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05 December, 2014

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At the Intersection of Natural, Theological, & Political Practice in 16th Century Northern  
Europe: Tycho Brahe's & Philipp Melanchthon's Astrological Adventures

. . . [H]e did not cease to contemplate this visible and temporal Theatre of Heaven until he crossed from the horizon of time into eternity and, with the aid of GOD, exchanged that eternal and invisible heaven with this other one. Wherefore who will rightly deny that it is entirely appropriate for the astronomical letters produced by so great an Atlas, a prince not only by virtue of his illustrious line, but also in this art, to claim for themselves the principal parts in this book?<sup>1</sup>

-Tycho Brahe on Landgrave Wilhelm IV of Hesse-Kassel,  
*Epistolarum astronomicarum liber primus (1596)*

Perhaps never has someone written so commendable a compliment which could, with as much accuracy, describe him- or herself as Tycho has done here. There is a popular misconception afoot concerning science, namely, that it and theology are fundamentally mutually-exclusive modes of thought and have almost inevitably antagonistic truth-procedures to the point that science is seen as waging a war against religious belief. This misconception, though perhaps more comprehensible in this day and age,<sup>2</sup> is never more obviously false than when the early modern period, through the telescope of history, if you will, is under examination. Throughout the narrative of sixteenth-century astronomy, Tycho Brahe's personal and professional opinions, as well as those of his political and academic peers, run contrary to these modern misconceptions. As will be seen herein, the codependent enmeshing of religion and politics holds as truly for natural inquiry and religion. Rather than being combative alternative routes to higher truth, theology and natural philosophy in this period, rather, for some early modern scholars and theologians, operate in conjunction with one another. Not only do the theological and scientific cohabit in the minds of sixteenth-century scholars, they cooperate to such an extent that any acuteness of

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<sup>1</sup> Adam Mosley, *Bearing the Heavens*, p. 1.

<sup>2</sup> I do not mean to imply that certain several scientific discoveries have not directly contradicted religious tenets or scriptural minutiae, for they have, merely that this is not an aim or necessary principle of science; when it has done so, it has done so as an incidental byproduct of its discoveries, through which it *always* intends to prove things, never to disprove (in this case, religious) things.

understanding in natural philosophy is consequently and necessarily an exercise in scrutinizing the divine. This is neatly, though not uniquely, evident in Tycho Brahe's program of astronomical empiricism, its prognostic applications, and Philip Melanchthon's encouragement of and the Danish court's patronage of such an endeavor.

In contrast to our modern extremely skeptical view of astrology as a fringe cultural element serving little purpose beyond amusement, in the minds of Melanchthon and Tycho, astrology was a conjoined extension of astronomy. In his lecture on the art of astronomy, though he originally promises to avoid the topic of astrology, Melanchthon apparently cannot contain his ardor, saying,

[a]lthough I said in advance at the beginning that I would not talk about the part containing divination, let me add nevertheless that the science of the heavenly movements is in itself an art of foretelling, and an outstanding and most certain divination ruling all of life. For these laws of the motions are evidence that the world has not originated by chance, but that it was created by an eternal mind, and that this creator cares about human nature.<sup>3</sup>

The fact that Melanchthon cannot prevent himself from talking about astrology when lecturing on astronomy, despite admitting to the criticism he is apt to receive, hints at his belief in their inextricability. What is more, he quickly goes on to describe the art of astrology as “divination of the greatest thing,” indicating that not only are astrology and astronomy complementary disciplines, but perhaps, even, that astronomy, as merely the mathematical legwork required to produce astrological prognostications, ought to play the subordinate role.

Tycho clearly agreed with the sentiment that the ultimate purpose of natural inquiries is examination of the divine. For Tycho, the *firmament*, that is, everything beyond earth, was very much a realm of both physical bodies and ethereal divinity when, in Thoren's words, Tycho concluded:

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<sup>3</sup> Philip Melanchthon, *Orations on Philosophy and Education* (Cambridge: CUP, 1999), 118.

