6 The Jesuit Censorship of Tycho Brahe

Despite Giovanni Paolo Lembo's successful attempts to integrate the Galilean novelties into the Aristotelian-Ptolemaic worldview as Clavius theorised it, his fellow Jesuit mathematicians followed a different path. As Michel-Pierre Lerner demonstrated in a seminal paper on the Jesuit reception of the Tychonic system in the early seventeenth century, the interpretation of Clavius's enigmatic plea led the majority of Jesuit astronomers to the adoption of a Tychonic geo-heliocentric cosmology.[1] In fact, a group of Jesuits familiar with Clavius's project and work, while not belonging to his inner circle, interpreted his words as opening the way to denying celestial solidity and advancing with a geo-heliocentric system that took celestial fluidity for granted. Accordingly, Christoph Scheiner remarked that Clavius's sentence:

> rightly announces that the system presented above [i.e. the Ptolemaic system] does not stand up to the phenomena observed as it is a fact for all astronomers that Venus revolves around the Sun because, by reflecting the light in that manner, it emulates the Moon. Galileo equally applies this principle to Mercury.[2]

1 Lerner, "L'entrée de Tycho Brahe". See also Lattis, *Between Copernicus and Galileo*, 181; Schofield, *Tychonic and Semi-Tychonic*, 277-81; Weichenhan, *'Ergo perit coelum…'*, 301.

2 Scheiner, *Disquisitiones mathematicae*, 51: "Haec ille [Clavius's words], satis declarant, Systema praemissum cum datis phoenomenis non stare; cum certum sit apud omnes Astronomos Venerem, quia Lunam imitatur lucendi modo, circa Solem girari: cui pariter legi subijcit Mercurium S. Galilaeus".

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Alongside Scheiner, this group included other young Jesuit astronomers, such as Cristoforo Borri and Giuseppe Biancani.[3]

Nevertheless, to adopt the Tychonic system, a twofold problem had to be solved. As one learns from the Jesuit internal censorship of Biancani's book *Aristotelis loca mathematica* (1615), apart from the question of the celestial fluidity itself,[4] there was the highly sensitive issue of the religious belief of Tycho Brahe. While examining Biancani's book, the Jesuit censor Giovanni Camerota resolutely condemned all the eulogies made by the Jesuit mathematics professor in Parma to astronomers who were either 'heretic' or 'strongly suspected'.[5] In his report elaborated in the Collegio Romano, he advised Biancani:

> To entirely abstain from praising the heretical authors, as in the first book of Meteors (chapter 4, post number 129, page 57 at the end and page 58 in the beginning), where he praises Tycho Brahe and others, including Landgrave Wilhelm [IV] of Hesse[-Kassel], Michael Maestlin, Cornelius Gemma, Helisäus Röslin, Christoph Rothmann.[6]

The turning point in the Jesuits' reception of Tychonism occurred in 1620. A copy of Tycho Brahe's *Astronomiae instauratae progymnasmata* was submitted to the Holy Office early that year. This book, originally published in 1602, contained Tycho's investigations into the new star of 1572 as well as his solar theory, research on the lunar theory and a comprehensive catalogue of stars.[7] Nevertheless, it was not the scientific contents that distressed the Catholic authorities but rather the religion or, more properly, the religious beliefs of its author.[8]

As it happened, the Jesuit Roberto Bellarmino was by then an influential member of the Congregation of the Inquisition, in addition to being a participant in the Congregation of the Index. Hence, Bellarmino, who had already played a key role in the 1616 condemnation of heliocentrism and censure of Galileo, was also to play an important part in the reception of Tycho Brahe's astronomical system and ideas into the mainstream of Catholic intellectuals.[9]

Celestial fluidity, upon which the Tychonic system rested, presented no major difficulty to the influential Jesuit Cardinal. While teaching theology at Louvain, in 1570-72, Bellarmino had already endorsed a cosmological model di-

3 See Lerner, "L'entrée de Tycho Brahe", 159, 171.

4 Camerota's censorship is included in Baldini, *'Legem impone subactis'*, 229-31.

5 "Constat enim aut hos omnes, aut ex his plerosque, atque adeo ipsum Tichonem, quem tanti facit, aut haereticos fuisse, aut valde suspectos". Baldini, *'Legem impone subactis'*, 230-1.

