

TYCHO'S CONVERSATION WITH URANIA, AND OTHER ENGAGEMENTS WITH THE MUSE

Clifford J. Cunningham

University of Southern Queensland, 3915 Cordova Drive,
Austin, TX 78759, USA.

E-mail: Cliff.Cunningham@unisq.edu.au

Abstract: In his own poetry, Tycho Brahe took inspiration from ancient Roman poetry by appropriating ancient theology: the god Apollo and the Muse of Astronomy, Urania. In so doing, he framed himself as being in a unique position to reveal the secrets of the cosmos. This study offers the first comprehensive analysis in English of Tycho's *Elegy to Urania*, and traces sources that have not previously been identified. The first 52 lines of his deeply personal *Elegy* are presented here in English for the first time. This study also looks at Scottish epigrams in praise of Tycho, and a brief look at how other poets and astronomers (notably Corbinianus Thomas) employed Urania for their own purposes.

Keywords: Tycho, poetry, Urania, Corbinianus Thomas, Giuseppe Piazzi

1 INTRODUCTION

In the Early Modern Era, poetry had a higher-level purpose than merely illustrating, amplifying or buttressing an argument deriving from science. By the strategic placement of poetic extracts—or entire poetic constructs specially commissioned for a book—authors induced in the minds of their readers a process of perceiving or thinking about astronomical ideas that were (mostly) divorced from the experiences of everyday life. This noesis, or intellection—as such a process is referred to in phenomenology—pervaded the writing of astronomy for much of this era. One of its most adept exponents was Tycho Brahe (1546–1601), who reworked the poetry of the ancient Roman Ovid (b. 43 BCE) to great effect. For Tycho and his circle, “... there was something magical about poetry, and poetry had to be considered as a part of science because it could literally alter the physical universe.” (Christianson, 2000: 47).

Centuries before Tycho, Urania had become the didactic face of natural philosophy. In *Cosmographia*, completed by Bernardus Silvestris (d. 1178) in 1147, the author envisions a crowd of thousands of spirits along a “... lunar boundary, as if at the midpoint of Homer's golden chain, the node uniting the higher with the lower Universe.” It is here that Urania speaks to this multitude: “Learn, for it is not fitting that Nature, so diligent in investigating created life, should be in doubt.” (Wetherbee, 2015: 119). Eschewing the didactic aspect of Urania, the muse in his poetry was an enabler who allowed Tycho to express his keen interest in philosophical matters, and proclaim his pre-eminence in astronomy.

2 TYCHO BRAHE

2.1 Epigrams by John Maitland

Tycho Brahe and the Muse Urania had the

most substantive interaction ever realised between the working science of Astronomy and its Muse. In March 1590 John Maitland (1543–1595), the Lord Chancellor of Scotland from 1586 to 1595, accompanied King James VI of Scotland on a trip to visit Tycho Brahe (1546–1601) at his observatory named Uraniborg on the island of Hven, which Tycho referred to as the Kingdom of Urania. The King himself wrote three sonnets celebrating Brahe. In one, he claimed Tycho was greater than Apollo. “Then greater art thou then Apollo cleare/As thy Uranias eldest foster deare.” (Westcott, 1911: 27).

As a neo-Latin poet, Maitland (Figure 1) was well-known for his satirical epigrams on political opponents (epigrams had an intense



Figure 1: Sir John Maitland, 1st Lord Maitland of Thirlestane, by Adrian Vanson (1589) (courtesy: National Trust).

circulation in the Renaissance; see [de Beer et al., 2009](#)). To commemorate his encounter with Tycho, who obviously impressed him greatly, [Maitland \(1637\)](#) switched from the satirical to the panegyric form of epigram. As explained by [McFarlane \(1980: 17\)](#), the brevity of the epigram in small multiples of elegiac couplets, "... encourages, if not exclusively, a lightness, a superficiality even of tone and theme." In this, Maitland was most proficient, and he was not shy about it. Instead of just saving his epigrams for future publication, he wrote them out and pinned them to the door of the Red Chamber in the upper story of Uraniborg, which was the King's chamber, and Tycho let them remain there for others to see ([Christianson, 2020: 164](#)).

Three of Maitland's epigrams are encompassed by the title *On Uraniborg on the Island of Tycho Brahe*. The first two praise Uraniborg as a palace of the Muses, an ornament of the world and a rival of Olympus that houses all the wisdom and wonder of ancient Babylon, Greece and Egypt. The third epigram is the longest of the three; it portrays Tycho's setting-up of Uraniborg as a heroic deed that is more amazing than the feat of Hercules in holding up the heavens (translation by R. Ceragioli):

Si mirum Alciden caelum subiisse
ferendo,
aut puerum raptu detinuisse deos,
Uraniam in terras celso qui eduxit
Olympo,
quantus et Uraniois annumerandus erit!

If it be surprising that the son of Alkaios
got under the heavens to support
them,
or that the gods abducted and held captive
a boy,
then as to Urania, he who has led her
out of high Olympus and onto the
Earth,
how great will he be! to be enumerated
among the Uranians!

By including Greek forms (*Alciden*, *Uraniois*) and playing on the word (*uránios*, heavenly), this epigram alludes to the 11th labour of Herakles, son of Alkaios (or Alceus). While the labour itself was to fetch the golden apples from the Garden of the Hesperides, no mortal knew the location of the garden. Atlas, the Titan, did possess this knowledge. Unwilling to reveal it to Hercules, he offered to fetch them himself if Hercules would hold up the heavens while he got them. This is depicted in [Figure 2](#). The appropriation of Hercules/Herakles and Atlas "... for legitimizing the new astronomy of the sixteenth and seventeenth centuries ... has been examined in detail by Volker [Remmert](#)

(2007). In another poem, Tycho himself invoked Hercules to buttress his credentials. Seven years later, in the neo-Latin work *Elegy to Denmark* (dated to 1597), Tycho "... compares himself with Hercules, interpreting his work as an effort to hold up the sky, preventing its fall." [Jensen \(2009: 575\)](#). Following Maitland, whose fulsome praise of Tycho obviously had consequences, Tycho also invokes both Hercules and Atlas in the *Elegy to Denmark*:

Scarcely has anyone [in Denmark] taken
note of my achievements,
Though they rival Hercules's in number.
The son of Alceus went to the aid of a
weary Atlas (so the story goes),
Lest the great fame of the pole fall head-
long to earth.
I myself stop to remedy your errors,
Ptolemy,
And yours, Alfonso and Copernicus.
([Remmert, 2007: 345](#)).