[t]he universe itself . . . is the best book of theology. . . . [E]vidence of divine wisdom is nowhere so clear as in the celestial regions, with their bodies of immense size, radiance, and perpetual regularity. . . . [M]ost people are ignorant or even scornful of knowledge concerning the heavens . . . do[ing] great harm to the disciplines of astronomy, astrology, and meteorology . . .”<sup>4</sup>

It is clear that, at least on the issue of astrology’s legitimacy and authority, Tycho and Melanchthon are of one mind, but it is important to demonstrate a more direct philosophical heritage between them before we can continue to demonstrate the mutually beneficial relationship between natural philosophy and religion as it is exemplified by Tycho and Melanchthon and encapsulated in the practice of astronomy-astrology.

Tycho was religiously aligned with Lutheranism, as was customary in the Denmark of his time (he lived from 1546-1601), and particularly favored the Philippist interpretation of Lutheranism. Though Tycho’s and Melanchthon lives overlapped slightly (Tycho was 13 at the time of Melanchthon’s death), Tycho lived most of his life in the aftermath of Melanchthon. At this time, Lutheranism was experiencing sectarian conflict in the long aftermath of Luther’s death. Gnesio-Lutherans, to be brief, defined themselves as Lutheran purists, who attempted to strictly adhere to Martin Luther’s doctrines. They saw themselves, for our purposes, in opposition to Philippists. One topic, important for any discussion on astral influences, upon which Gnesio-Lutherans and Philippists disagreed was the nature of predestination. Following Luther, Gnesio-Lutherans believe in double predestination, that is, whosoever is going to either heaven or hell has been predetermined by God. Melanchthon, and the Philippists in tow, held a looser and accommodating interpretation of free will. Tycho’s preference for Philippist Lutheranism was critical to enabling his practice with astral influences because, if confined to the doctrine of double predestination, it would be

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<sup>4</sup> Victor E. Thoren, *The Lord of Uraniborg: A Biography of Tycho Brahe* (New York, Cambridge UP, 1991), 60.

impossible for celestial bodies to have an impact on events, the outcome of which had already been determined in advance by God.

Though the details of this controversy are beyond the scope of this argument, the distinction is critical to the continued existence of astronomy, and consequently astrology, in Lutheran territories at the time. Luther forbade astrology, finding it ludicrous, though Melanchthon was more sympathetic to the art, even, as we have seen, encouraging it (he, in fact, refused to travel to Denmark because his horoscope warned against it).<sup>5</sup> That Tycho engaged in the art at all, much less acted as one of its most prominent practitioners, should hint at his alignment with Philippism, though other facts strengthen this indication. Tycho's educational background was entirely under Philippist influence, receiving most of his education from the Philippist strongholds of the universities of Copenhagen and Rostock, and even visiting Wittenberg itself.<sup>6</sup> Moreover, when Tycho decided to make the full exposition of his system of celestial bodies (to rival the Aristotelian and Copernican systems), he did so in a letter to Caspar Peucer, who was not only, in Mosley's words, "the doyen of the Wittenberg astronomical tradition" and "the defender of his [Melanchthon's] posthumous reputation," but also Melanchthon's son-in-law. Mosley best describes the significance of this letter's addressee when he says, "[b]y writing to Peucer, Tycho was once again signalling his debt to Philippist conceptions of the relationship between theology, cosmology, and mathematics."<sup>7</sup> No doubt this relationship existed for all astronomers of the period. Also little up for debate is the natural role played by astronomy as a form of understanding the complex magnificence of creation. What was debatable at that time, however, is whether a practicing astronomer was

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<sup>5</sup> Ibid, 12, 81.

<sup>6</sup> Adam Mosely, *Bearing the Heavens: Tycho Brahe and the Astronomical Community of the Late Sixteenth Century* (New York, Cambridge UP, 2007), 83.

<sup>7</sup> Ibid, 100.

capable of translating astral measurements into astrological prognostications, and whether such a translation had theological justification.