6 "Omnino tamen abstineat laude Scriptorum Haereticorum. Ut in primum Meteor. cap. 4, post numº. 129 pag. 57 in fine, et 58 in princ. ubi laudat Tichonem Brahe, et alios, qui sunt Gulielmus Landgravius Hassiae, Michael Maestlinus, Cornelius Gemma, Helisaeus Roeslin, Christophorus Rothmannus". Camerota in Baldini, *'Legem impone subactis'*, 230.

7 On this book's composition process, see Thoren, *The Lord of Uraniborg*, particularly 283-5, 262, 282.

8 On this process, see particularly Lerner, "Tycho Brahe Censured". See also Bucciantini, *Galileo e Keplero*, 91-2; Tutino, *Empire of Soul*, 279-80; Tirapicos, "On the Censorship".

9 On the role played by Bellarmino in establishing the theology orthodoxy and striving for the intellectual leadership of the Catholic Church, see particularly Tutino, *Empire of Soul*. A critical analysis of some historiographical rehabilitation of Bellarmino can be found in Omodeo, "'Jesuit Science'".

vided into three heavens – the *aereum*, the *sidereum* and the *empireum* – that assumed the planetary heaven (the *sidereum*) to be a fluid body. In the *caelum sidereum* – as he stated – "the stars are not moved together with the motions of the heavens, but they move by themselves (*motu proprio*) like the birds through the air and the fishes through the water".[10] W.G.L. Randles convincingly demonstrated that Bellarmino's cosmology stemmed from his *Hexameron* reflections.[11] Indeed, a reflection on "the work of the Days", described in the Book of Genesis, would also lead other Jesuits to support a tripartite division of the cosmos and potentially to endorse the notion that planets move in a fluid region. This was, for example, the case of the Spanish theologian Luís de Molina, professor at the University of Évora, Portugal. While discussing the issue of the creation of the heavens, Molina argued for the existence of the same three heavens: the *caelum aereum*, including the region from the earth to the orb of the Moon, the *caelum sidereum*, consisting of the incorruptible celestial orbs made up of water, and the *caelum empireum*.[12]

As far as the issue regarding the confessional identity of Tycho Brahe is concerned, Bellarmino offered a puzzling assessment. Although recognising Tycho as likely to be a 'heretic' – as he praised Luther, Melanchthon, Beza and Chytraeus – Bellarmino nevertheless suggested that he might have converted to Catholicism at some point as his children dedicated the book to the Catholic Emperor Rudolph. Even so, the Jesuit Cardinal recommended the book to be expurgated of all the eulogiums bestowed on Protestant authors as well as the letters received from the Landgrave Wilhelm IV and addressed to other Protestant princes. In his words:

> It seems, both from the praises with which the author honours the heretic Luther, Melanchthon, Beza, Chytraeus and from his close friendship with the heretic Lutheran Landgrave Wilhelm of Hesse, that this author was a heretic.
>
> [Nevertheless], it seems from the fact that, upon his death, his children dedicate his books to the Emperor Rudolph and call their father a man of pious memory, that he had probably been a Catholic. The Emperor himself ordered, thereafter, some of his works to be prepared at his own expenses as it is clear in the book published in folio, which is the third volume, so to speak. It is indeed hardly credible that a Catholic emperor promoted the publication of the works of a heretic author.
>
> This book could perhaps be amended by suppressing the honours addressed to the heretics and the letters of the heretic prince as well as the letters sent to the heretic princes.[13]

10 Bellarmino, *The Louvain Lectures*, 19: "stellas non moveri ad motum coeli, sed motu proprio sicut aves per aerem, et pisces par aquam".

11 Randles, *The Unmaking*, 44.

12 Defending the Creation of the Empyrean heaven on the First Day, Molina stated, "Solet etiam positio caeli empyrei confirmari. Primo, ex illo 2 ad Corinth. 12, *Scio hominem in Christo ante annos quatuordecim raptum usque ad tertium coelum*. Quasi ex Scriptura sacra […] triplex caelorum genus sit constituendum, aereum primum, quod usque ad orbem lunae incorruptibilem pertingit; sydereum secundum, quod orbes omnes incorruptibiles ex aqua factos, in quibus astra omnia sunt collocata, comprehendit, et empyreum tertium, quod est sedes beatorum, atque ad hoc tertium raptus fuerit Paulus in consortium beatorum" (Molina, *Commentaria in primam*, 705).

