in *Astrology, Science, and Society: Historical Essays*, ed. Curry (Woodbridge: Boydell, 1987), pp. 245–59; Peter Wright, “Astrology and Science in Seventeenth-century England,” *Social Studies of Science* 5 (1975), pp. 399–422. See also William E. Burns, “Astrology and Politics in Seventeenth-Century England,” *The Seventeenth Century* 20 (2005), pp. 242–53.
6. Thomas and Capp note how several astrologers participated in astrology’s decline. See Thomas, pp. 283–322; Capp, p. 199. My study, however, is the first (or at least the first to be published) to examine the astrologer’s demise through the full history of a particular almanac series. Furthermore, it is precisely this gradualism—arduous, complex, and messy—that proves most instructive.
7. On the content of early modern almanacs, see Louise Hill Curth, *Astrology, Almanacs, and the Popular Press, 1550–1700* (Manchester: Manchester University Press, 2006); Thomas, pp. 293–305; E.F. Bosanquet, *English Printed Almanacs and Prognostications* (London: The Bibliographical Society at the Chiswick Press, 1917).
8. J.S., *The Starr-Prophet anatomiz’d and dissected* (London: Printed for M.D, 1675), p. 25.
9. *An Almanac after a New Fashion* (London: Company of Stationers, 1664), p. B1^r.

10. Robert Markley, *Fallen Languages: Crisis of Representation in Newtonian England, 1660–1740* (Ithaca: Cornell University Press, 1993), p. 92; Anthony Grafton, *Joseph Scaliger, A Study in the History of Classical Scholarship* (Oxford: Oxford University Press, 1993), pp. 1–139. Capp, in *Astrology and the Popular Press*, also devotes considerable attention to historical chronologies.
11. I am treating the Cambridge Printers and the London Stationers as institutional agents or agencies—architectonic forces. Various names turn up in the role of printer for the almanacs, including Th. Buck (1640), Roger Daniel (1641), A.N. (1643), T.W. (1649), John Field (1657–1670), and John Hayes (1671–1709). At other times, “Universitie of Cambridge” or “Company of Stationers” appears. While book history obviously plays a role here, my emphasis falls upon the character of Dove as he winds his way through seventeenth-century England. Also, the most intriguing shifts in the almanacs do not correspond to changes in editorship. On the history of printing at Cambridge University, see David McKitterick, *A History of the Cambridge University Press, Volume 1: Printing and the Book trade in Cambridge, 1534–1698* (Cambridge: Cambridge University Press, 1992), pp. 217–362. On printing in seventeenth-century England, see Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago: University of Chicago Press, 1998).
12. Dove, *A prognostication for the yeare of our Lord God 1627* (Cambridge: Printed by the Printers to the Universitie of Cambridge, 1627), p. B1^r.
13. Chronologies in almanacs represent the most extensive register of memory’s transition in early modern culture to a print based canon. On memory in transition, see David Cressy, *Bonfires and Bells: National Memory and the Protestant Calendar in Elizabethan and Stuart England* (Berkeley: University of California Press, 1989); Walter Ong, *Orality and Literacy: the Technologizing of the Word* (New York: Methuen, 1982), pp. 141–47; Frances A. Yates, *The Art of Memory* (Chicago: University of Chicago Press, 1966), pp. 368–89.
14. Dove, *A prognostication for 1627*, p. B1^v.
15. Dove, *A prognostication for 1627*, pp. B3^r–C3^r.
16. Dove, *A new Almanack for the yeare since the nativity of our Savior MDCXXXI 1631* (Cambridge: Printed by the printers to the Universitie of Cambridge, 1631), p. A2^r.
17. Dove, *A new Almanack for 1631*, p. C2^v. A version of this diagram appears in the almanacs through 1685. On the basic tenets of astrological medicine, see D.P. Walker, “The Astral Body in Renaissance Medicine,” *Journal of the Warburg and Courtauld Institutes* 21 (1958), pp. 119–33.
18. Dove, *An Almanack for the yeare of our Lord God 1636* (Cambridge: Printed by the printers to the Universitie of Cambridge, 1636), pp. B4^r–C2^v.
19. Dove, *An Almanack for 1636*, p. B4^r.
20. Dove, *An Almanack for 1636*, p. C1^v.
21. Dove, *An Almanack for 1636*, p. C2^v.
22. Dove, *An Almanack for the yeare of our Lord God 1643* (London: Printed by A.N. for the Company of Stationers, 1643), pp. C1^r–C2^v.