In Tycho's own words, Claudius Ptolemy (100–170), King Alfonso X of Castile (1221–1284) and Nicolaus Copernicus (1473–1543) constitute three Atlases, all of whom he is triumphing over in his guise of Hercules ([Remmert, 2007: 346](#)). The synergistic relationship between Atlas, Hercules and Urania is ideally represented in the frontispiece to the 1648 book *Ephemerides* by the Italian mathematician Andreae Argoli (1570–1657; [Figure 2](#)). Argoli used frontispieces to his books to broadcast his personal agenda. In a book of 1639, the frontispiece was dramatic—in a bid to supplant Tycho, Argoli linked an image of Tycho with Atlas (both representing the old astronomy) while he linked a portrait of himself with Hercules (the new astronomy) ([Remmert, 2007: 353](#)). The same trope (transferring astronomical knowledge from the older to the newer generation) was used in 1647, when a poem in the book *Selenographia* by Johannes Hevelius describes Atlas putting the weight of the heavens on the shoulders of Hevelius ([Tautschnig, 2022: 1016](#)).

The second line by Maitland also alludes to Zeus' famous abduction of the boy Ganymede ([Swinford, 2013](#)). The words by Maitland about Tycho 'leading Urania out of high heaven' suggest marriage: the groom leads the bride from her father's home to his own. Nevertheless, Tycho will be considered a 'Uranian' (a term that collectively refers to the gods) rather than Urania becoming a 'Tyconic,' so to speak. This reverses the age-old relationship Urania had held with humans; for example, Cicero "... transported in a dream to Mount Helicon, where all nine Muses confronted him and Urania tendered ..." him advice

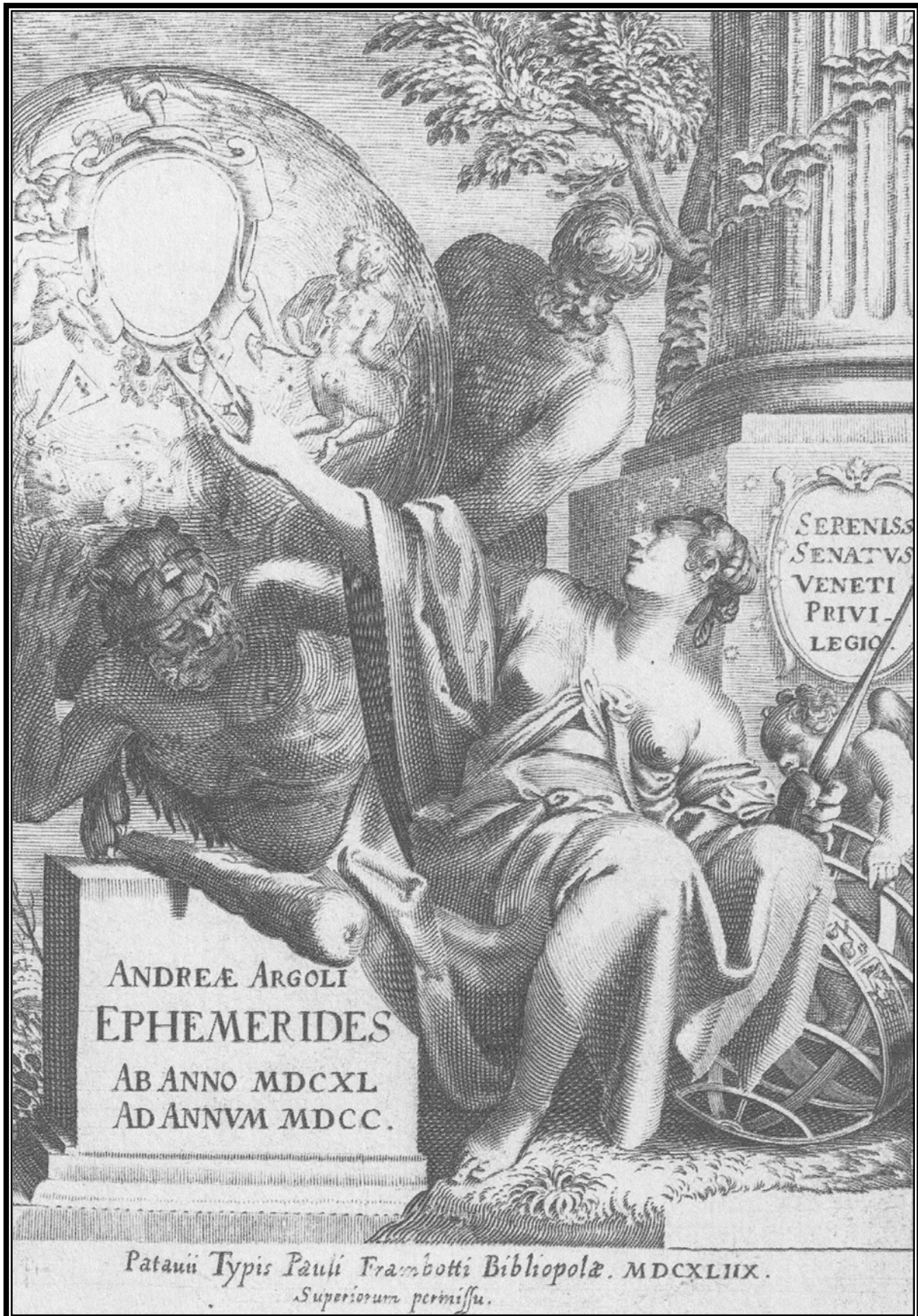


Figure 2: Frontispiece to *Ephemerides* by Argoli (1648); Atlas (centre) is relinquishing the task of holding up the Earth to Hercules, under the watchful gaze of Urania (courtesy: Wikimedia Commons).

(Jocelyn, 1984: 44). Such a heavenly visit, which was not unique, is described by the first century BCE Greek historian Diodorus Siculus in his book *Library of History* 4.7.1.

For the name of each Muse, they say,
men have found a reason appropriate
to her ...

Urania, because men who have been
instructed by her she raises aloft to
heaven, for

it is a fact that imagination and the power
of thought lift men's souls to heavenly
heights.

(quoted in Murray, 2004: 384).