13 In Godman, *The Saint as Censor*, 307: "Quod hic auctor fuit haereticus, videtur intellegi posse tum ex laudibus, quibus ornat haereticos Lutherum, Melancthonem, Bezam, Cythreum, tum quia erat amicissimus Gulielmi Hussiae Lantgravii, haeretici Lutherani".

An appropriate censure would thus turn Brahe's *Astronomiae instauratae progymnasmata* into a suitable book for a Catholic audience. The Congregation of the Holy Office accordingly decreed the book to be expurgated from the praises addressed to Protestants.[14] As Michel-Pierre Lerner has already stressed, even though this book was not included in the Roman *Index librorum prohibitorum*, it most likely circulated in the Jesuit milieu.[15] The Jesuit professors of the Class on the Sphere provide a good example of this circulation, as one learns from the copy of Tycho Brahe's *Astronomiae instauratae progymnasmata* (1610), which belonged to the mathematics library of the College of Santo Antão.[16]

The Lisbon Jesuit copy of Tycho's *Astronomiae instauratae progymnasmata* contains two sorts of censorship that both deal with religious issues. First and foremost, the erasures included in the typescript were intended to suppress sympathetic references to the religious beliefs of Brahe and his Lutheran and Calvinist fellows. Thus, along with favourable allusions to Luther,[17] the names of distinguished Lutherans, such as Philip Melanchthon and his disciple, the University of Rostock professor David Chytraeus, were eliminated from the text.[18] Tycho Brahe's criticism of Catholic authors was also subject to censorship. Brahe was particularly harsh regarding the eschatological interpretation of Theodorus Graminaeus, a former professor of mathematics at the University of Cologne and tutor to the Dukes of Cleves, who abhorred Protestantism and became a champion of the Counter-Reformation.[19] Accordingly, Brahe's sentences criticising the anti-Luther statements of the Catholic Graminaeus were also inked out of the text.[20]

Quod fortasse fuerit Catholicus, videtur colligi ex eo, quod filii eius post mortem ipsius dedicant eius libros Rudolpho imperatori et vocant parentem suum piae memoriae virum. Deinde ipse idem imperator suis sumptibus iussit excudi aliqua eius opera, ut patet ex libro in folio edito, qui est quasi tertius tomus. Vix est autem credibile imperatorem Catholicum iussisse excudi opera hominis haeretici.

Posset fortasse corrigi liber, sublatis laudibus haereticorum et epistolis principis haeretici et epistolis ad principes haereticos missis".

14 Lerner, "Tycho Brahe Censured", 96-7.

15 Neither was it included in the Portuguese *Index auctorum damnatae memoriae*. Spain provides the exception. In fact, the Spanish *indexes* ordered 'corrections' not only in the *Astronomiae instauratae progymnasmata* but also in three other books: the *De Mundi Aetherei recentioribus phaenomenis*, the *Epistolae Astronomicae* and the *De disciplinis Mathematicis oratio*. Lerner, "Tycho Brahe Censured", 97-8; Tirapicos, "On the Censorship", 102. On the Spanish Inquisitorial censorship of scientific books, see Pardo Tomás, *Ciencia y Censura*.