23. Dove, *An Almanack for 1643*, pp. C2^v–C4^v.
24. William Lilly, *Englands propheticall Merline*. London, 1644, p. B^v. The royalist astrologer John Gadbury raises a similar concern in the *Nativity of the late King Charls* (London, 1659), “Epistle to the Reader,” noting that many sorcerers “shrowd” themselves “under the branches [of astrology],” professing “great skill in Conjuraton, Necromancie, Theurgie, [and] the Cristal,” but “question with them concerning [the astrological] Art,” and one receives no “true satisfaction.” Gadbury distances himself from what he perceives to be the demonic side of rhetoric and prophecy.
25. See Augustine, *On Christian Doctrine*, trans. D.W. Robertson (New York: Library of Liberal Arts, 1958), pp. 55–65; *City of God*, trans. Marcus Dodds (New York: The Modern Library, 1950), pp. 142–51.
26. Dove, *An Almanack for the yeare of our Lord God 1647* (London: The Company of Stationers, 1647), p. C1^v.
27. Dove, *An Almanack for 1647*, p. C5^r.
28. Dove, *An Almanack for 1647*, p. C3^v.
29. Dove, *An Almanack for 1647*, p. C3^v.
30. Dove, *An Almanack for the yeare of our Lord God 1649* (London: Printed by T.W. for the Company of Stationers), p. C3^r. Several intellectuals of the period attempted defenses of astrology—or at least inquiries into astrology—based upon newly scientific methodologies, including Francis Bacon, Robert Fludd, Christopher Heydon, Joshua Childrey, and Thomas Streete. Childrey’s *Syzygiasticon instauratum* (1653) and *Britannia Baconica* (1662) are especially intriguing, but the most famous is Bacon’s call for a sane astrology in *De Augmentis Scientiarum* (1623), which Don Cameron Allen explicates in *The Star-Crossed Renaissance: The Quarrel about Astrology and its Influence in England* (Durham, NC: Duke University Press, 1941), p. 152. On connections between Renaissance astrology and astronomy, see Peter Dear, *Revolutionizing the Sciences: European Knowledge and Its Ambitions, 1500–1700* (Princeton: Princeton University Press, 2004), pp. 18–29.
31. Dove, *An Almanack for 1647*, p. C8^r.
32. William Harvey, “The Anatomical Examination of the Body of Thomas Parr,” in *The Works of William Harvey*, trans. Robert Willis (London: Johnson Reprint Corporation, 1968), p. 591. On some of the social implications of Harvey’s work, see Elizabeth Spiller, *Science, Reading, and Renaissance Literature: The Art of Making Knowledge, 1580–1670* (Cambridge: Cambridge University Press, 2004), pp. 59–100; Alan Clarke Shepard, “Harvey’s Royalism and His Autopsy of Old Parr,” *University of Toronto Quarterly* 65 (1996), pp. 482–505.
33. William Harvey, *Circulation of the Blood and Other Writings* (London: Everyman’s Library, 1990), p. 5. On the advancement of medicine in Renaissance and Restoration England, see Andrew Wear, *Knowledge and Practice in English Medicine, 1550–1680* (Cambridge: Cambridge University Press, 2000).
34. Dove, *An Almanack for the yeare of our Lord God 1651* (Cambridge: Printed by the printers to the Universitie of Cambridge, 1651), p. C5^r.

35. Dove, *An Almanack for 1651*, p. C4^v.
36. Dove, *An Almanack for the yeare of our Lord God 1655* (Cambridge: Printed by the printers to the Universitie of Cambridge, 1655), p. A1^v.