In *Cosmographia*, Urania came down to Earth to aid in the creation of Man; in Tycho's *Elegy*, she visits Earth to converse with Tycho! By achieving the astonishing feat of bringing the Muse herself to Earth for a private conversation, Tycho positions himself as the giver of Astronomy to humanity. But unlike Prometheus, who gifted fire to mankind, Tycho will not be punished for his gift. The importance of the epigram in the context of this study is the intensely personal relationship Maitland describes between Tycho and Urania.

In another epigram, *In Uraniam*, Maitland writes (translation by R. Ceragioli):

Quod Iovis alta domus, quicquid natura,
vel orbis,
Alter et orbis habet, mirum opus.
Urania.
Est merito divisa orbi, quam non capit
orbis,
Aemula naturae haec, aemulus ipse
Iovi.

On the Subject of Urania

All that Jove's lofty house, all that Nature,
or rather the World,
(and New World too) contain: a marvelous
work. As to Urania,
she is rightly separated from World,
since World contains her not:
She emulates Nature, just as He emulates
Jove.

As Ceragioli points out,

This epigram is not as clever and learned
as the earlier one. Jove's lofty house
is the sky. Nature is personified as a
goddess too—of the sublunary region,
and rivals Urania as a sky goddess, just
as Tycho [the text says not 'Tycho,' but
'ipse' meaning 'himself,' since Tycho
was the subject of the preceding epigram].
The World, and the Other [or Second]
World, likely mean the Old and New
World, and so the whole World.

These people are geocentrists: the Heavens and the World are antithetical counterparts, as are Urania/Nature and Jupiter/Tycho. Obviously, it is lofty praise (bordering on hubris) to say Tycho rivals Jupiter. But since these people are Christian, Jupiter is really just another name for the heavens as seen by the eye, and not truly a god. (R. Ceragioli, pers. comm.).

There was a recent precedent for appropriating Urania in a scientific context. Girolamo Fracastoro (who died when Tycho was just seven) is best known as a physician, but he was also an astronomer and a poet. Conversely, Tycho is famous for being an astronomer, but he too wrote poetry. They both chose Urania as the scientific spirit of their poetry (Vaananen, 2017: 145).

At the entrance to Stjerneborg (Star Castle) on Hven, Tycho's underground observatory, visitors were greeted with the following Uranian verse written by Tycho (University of Rostock, 2019; translation modified by me):

URANIA, glimpsing this cave from heaven
quoth:

"What prank is this below the clay?"

And gliding down came in to say:

"Wherefore celestial orbs conceal,
If Earth into my sanctum steal?

That which in the sky is hid, espied from
out the Earthly womb.

For stars no nook is left nor yet remains
a secret room.

What use the heavens' far-flung sites,
Abstruse and twisting orbital flights,
When they, from out this Earthen centre
My cavernous star theatre unbidden enter?"

Here we can discern the influence of Giovanni Pontano (1426–1503) on both Fracastoro and Tycho, whose famous poem *Urania* was certainly known by both. In addition to being the muse of astronomy, Pontano positions Urania "... as a source of inspiration about the beginnings and reasons behind natural phenomena." (Vaananen, 2017: 145). In the verse at Star Castle, Urania expresses disquiet that a mere human has entered her celestial theatre without an admission ticket. What is the point of secret places in the sky if Tycho's astronomical instruments can peer into them? Urania speaks here of caves in the Earth (in this case, Tycho's underground observatory), and also employs *cavernae* in reference to celestial locales. The Latin *cavernis* was used by Urania in another speech, this one addressed to Cicero in his fragmentary work *De consulate suo* (Wardle, 2006).

First of all Jupiter, aflame with the fire of
the ether, turns and bathes the
whole world in his light; he searches the
heaven and the earth with his
divine mind which probes to the bottom
the thoughts and lives of men,
confined and hammed within the cav-
erns of the eternal ether.

Thus, the 'secret rooms' Urania refers to in Tycho's verse may hold not just celestial secrets, but the incorporeal lives of humans as well—a dual reason to guard them from being 'espied from out the Earthly womb.' While Urania is intrigued enough to glide down to Earth from her celestial abode, she does not threaten. In his subsequent *Elegy to Urania*, Tycho takes advantage of Urania's curiosity to reassure her of his benign intentions. And he does so in person.

2.2 Elegy to Urania

Having suggested in these lines that Urania has already visited his observatory, which is able to see all the far-flung sites of heaven, Tycho (1573), in his book on the supernova of 1572, goes one step further.¹ The 232-line Latin *Elegy to Urania* (*In Vraniam Elegia Autoris*), written by Tycho himself, appeared as a noetic nine-page concluding paratext; in this epiphany of Urania, "... he was using allegory to describe the appearance of the supernova." (Christianson, 2000: 52).

Tycho (Figure 3) envisions a personal encounter with Urania on an evening walk in the woods of his birthplace Scania, the southernmost province of modern-day Sweden, but until 1658 part of Denmark. The Rönne River (line 1) extends 83 km (52 miles) through Scania (line 4). Lines 1–52 have never before appeared in print in English; here are lines 1–28 of the *Elegy to Urania*:

There is a place where the river Rönne
flows
And if you saw it, you would think it the
home of Muses.
So fertile no other place can match it,
and none so fair
As Skåne's fine lands, facing the north-
ern pole.
Skåne is rich, and studied in the art of
warfare,
The pride of Denmark, and her richest
glory,
Crowned in every part with shady for-
ests
Surrounding and embracing gentle mea-
dows.
And in the midst looms an ancient build-
ing

Named in days long past as Herrevad.
A crafty band of hooded monks once liv-
ed here
And pursued what they considered relig-
ion.

Back when the Pope in Rome still sold
The sacraments and locked up Hell, but
for a fee.

But now in recent times the gods com-
manded

Denmark to defy the Popes, refuse to
bear their yoke

And the band who cultivated such prof-
itable piety there

Was ordered forthwith to leave the
place.

Now the ancient Bille blood lives there



Figure 3: A 1596 portrait of Tycho Brahe, in the collection of Skokloster Castle (courtesy: Wikimedia Commons).