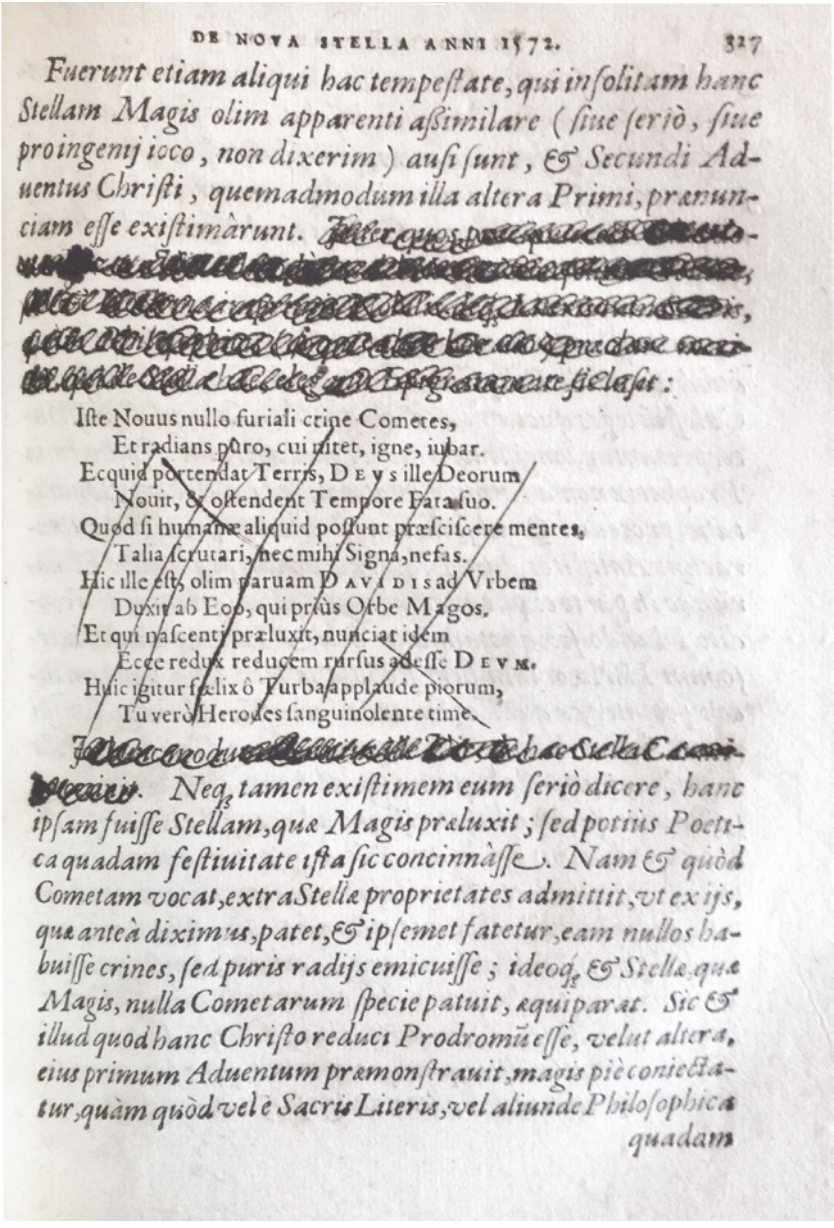
16 This copy is preserved in the Biblioteca da Ajuda, Lisbon (35-XI-7) – henceforth BA, copy 35-XI-7. The front page of the book includes an explicit reference to its former owner: "da livraria da Mathematica de Santo Antão" ('from the mathematical library of the [College of] Santo Antão'). Along with the expurgation of sentences, the BA copy is provided with some mathematical annotations in the same ink as that of the erasures. The style of handwriting is typical of the seventeenth century.

17 For example, while referring to Theodorus Graminaeus's interpretation of the Abbott Joachim Lichtenberg's *vaticinia*, which Tycho Brahe considered to be odiously (*odiose*) pitched against Luther, the Jesuit censor erased the word *odiose*. A negative statement was thus turned positive. Brahe, *Astronomiae instauratae progymnasmata*, BA, copy 35-XI-7, 776. Cf. Brahe, *Astronomiae instauratae progymnasmata* in *Opera Omnia*, 3: 290.

18 Brahe, *Astronomiae instauratae progymnasmata*, BA, copy 35-XI-7, 711. Cf. Brahe, *Astronomiae instauratae progymnasmata* in *Opera Omnia*, 3: 225.

19 On Theodorus Graminaeus, see particularly Vermij, "Theodorus Graminaeus".

20 *Astronomiae instauratae progymnasmata*, BA, copy 35-XI-7, 777. Cf. Brahe, *Astronomiae instauratae progymnasmata* in *Opera Omnia*, 3: 291.



DE NOVA STELLA ANNI 1572. 327

Fuerunt etiam aliqui hac tempestate, qui insolitam hanc Stellam Magis olim apparenti assimilare (sive seriò, sive proingenij ioco, non dixerim) ausi sunt, & Secundi Aduentus Christi, quemadmodum illa altera Primi, pronunciam esse existimàrunt. [illegible]

Iste Nouus nullo furiali crine Cometes,
Et radians puro, cui nitet, igne, iubar.
Ecquid portendat Terris, DEVS ille Deorum
Nouit, & ostendent Tempore Fata suo.
Quod si humanæ aliquid possunt præscisscere mentes,
Talia scrutari, nec mihi Signa, nefas.
Hic ille est, olim paruam DAVIDIS ad Vrbem
Duxit ab Eoo, qui prius Orbe Magos.
Et qui nascenti præluxit, nunciat idem
Ecce redux reducem rursus adesse DEVM.
Huic igitur felix ô Turba applaude piorum,
Tu verò Herodes sanguinolente time.