37. Dove, *An Almanack for the year of our Lord God 1673* (Cambridge: Printed by John Hayes, 1673), p. A3^r.
38. Dove, *An Almanack for the yeare of our Lord God 1657* (Cambridge: Printed by J. Field, 1657), p. A1^v.
39. Dove, *An Almanack for 1657*, p. A1^v.
40. Dove, *An Almanack for the year of our Lord God 1662* (Cambridge: Printed by John Field, 1662), p. A1^v.
41. Dove, *An Almanack for the year of our Lord God 1663* (Cambridge: Printed by John Field, 1663), p. A1^v.
42. Dove, *An Almanack for the year of our Lord God 1665* (Cambridge: Printed by John Field, 1665), p. A1^v.
43. Dove, *An Almanack for the year of our Lord God 1667* (Cambridge: Printed by John Field, 1667), p. A1^v.
44. Dove, *An Almanack for the year of our Lord God 1668* (Cambridge: Printed by John Field, 1668), p. A1^v.
45. Dove, *An Almanack for the year of our Lord God 1670* (Cambridge: Printed by John Hayes, 1670), p. D4^v.
46. Dove, *An Almanack for 1673*, p. A2^v.
47. Dove, *An Almanack for 1673*, pp. A2^v–A4^r.
48. John Donne, "An Anatomy of the World," in *Selected Poetry* (Oxford: Oxford University Press, 1998), pp. 158–69.
49. Dove, *An Almanack for the year of our Lord God 1686* (Cambridge: Printed by John Hayes, 1686), pp. A2^v–A4^r.
50. Dove, *An Almanack for 1636*, p. C4^r.
51. Dove, *An Almanack for 1636*, p. C5^v.
52. Dove, *An Almanack for 1636*, p. C6^r. Tycho's geo-heliocentric model first appeared in his *De Mundi Aetherei recentioribus Phaenomenis* (1588). On Tycho's cosmology, see Albert Van Helden, *Measuring the Universe: Cosmic Dimensions from Aristarchus to Halley* (Chicago: University of Chicago Press, 1985), pp. 41–53; Christine Jones Schofield, *Tychonic and Semi-Tychonic World Systems* (New York: Arno Press, 1981).
53. Dove, *An Almanack for 1636*, p. C6^r.
54. Thomas Digges, *A Prognostication* (London: Printed by Thomas Marsh, 1576), p. D4^r.
55. Browne, *Religio Medici* (London: Printed for Andrew Crooke, 1645), p. 173.
56. Dove, *An Almanack for the yeare of our Lord God 1649* (London: Printed by T.W. for the Company of Stationers, 1649), p. C4^r.
57. Dove, *An Almanack for 1649*, p. C4; Dove, *An Almanack for the yeare since the nativity of our Savior 1634* (Cambridge: Printed by the printers to the Universitie of Cambridge, 1634), p. C1^v.
58. Dove, *An Almanack for the yeare of our Lord God 1649*, p. C4^r.

59. Dove, *An Almanack for 1649*, p. C4^r.
60. Dove, *An Almanack for 1649*, p. C4^r.
61. Dove, *An Almanack for 1655*, p. C1^r.
62. Dove, *An Almanack for 1655*, p. C1^r.
63. Dove, *An Almanack for 1655*, p. C1^v. On Thomistic cosmology and astrology, see Gale Christianson, *This Wild Abyss: The Story of the Men who Made Modern Astronomy* (London: Free Press, 1978), pp. 97–110.
64. Dove, *An Almanack for 1655*, p. C1^v.
65. Dove, *An Almanack for 1655*, p. C1^v.
66. On rhetoric, religion, and Renaissance cosmology, see Jean D. Moss, *Novelties in the Heavens: Rhetoric and Science in the Copernican Controversy* (Chicago: University of Chicago Press, 1993), pp. 1–26.
67. Dove, *An Almanack for 1673*, p. C3^r.
68. On the surprisingly slow process of scientific revolution in university curriculums, see John Gascoigne, “A Reappraisal of the Role of Universities in the Scientific Revolution,” in *Reappraisals of the Scientific Revolution*, ed. David C. Lindberg and Robert S. Westman (Cambridge: Cambridge University Press, 1990), pp. 207–60.
69. Dove, *An Almanack for 1673*, p. C3^r.
70. Dove, *An Almanack for 1673*, p. C3^r.
71. Dove, *An Almanack for 1673*, p. C3^r.
72. Dove, *An Almanack for the year of our Lord God 1684* (Cambridge: Printed by John Hayes, 1684), p. C3^v.
73. John Rudson, *A New Almanac and Prognostication, for the year of our Lord God 1624* (London: Printed for the Company of Stationers, 1624), p. B4^r.
74. Dove, *An Almanack for the year of our Lord God 1689* (Cambridge: Printed by John Hayes, 1689), p. C3^v.
75. John Milton, *Paradise Lost* (London, 1674).
76. Dove, *An Almanack for the year of our Lord God 1689* (Cambridge: Printed by John Hayes, 1689), p. C3^v.
77. Dove, *An Almanack for 1689*, p. C3^v.
78. Dove, *An Almanack for the year of our Lord God 1692* (Cambridge: Printed by John Hayes, 1692), p. C4^v.
79. Dove, *An Almanack for 1692*, p. C4^v.
80. Using the pseudonym “Isaac Bickerstaff,” Jonathan Swift famously lampoons Partridge in the early eighteenth century, leaving the astrologer critically wounded within the academic circles that Swift represented, but these were small circles—one patch of academia. When Partridge’s almanacs reappeared in 1713, they were just as popular in mainstream culture, and the Stationer’s Company continued printing them throughout the eighteenth century.