Personified in Steen, the glory of his
fatherland,
And his avenging hand has driven
Their cruel barbarism to flight.
Glass like that of Venice bears witness
to his presence
And beams in all clear colors of crystal,
A witness to his hand is paper making, a
skill unknown before,
Which woke to life, Steen, under your
auspices.
Here in this place, together with Steen,
my uncle,
I lived a long time in his home as guest.
(Translation © J. R. Christianson)
Tycho gives in these lines a capsule history

of Herrevad (line 10). It was at Herrevad, originally an abbey founded in 1144 (the "ancient building", line 9), that Tycho first saw the supernova of 1572. Herrevad derives from Herivad (army ford), a reference to a ford over the Rønne. Denmark defied "the Pope" (line 13) by leaving the Roman Catholic church in 1536, becoming a Protestant kingdom. Tycho, a Lutheran, decries the selling of indulgences by the Popes, whereby one could get a complete remission of sins for a fee; no trips to Hell for those who could afford it! (line 14). By 1565 the monks were forced to leave Herrevad; 20 years later the building was administered as its governor by Tycho's uncle Steen Bille (line 21), who began manufacturing glass (similar to Venetian glass; line 23), and paper (line 25) there.

Now that Tycho has established for the reader an actual place (fine enough to be the "home of Muses")—and his familial link to that place which was astronomically important for him—the elegy shifts to the supernatural as Tycho takes a casual stroll in Skåne. Urania descends, identifies herself, and tells him not to be afraid. Here are lines 29–52:

One day, while I was strolling on the
shaded forest edge
All by myself, along the bubbling
stream,
The Sun was setting in the waves of
Hesperus
Just as the Moon began to speed its
nightly ride.
And look! A goddess descended – I
didn't know who –
From the clear heavens and suddenly
stood before me.
Stricken with terror, my hair stood on
end
Until she herself drove away the terror
her appearance caused.
"Forget your fright," she said, "don't flee
from sight,
For you, young man, must never leave
my art.
I am the goddess with the bright Olym-
pian name,
Urania - perhaps you knew that?
Among the charming Muses, the nine
Apollonian goddesses,
Jove, the highest of gods, loves none
other so much as me.
For just as ether towers high above
earth's downward sloping,
Tiny acres on the immense course of its
journey,
I soar high above the crowd of my sis-
ters

— Smile and forgive me, Calliope —
For they sing only of humanity's vain
labors,
Pleasures, power, might, and war,
And whatever else is happening on this
miserable globe,
Everything that does not last but quickly
perishes and dies.
I disregard everything that takes place
among people on earth
And soar through the ether to reach my
heavenly home."
(Translation © J.R. Christianson).

Urania seems to enjoy stirring the pot of sibling rivalry, even as she issues a half-hearted apology to one of her sisters, Calliope, who was regarded as Chief of all the nine Muses. If one reads neo-Latin Danish poetry, the visit of Urania to Skåne is not quite as startling as it appears here in isolation. As [Jensen \(2004: 66\)](#) points out, Erasmus Laetus (1526–1582) "... invites Apollo and the Muses to Valby Hill ...", which is in Copenhagen. This invitation occurs in the seventh poem of his book *Bucolica* ([Laetus, 1560](#)), a collection of poems well known in Tycho's circle. A close friend of Tycho, Johannes Pratensis, wrote a neo-Latin pastoral poem *Daphnis* in 1563. As [Zeeberg \(2009: 96\)](#) observes, "The overall composition of the poem is modelled on Virgil's 8, eclogue. But the references to that poem are fused with references to the *Bucolica* of Erasmus Laetus."

Jensen goes on to write

Inviting the Muses to Denmark was a standard procedure, one that was used also by Hans Frandsen, Hans Jorgenson Sadolin and Tycho Brahe, and it was common in European Neo-Latin poetry in general to invite the Muses to settle down in new places. ([Jensen, 2004: 66](#)).

It must be noted, however, that in *Elegy to Urania* the Muse is not invited, but appears unbidden.

In a study of vatic poetics, Molly [Pasco-Pranger \(2000: 275\)](#) reveals the inspiration for the "Forget your fright ..." invocation by a different divine interlocutor:

The first words addressed to the poet by a divine interlocutor in Ovid's *Fasti* "surprise" him as he sits at home with his tablets in hand and considers what explanation he should give for the nature and form of the god Janus. Janus speaks to the terrified poet:

Put aside your fear, laborious poet
of the
days, learn what you're asking
about and
hear my words with your mind.

In lines 29–52, we can clearly see the influence of Ovid (Figure 4). This time it is from his *Fasti*, a poem left unfinished in 8CE when he was banished from Rome by the Emperor Augustus (63BCE–14CE). As a divinely-inspired (i.e. vatic) poet, Tycho is framing his scientific authority here in terms of Ovidian poetics. Disdaining their predilection for the travails of mere mortals, Urania exalts herself as the only Muse to concern herself with heavenly matters, and the one most loved by Jove (Jupiter, King of the Gods). However, she is making an exception here, favouring Tycho above all other mortals in deserving of her patronage. In an encounter between a mortal and a goddess, the flow of time itself must certainly alter. Tycho does not present this as a conversation, as he essentially just listens—somewhat stupefied one expects—as Urania delivers a lengthy monologue. This is clearly not a didactic poem.

The conversation between Urania and Tycho, which is the bulk of the elegy, exists “... between time and timelessness ...”, as Karla Pollmann (2017: 178) writes in a discussion of poetry. The first 28 lines clearly situate the elegy in the existing time and culture of Denmark; the timeless content is conveyed to the reader in a particular aesthetic fashion that Tycho fabricates to deliver this otherwise unbelievable reportage of an exact encounter with a goddess. In lines 39–56 and 81–86 Urania presents her own “... foundation myth or origin story ...”, thus highlighting the tension Tycho feels as his “... hair stands on end.” As Tycho is suspended in timelessness, his entire future is determined by Urania, as she directs “... you must never leave my art.” (line 38). In the words “... never leave ...”, Urania is putting her temporal stamp of eternity on the command. By advancing Man's knowledge of astronomy, Tycho (as a committed acolyte of Urania) will be the driving force to move culture forward for future generations. The remaining lines of the elegy given in this paper were previously published in (Christianson, 2000).

Urania then describes her attributes (Christianson, 2000: 46), lines 53–66:

And boldly I soar to heaven, beyond the
clouds.
With Jove, I taste the ambrosia divine
And search the sevenfold heaven's
ceaseless orbs

Among the stars, wandering well-worn
paths:
The stars that reveal the skill of godly
will
That built a sparkling roof above the
earth;
The stars that far in advance knew our
fate,
Fate – often good, often bad;
The stars that silently exercise justice
among you.
Much do they grant with grace. They
hinder too.
But do not force the soul that has a
mind,
For he does all according to his will,
But few will take the way of the mind on
earth,



Figure 4: The Roman poet Ovid, imagined in a woodcut from the Nuremberg Chronicle of 1493 (courtesy: Wikimedia Commons).