[illegible] *Neq; tamen existimem eum seriò dicere, hanc ipsam fuisse Stellam, quæ Magis præluxit; sed potius Poetica quadam festiuitate ista sic concinnàsse. Nam & quòd Cometam vocat, extra Stellæ proprietates admittit, vt ex ijs, quæ anteà diximus, patet, & ipsemet fatetur, eam nullos habuisse crines, sed puris radijs emicuisse; ideoq; & Stellæ quæ Magis, nulla Cometarum specie patuit, æquiparat. Sic & illud quod hanc Christo reduci Prodromũ esse, velut alteram, eius primum Aduentum præmonstrauit, magis piè coniectatur, quàm quòd vel è Sacris Literis, vel aliunde Philosophica*

quadam

Figure 5 Brahe's quotation of Theodore Beza censured (Brahe, *Astronomiae instauratae progymnasmata*, Biblioteca da Ajuda, 35-XI-7, 327)

In some cases, this involved suppressing extensive parts of the text. This was the case, for example, with Theodore Beza's poem on the eschatological meaning of the new star of 1572. Beza was a preeminent figure in French Calvinism. Upon Calvin's death, the French theologian and biblical scholar became the religious leader of the Geneva Republic.[21] Brahe, who praised Beza for being "very famous and a nobleman, not only by birth but especially by knowledge, who plainly deserves to be praised in sacred letters as well as in philosophy",[22] established an analogy between the 1572 *nova* and the Biblical Star of Bethlehem. The Jesuits deemed unacceptable not only this interpretation of the new star as a token of the second advent of Christ but also the praise of Beza's theological and philosophical scholarship.[23] Accordingly, the Jesuit censor eliminated Brahe's just-cited eulogium as well as Beza's poem **[fig. 5]**.

Less frequent, yet of no less significance, was the exclusion of any excerpts that seemed to jeopardise the authority of the *Bible*. Although Brahe did not question the authority of the *Bible* in the scientific domain, the Jesuit censor found a couple of sentences worthy of suppression. Those sentences vaguely challenged the *Bible*'s absolute authority. The criticism that Brahe elaborated on Paul Hainzel's location of the new star of 1572 represents a case in point. According to the Dane, despite recognising that the new star was deprived of observable parallax, the German astronomer paradoxically persisted in claiming that it appeared below the Moon. From Brahe's viewpoint, this approach was typical of those scholars who, despite sound evidence that they were wrong, continued to follow the well-received authorities uncritically. Brahe established an analogy between this sort of scholar and those who argued in favour of long- and well-established theories with the sole purpose of supporting the biblical account:

> For that reason, I should not be further surprised if, in matters of religion, they fight to such an extent in favour of the ancestral principles in whatever way the Holy Scripture would sufficiently and openly prevail over the enemy on certain occasions.[24]

This sentence was accordingly inked out of Brahe's text.

The Lisbon Jesuit copy of *Astronomiae instauratae progymnasmata* was therefore censored according to the Roman guidelines. The quill of Bellarmino the censor had reached Lisbon. It was most likely brought by the hand of a Jesuit mathematician with close ties to the Roman circle.

21 Gordon, "Beza, Theodore"; MacCulloch, *The Reformation*, 236, 244, 298, 303, 599-600.

22 Brahe, *Astronomiae instauratae progymnasmata* in *Opera Omnia*, 3: 325: "Inter quos praecipuus est Theodorus Beza, Vir admodum celebris, et non solum Genere, sed et Doctrina imprimis Nobilis, deque Literis tam Sacris, quam Philosophicis (si quis alius hoc aeuo) praeclare meritus".

23 Brahe, *Astronomiae instauratae progymnasmata*, BA, copy 35-XI-7, 327.

24 Brahe, *Astronomiae instauratae progymnasmata*, BA, copy 35-XI-7, 542; Brahe, *Astronomiae instauratae progymnasmata* in *Opera Omnia*, 3: 56: "ideoque iam non amplius mirum in Religionis negocio adeo pro auitis decretis pugnari, vtvt Sacrae literae satis aperte contrarium nonnunquam euincant".