Melanchthon's personal support for astrological and horoscopic exercises was, by itself, a form of religious justification, albeit an indirect and ecclesiastical rather than biblical justification. It would not suffice for Tycho to engage in astrology with a simple nod of approval from Melanchthon, but rather, the reasons Melanchthon gives would have been crucial to determining religious justification. In a lecture entitled "The Dignity of Astrology," Melanchthon immediately sets out to "show both that the science of heavenly influences is true and that it brings great benefits for life."<sup>8</sup> Melanchthon first attempts to dispel doubt, presumably common at the time, that astrology is inauthentic simply because it produces erratic and infrequent results. He points to meteorology, medicine, and agriculture, highlighting the not infrequent errors of those arts. Of meteorology he asks if the whole field should "be disparaged, therefore, because it contains few proofs and accomplishes most things by conjecture?"<sup>9</sup>

Melanchthon's second argument for the efficacy of astrology relies on the natural phenomena of the sun, moon, and planets. The sun is known to control the temperature and, thereby, the seasons, and the moon is "known" to control the humidity, while the light from the planets is "known" to cause various meteorological phenomena according to each planet's temperament. "If these things are certain, it is manifest that the foundation of the art is true and fixed, that is that heavenly light has great influence in tempering and changing the elements and the mixed bodies."<sup>10</sup> For Melanchthon, the same must hold true for stars. At this point in the lecture, Melanchthon has made one logical justification for astrology and one

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<sup>8</sup> Melanchthon, 120.

<sup>9</sup> Ibid, 122.

<sup>10</sup> Ibid, 123.

based on natural observation. Eyebrows might have been raised, for the audience was expecting theological reasons to be put forth, but for his third argument in favor of astrology: a resoundingly theological one.

Concerning stars, the positions of which are essential to astronomical prognostication, “should we believe that these most beautiful lights are made *without purpose*, given that nothing is more outstanding by nature or more powerful than light [emphasis mine]?”<sup>11</sup> God’s, or any prime mover’s, in cosmological terms, omniscience and omnipotence, is, of course, beyond doubt. As the first cause and original Creator, God shan’t have created anything inefficiently or superfluously — without purpose, that is. Melanchthon’s awareness of this argument is impossible to ignore: “For if these signs are not meant to be considered, why are they written and painted on the sky by divine providence? Since God has engraved these marks in the sky . . . , it is impiety to turn one’s mind away from their observation.”<sup>12</sup> Not only is it justifiable to portentously read the stars’ arrangements, it is impious *not* to do so — indeed, they were put there for that very purpose. Put simply, astrological prognostication is manifest in the divine mandate.

It is clear that, through Melanchthon, at least for Philippist Lutherans, the practice of astrology received theological backing. In order, however, to demonstrate that religion and natural inquiry, as evinced by astronomy-astrology, were cooperative institutions, the institution of astrology must exhibit some measure of reciprocity. That is to say, simply, if religion has given astronomical-astrological endeavor theological justification, what, then, has that form of natural inquiry done for religion in return? At this time, natural inquiry had, only a generation before, taken its first (again, incidental) stab at religious orthodoxy. Copernicus had produced a celestial model that posited the translocation of earth relative to a static sun,

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<sup>11</sup> Ibid.

<sup>12</sup> Ibid, 124.

thus subordinating earth, the then-perceived focal centerpiece of God’s design, to a symbolically inferior position in the planetary scheme. This was unacceptable, not only to Luther and Melanchthon, but also to Tycho.<sup>13</sup> In the minds of Lutheran leaders, it was crucial that a reconciliation of astronomical observations and earth’s providential supremacy be made. Tycho set out to do just that. His system, like the Copernican, proposed that the planets (excluding earth) revolved around the sun, and, as with the Copernican, this coincided with the most accurate observations. Unlike Copernicus, however, Tycho proposed that the Sun, along with all the planets that rotated around it, rotated around a fixed earth, thus positing a “system of the universe acceptable to those who thought that the Ptolemaic geocentric system was no longer tenable yet considered the Copernican hypothesis either physically absurd or theologically objectionable.”<sup>14</sup>