So, very few can bend the heavenly
force.
(Translation © J.R. Christianson).

The sevenfold orbs refer to the planets, while stars sparkle in the roof. Tycho gives a nod to astrology, whose stars foretell the future of ordinary humans. He espoused an apocalyptic astrology,

... that contrasted sharply with the prevalent Lutheran view ... [which held that] ... divine punishments brought about by the heavenly bodies could be fended off by praying and making penance. (Håkansson, 2004: 234).

Urania reveals a different path is open to Tycho; as an intellectual he can escape the fates of lesser mortals, harnessing the very force of the heavens by willing it. This combination of will and intellect is in fact an evocation of Reason that would see its full expression in the eighteenth century in what we term The Enlightenment. [Christianson \(2000: 51\)](#) quotes from the poem further (lines 81–94):

But I recall an ancient, worthy time
 When I was worshipped, honoured here
 on earth.
 And I recall when, in the halls of kings,
 Proudly I went forth in glory. Then
 No men but kings and those of royal
 blood
 Would dare approach my sacred temple
 site.
 But you do not neglect to show me
 honour,
 For you have strewn your incense on
 my altar
 And often stand at night and watch the
 stars.
 Then spoke Apollo: "He belongs to you!"
 His very words! And both of us did hope
 That you would dedicate yourself to me,
 And serve me under Ursa Major's sign
 And spread abroad your northern home-
 land's fame.
 (Translation © J.R. Christianson).

Urania offers a lamentation that is typical of this genre of poetry in the Renaissance. Through this neo-Latin poetry, writes [Jensen \(2004: 66\)](#),

... writers expressed their view of the arts and sciences of their own period as being the direct heirs of Antiquity, often with a polemic against the Middle Ages, which had not taken sufficient care of its heritage. This was the case ... with Tycho Brahe's Urania, who was homeless because she lacked pupils.

Urania's reference to being honoured by kings is a nod to Claudius Ptolemy, who was regarded in this era to be a member of the Egyptian Ptolemaic dynasty; he is often depicted as wearing a crown. Urania remembers this ancient time fondly in lines 81–86, but until Tycho came along she lacked any suitable worshippers; thus these six lines are really a lament.

The preterite acts of royalty are compared favourably with the way Tycho (her star pupil) accords due honour to Urania, thus by association clothing him in the same mantle of royalty; instead of being an authority in poetry,

he becomes one in astronomy, like Ptolemy. But the honour is not just an act of worship accorded to her past. Rather, this honour accorded to Tycho brings with it a burden of perdurance—a persistent and dedicated devotion that sees him watching the stars. However, the key point of this passage, and indeed the entire elegy, is the god of poetry, Apollo, granting Tycho to Urania. The intervention of a god here—higher up the Olympian ladder than a muse—is extraordinary. In this early-modern era, the two deities are often linked. To mention two later examples: in art, they are shown in a painting by Charles Meynier ([Figure 5](#)); in poetry, by William Congreve: "Hark, hark, again Urania sings!/Again Apollo strikes the trembling strings!" (in a miscellany of poems by [Dryden, 1716: 308](#)). Thus, it is not surprising that Tycho makes direct use of Apollo (poetry) and Urania (astronomy and harmony). In a 1593 letter, Tycho mentions the Scottish brothers Thomas and John Craig. As [McComish \(2017: 57\)](#) writes, the letter

... reveals the privileged position that poetry held amongst those at the forefront of advances in astronomy and mathematics in the early-modern period. We learn from a letter to Peter Young in 1593 that Brahe believed that Thomas, like his brother, was interested in astronomy, and wished to use his [Tycho's] own "not unsophisticated" poetry to beautify his astronomy.

Tycho co-opts Apollo in another of his poems, *Urania Titani*, dated to 1594. In a study of that poem, Minna [Jensen \(2004: 178\)](#) of the University of Southern Denmark writes

Tycho adds an extra twist by having Urania introduce her brother Apollo in laudatory terms inasmuch as it is, of course, Tycho Brahe himself who has put these words in the mouth of the narrator.

And like the *Elegy*, this poem takes Ovid as a source (see Section 2.3) However, one must be cautious here, as [Ehrenpreis \(1974: 127\)](#) warns us:

Even when a poet boldly alludes to another man's work and draws our attention to the fact, the significance of the parallel depends on how he applies it. We have no way of telling whether or not the poet asks us to recall the whole of the work he alludes to.

It is also notable that Urania directs Tycho to serve her under the sign of Ursa Major. This is likely because, as a circumpolar



Figure 5: "Apollo, God of Light, Eloquence, Poetry and the Fine Arts with Urania, Muse of Astronomy", by Charles Meynier, 1798, Cleveland Museum of Art (public domain).

constellation, it never dips below the horizon as seen from Star Castle, so he would be constantly under her gaze. This elegy inspired Willem Jansonius Blaeuw (1571–1638) of Amsterdam, a disciple of Tycho, when he created a celestial globe in 1640. Blaeuw (Figure 6) "... dedicated this precious work to the Danish astronomer whose portrait is engraved at the head of Ursa Major."² (Hujer,

1965: 132) (Figure 7).

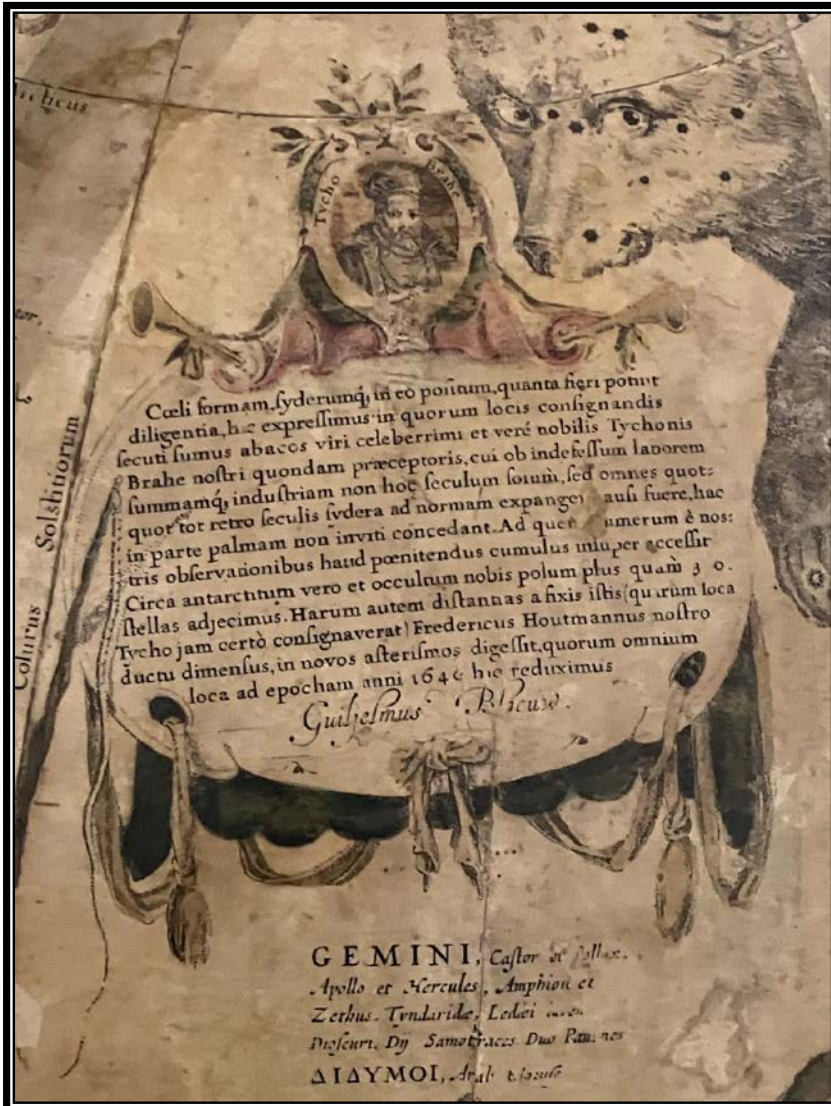
Deeper into the elegy, Tycho wrote a highly esoteric look at the relationship between chemistry and astronomy. At Herrevad in the 1570s, Tycho and his uncle began work on establishing a chemical laboratory, which explains the initial reference in these lines to "Vulcan's secret arts," an allusion to alchemy.



Urania complains that he thereby neglected her, causing her glory to dim. Lines 95–108 from [Christianson \(2000: 52\)](#):

But soon you fell on Vulcan's secret arts
And laboured many hours with sacred fire.
My glory dimmer, for no one worshipped me.
And I was stripped of honour as before.
But I could bear it, since the earth has stars
And they are not at enmity with mine;
The earth has suns, and it has moons as well,
It takes its hosts of stars in broad embrace.
For that which is above is also hid below,
And these two regions have a common nature.
But earthly stars are treated just like matter:
The powers they have appear in Vulcan's art.
Our stars in heaven's sphere the eye can see,
But mind alone, not eyes, can see their force.
(Translation © J.R. Christianson).

Figure 6 (left): Willem Blaeuw, portrait by Jeremias Falck (courtesy: Wikimedia Commons).



In the first 4 lines we see the hand of [Cicero \(1949, xviii.67\)](#), who noted that "... the topic of the effects of causes ... is wont to give a marvellous fullness of expression to orators and poets." Here Urania targets "Vulcan's secret arts" as the cause, the effect being her dishonour. The remainder of this passage is an unexpected excursus into Renaissance Neoplatonism that requires careful explanation. Ultimately it is based on so-called Hermetic texts, religio-philosophical treatises that originated in Hellenistic Greek times that expounded a harmony between humans (the microcosm) and nature (the macrocosm). The Hermetic view is directly expressed by Tycho, stating "... these two regions have a common nature." This view was most forcefully promulgated by Paracelsus in a text he wrote in 1530 (but not published until after his death in 1541), where he expressed everything in terms of stars—a notion that clearly appealed to Tycho. So-called 'weatherstars' were said to

Figure 7: Tycho appears together with Ursa Major on a star atlas by Blaeuw; photograph taken in Avignon by John Christianson.

be responsible for temperature changes: night was produced by dark stars; windstars produced winds; rainstars begat the rains; winterstars brought about the winter, and so on. All this was linked to chemical reactions, which Paracelsus believed made the laws of nature explicable (Aly-Labana); this explains Tycho's line 106 about such powers appearing in alchemy ('Vulcan's art'). The "... groundless fiction ..." (Thornton, 1799: 43) expounded by Paracelsus was reinforced by the German mystic Valentin Weigel (1553–1588),

... whose astrological texts present a Paracelsian harmony between the actions of the inner, microcosmic stars within humans and those in the heavens, the macrocosm. This doctrine of a twofold celestial and terrestrial astronomy was expressed by Tycho Brahe. (Shackelford, 2008: 184–185).

What was 'an actuality' in one cosmos ("Our stars in heaven's sphere the eye can see") was 'a potentiality' in the other ("But mind alone can see their force"). A full treatment of Tycho's engagement with Neoplatonism can be found in Christianson (2000).

Tycho concludes his poem in these final lines (222–232) from Christianson (2000: 52):

Like blind moles, lethargic mobs see
No more than earthly, perishable things.
So very few Apollo grants to see
The riches which Olympus hides away.
For they must show contempt to earthly gain
And lift their eyes unto the heavenly beams.
And Venus cannot lure them, nor the glass
Of wanton Bacchus. Riches, power, fame.
More beautiful by far the goal they seek,
For it is not a goal unknown to gods:
Through mental force control the heaven's stars,
Subject the ether to his conquering spirit.

(Translation © J.R. Christianson).

The idea that only a select few were able to enjoy the riches of Olympus was a pervasive belief in this era. What strikes one here are the final two lines of the *Elegy*, which were not merely allegorical. The widely-read Tycho was quite possibly familiar with the works of the Italian philosopher Agostino Nifo (1473–1545; Figure 8), an adherent of Plato (Mahoney, 2000).

Against naturalism, Nifo appealed to Plato and the Platonists who admit a

spiritual principle in the human being and consider it free and superior to the stars, 'the wise would control the stars.' (Einaudi, 2008: 358).