In addition to providing a conveniently conciliatory planetary model, Tycho, using rhetoric, overcame an inconvenient theological stumbling block for astrology. “[T]heologians since Augustine had opposed astrology because of what they took to be its inimical implications for Christianity.”<sup>15</sup> If human events can be horoscopically determined at the time of birth based on the positions of planets and stars at that moment, how can there be free will? This was particularly troubling to Niels Hemmingson, a Wittenberg contemporary of Melanchthon and “the foremost spokesman of Danish Philippism” by Tycho’s time.<sup>16</sup> Tycho was given the perfect opportunity to hurdle this stumbling block when he gave a lecture at Wittenberg, for which Hemmingson was present in the audience. The primary theme of the lecture was “to reconcile his view of the universe with the variety of Phillipist theology that

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<sup>13</sup> Thoren, 276.

<sup>14</sup> Mosley, 28.

<sup>15</sup> Thoren, 81.

<sup>16</sup> Ibid.



prevailed under Hemmingsen's influence, at the University of Copenhagen."<sup>17</sup> Tycho's argument rested on the fact that *influences* of celestial bodies were just that — influences — not determinants. He pointed to the fact that many people were born at the same time on the same day (the key factor in producing a horoscope). If human outcomes were mandated by astral positions, all such persons would live exactly the same life. This is, of course, untrue. Tycho spoke directly to this issue when he said, "[t]he free will of man is by no means subject to the stars. Through the will, guided by reason, man is able to do many things that are beyond the influence of the stars, if he wills to do so."<sup>18</sup> The importance of this argument was not lost on Thoren who concludes of the lecture, "[i]t was this allowance for the force of individual human will that constituted the crux of Tycho's attempt to reconcile astrology to Philippist doctrine."<sup>19</sup>

Through the accumulative actions of Philip Melanchthon and Tycho Brahe, theology and natural inquiry, in the form of astronomy and astrology, cooperated to such an extent as to provide for their mutual reassurance. This is but one instance of the inextricability of religion and "science" in the early modern period. In concert with this cohabitation of science and religion in the minds of individual persons and institutions was the cohabitation of religion and the state. This has been well documented and need not be evidenced here. What should be pointed out, for our purposes, is the density with which all of these three institutions are enmeshed and how well the practice of astrology demonstrates that density. While astrology was justified by theologians using religious principles, and while it also strengthened religious worldviews, especially of a cosmological nature, it was simultaneously patronized by secular leaders (for its financial stability), and applied to the futures of king's

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<sup>17</sup> Ibid, 82.

<sup>18</sup> Ibid, 83.

<sup>19</sup> Ibid.

dominions and children (for the kingdom's benefit). This clearly shows astrology as playing a reciprocating role with the state similar to that it enjoyed with religion. That reciprocity is amply demonstrated by Tycho and his astro(nomical/logical) undertakings. Over the course of his life, Tycho was privy to the presence of several comets. The comet of 1577, Tycho concluded, "had important implications for Danish national security; these he spelled out clearly in a manuscript written, in German, for the eyes of King Frederick and Queen Sophie alone."<sup>20</sup> Additionally, Tycho prepared horoscopes for Christian IV of Denmark,<sup>21</sup> two other princes,<sup>22</sup> and was solicited for one by the Duke of Brunswick.<sup>23</sup>

What is now evident is how rapidly and disgracefully astrological horoscopy has fallen in the past 400 hundred years. While it now sits deep in the hinterlands of lunacy, it clearly once enjoyed the prominence of an art that was buttressed by theology, practiced by masters of empirical observation, and applied to affairs of state of great magnitude. It was positioned at the intersection of these three potent institutions and its being thus situated provides an articulately illustrative example of the historical interdependence of those institutions.

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<sup>20</sup> John Robert Christianson, *On Tycho's Island: Tycho Brahe and His Assistants, 1570-1601* (New York, Cambridge UP, 2000), 64.

<sup>21</sup> J.L.E. Dreyer, *Tycho Brahe: A Picture of Scientific Life and Work in the Sixteenth Century* (Edinburgh, Adam and Charles Black, 1890), 146.

<sup>22</sup> *Ibid*, 154.

<sup>23</sup> *Ibid*, 285.

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