He could be the inspiration for Tycho's audacious ending to the *Elegy*, where he reaches for a goal known only to the gods themselves: control the heaven's stars!

Tycho did truly believe that there was a spark of divine power in the human intellect, and that the person who used his or her mind [ie 'mental force'] could penetrate to a knowledge of the hidden, nonmaterial, forces within nature. (Christianson, 2000: 53).



Figure 8: An eighteenth century engraving of Agostino Nifo (courtesy: Wikimedia Commons).

With that knowledge would come control. The invocation of 'force' in lines 66 and 108 are reinforced in these final two lines.

Overall, the last 11 lines are a clarion call for all those who would pursue natural philosophy to its ultimate extent: forswear Venus (women), Bacchus (drink), and pursuit of wealth ("contempt to earthly gain"). While not as extreme as suggesting men should become anchorites, Tycho clearly believes the ascetic lifestyle is most conducive to study. Even though he established himself on the island of Hven to provide a measure of isolation, his lifestyle there was far from the ascetic ideal.

Nonetheless, Tycho's elegy "... is an allegorical description of the astronomer's decision to devote his life to science, specifically astronomy." (Zeeberg, 2007). Tycho was the very embodiment of such an astronomer described by Scipione Capece (1480–1551), president of the Neapolitan Academy until 1543. In his poem *De principis rerum*, Capece (1546) wrote of shrewd men who studied Nature, and astronomy in particular (Haskell, 1998: 521):

Shrewd men, marvelling at the expanses of the unchanging earth and the vast surface of the blue sea and the immense spaces of the deep sky, and that the universe was decorated with flashing stars, and that wandering stars were borne in diverse motions, tried to understand with their intelligence the hidden secrets of Nature and to inquire into the concealed beginnings of the universe, enraptured by the sweet desire of seeking out the reason for things.

2.3 Hellenistic and Roman Influences on Tycho's Elegy

While there has been some analysis of Tycho's poem published in Danish, only brief remarks by Christianson (2000) have appeared in English, a fact which has animated this study. Tycho's choice of elegy might strike one as curious, as it is often associated with commemorating the death of a famous person (the early seventeenth-century poet Isaac Watts invoked Urania several times in his poetic lamentations; see Gibbons, 1836). Although that meaning did become more popular in the late sixteenth century, *elegia* "... actually denoted a broader conception of the genre indebted to Hellenistic elegists, who wrote on myths and history." (Olson, 2018: 5). While Urania does lament the passing of a happier time when she was worshipped and honoured, the trajectory of Tycho's elegy is clearly rooted in this Hellenistic conception (also the period of origin of the *Corpus Hermeticum*). And it is certainly quite personal. In the case of this elegy, the person is very much alive, as Tycho employs a *de haut en bas* style to mold the perception of the reader into accepting he is the type of person singled out by Apollo and coddled by Urania.

The choice of writing an elegy to Urania in particular, is that the Muse personifies a dual role as the Spirit of Poetry and the Muse of Astronomy. We must look to ancient Roman poetry to find the inspiration for Tycho's poem, and while it was a particularly audacious composition, it was actually very much of a piece with other early modern scientific works.

While we do find presentations of empirical data, charts, and diagrams in early modern scientific texts, the major part of these works consists of humanistic literary prose, or even verse, which is greatly influenced by classical models and their style – by ancient rhetoric. For early modern scientists, this style was a natural choice, since it was precisely how they had learned to write at school. (Luggin, 2021: 643).

For a study of Tycho's early education, and his engagement with ancient sources, see Christianson (1967). As Jensen (2009: 570) writes, Tycho's *Elegy* is "... closely modelled on one of Ovid's *Amores* (3,1) ..." in which Ovid met his protectress, the goddess *Elegy*. The *Amores* even begins the same way, with *Elegy* appearing in "... an isolated wood, a scene of epiphany that harkens back to Hesiod's *Theogony* (22-35)." (Perkins, 2011: 313). However, the setting goes further by exploiting "... the metaphor of literary tradition as an ancient and sacred forest." (Westerhold, 2013). Tycho used the same approach as Ovid by transforming his choice of poetic genre—elegy—into a walk in the woods. It is not surprising Tycho looked to Ovid for inspiration as "Ovid himself served as an explicit model for self-presentation ... In *Tristia* 5.1, he declares 'I myself am the architect of my story.'" (Olson, 2018: 76). Like Ovid, Tycho was a salesman, and the product was himself, with astronomy serving as the delivery vehicle. It is also important to recognize there was a relationship between the Muses and the personification of the elegiac form, *Elegea* herself. The first century CE Greek–Roman poet Statius portrayed *Elegea* attempting to infiltrate the party of the Muses at the wedding of one of her poets. *Elegea*, Statius (*Silvae* 1.2.10) writes, "... wants to be seen as a tenth [Muse], and mingled in the sisters' midst." (Fielding, 2019: 7). In his analysis of the *Elegy to Urania*, Peter Zeeberg comments that Tycho, unlike most poets, was seeking to establish his credentials in an academic milieu and that this was a lower social arena than the high aristocratic milieu into which he was born. He did so by having Urania summon him away from empty aristocratic values based on wealth and power to the eternal, heavenly calling of "... a mystical experience in the Neoplatonic tradition: the mind torn free from the body." Zeeberg notes that most nobles would not read this poem; it was 'self-therapy' that dealt with a deep personal conflict, and this was what made the poem so "... beautiful and effective." (Zeeberg, 1993: 12). Lines 65 and 66 of the *Elegy*



Figure 9: Detail from the frontispiece of *Harmonia Macrocosmica* by Andreas Cellarius; depicted is Urania, seated; at her right hand is Tycho Brahe; engraving done in 1660 is by Frederik Hendrick van den Hove (public domain).

cogently express this Neoplatonic approach: “But few will take the way of the mind on earth/ So, very few can bend the heavenly force.”

The Elegy certainly had its intended effect, bolstering Tycho's identification with Urania. This reached its most famous expression in 1660, when Andreas Cellarius published his now-famous star atlas, *Harmonia Macrocosmica*. Its frontispiece depicts a seated Urania. At her right hand is Tycho, looking directly at the viewer (Figure 9).

3 OTHER RELATIONSHIPS WITH URANIA

3.1 Giovanni Pontano

Another President of the Neapolitan Academy,

Pontano, is depicted on the walls of the town hall in his Umbrian home, Cerreti di Spoleto. Pontano is shown with his eyes turned towards the heavens, with the Muse Urania at his shoulder, setting a laurel crown on his head as he writes the famous poem *Urania* in Latin hexameters; the book was begun in 1475 but not finished until about 1500, three years before his death. The parallel with Tycho is clear, as Pontano was not just a poet, but an astronomer/astrologer as well; he regarded astronomy as compatible with providence (Goddard, 1991). And like Tycho, he visibly reached for eternal glory; in Book 5 of *Urania* he expressed confidence in the immortality that his poetic writings would achieve. “Inspir-

ed by Propertius, Pontano aimed at experiencing poetry as a destiny by balancing poetic inspiration and life.” (Soranzo: 1472). Again, the parallel with Tycho is stark. Pontano’s life overlapped with that of Copernicus, who owned a copy of Pontano’s prose works, printed in Venice in 1501. Pontano wrote this in *Urania’s* poem:

Which fires shine in the firmament,
which stars move the silent sky, with
which stars the zodiac glitters
and how the planets follow their trajectories...



Figure 10: Portrait of Joseph Justus Scaliger, aged 35, looking to right, bust in an oval, within a decorative surround and flanked by statues of Urania (holding an astrolabe and calipers) and Mercury; from a portrait of 1575, this print was made in 1592 by Hendrik Goltzius (courtesy: The British Museum, 1857,0613.458).

Such things tell me, o divine Muse
Urania, most famous daughter of Jupiter,
who draws your name from the sky itself.

(Quoted in Furstenberg-Levi, 2016: 32).

3.2 Julius Caesar Scaliger

In his *Elegy to Urania*, Tycho disdains the caution given by the Italian scholar Julius Caesar Scaliger (1484–1558) that elegy should “... not be obscured by far-fetched stories.” (Scaliger, 1561: 126). Tycho admired Scaliger’s astronomical knowledge, and sent

him a manuscript of astronomical tables in which he praised Scaliger. Possibly taking inspiration from Tycho’s closeness to Urania, Scaliger’s son Joseph (in 1592; Figure 10) depicted himself being accompanied by Urania (at left). He is also flanked, at right, by Mercury. Urania and Mercury appear again in the frontispiece to a star atlas (see Section 3.3.1). Mercury was equated with Hermes Trismegistus, author of the Emerald Tablet, which was taken to be a primary Hermetic source.

3.3 Cunitz and Thomas

On the ‘personal’ aspect of Tycho’s elegy, no other early Modern astronomer so closely identified himself with Urania. However, Urania was especially linked to two others in the seventeenth and eighteenth centuries.

For the female Silesian astronomer Maria Cunitz, a poem was written for her 1650 book *Urania Propitia* (Gracious Urania; or Beneficent Urania) by Constantius Ringius. The ‘divine Urania’ is directly invoked once, and Urania is mentioned again as a reference to her status as a female. But this is far removed from the personal conversation Tycho creates between himself and an Olympian deity. Cunitz’s book never achieved wide circulation; only nine copies still exist.

A beautiful star atlas appeared in 1730: *Mercurii Philosophici Firmamentum Firmianum Descriptionem et Usum Globi Artificialis Coelestis*. In it, Corbinianus Thomas (1694–1767) invented one new constellation to honour his patron. It was named Corona Firmiana, dedicated to Leopold Anton von Firmian, the Prince-Archbishop of Salzburg (1679–1744). Firmian is best known for his despicable expulsion of Protestants from the lands he controlled, choosing 31 October as the very day in 1731 to finish his edict. It was on 31 October 1517 that Martin Luther launched the Reformation. Firmian’s actions shocked and scandalized Europe as some 20,000 Protestants quickly fled to Prussia, the Netherlands, and lands controlled by Great Britain (Walker, 1992).

The Benedictine monk Thomas, who came from Elchingen in Bavaria, was a Professor at the University of Salzburg from 1720 to 1767. In 1720 he authored his first theological book, *Introductio in Prolegomena Theologiae Dogmaticae*. In 1721 he became a Professor of Mathematics there, and also taught astronomy. In addition to hermeneutics and exegesis, Thomas also taught the Hebrew language at the theological faculty.

His atlas is unique in that it combines a Bayer Greek letter to designate a star, a Roman



Figure 11: Striking allegorical frontispiece for *Mercurii Philosophici Firmamentum Firmianum*, a 1730 celestial atlas by Corbinianus Thomas (Cunningham Collection).

numeral for magnitude, and an Arabic numeral for reference to a star catalog. He was the first celestial cartographer to provide individual plates for some of the Southern constellations, such as Indus and Pavo. In all, his atlas contained 54 etchings of individual constellations.

3.3.1 The Frontispiece to the Star Atlas

The frontispiece was drawn by August Christian Fleischmann, a German engraver who flourished from 1694 to 1732. In this dramatic scene, a portrait of Firmian is held up by Fame (Figure 11).

The heavenwards reach and flight of fame goes back to Odysseus's self-revelation to the king of the Phaeacians at *Odyssey* 9.19-20: 'I am Odysseus, son of Laertes, who am known to all men for my cunning, and my fame reaches the heavens.' (Hardie, 2022: 52).

Here we see Fame with her trumpet, which is also a standard visual attribute of Fame, who is the messenger of Zeus (seen at upper right). In the Apollo room of the Pitti Palace in Florence, completed in 1665, a Medicean prince is instructed by Apollo who points to a celestial globe, a lesson in astronomy. Fame with her trumpet is positioned behind the prince (Hardie, 2022: 258); she appears in the same position with prince Firmian here.

Draped in a star-strewn cloak is Urania, who appears as an adoring female figure. She exclaims "Apollo will be great to me." This recalls the inclusion of Apollo in Tycho's elegy; as I wrote earlier, Tycho believed he is the type of person singled out by Apollo and coddled by Urania. Fleischmann was likely inspired not only by the Pitti Palace representation but by a 1533 work from the school of Michelangelo, *The Dream of Human Life*. Several elements of it have been reworked here. In the

1533 work, a figure with wings holds a trumpet, whose large end rests directly on the forehead of a figure representing humanity. In the frontispiece we see here, the winged figure of Fame holds a trumpet over Firmian's head, while Urania becomes linked to him with a white ray of light. A large celestial globe features in all three works.

Thomas 'pulls out all the stops' as he positions *his* patron, like Tycho, as the one so beloved of Apollo and Urania. He explicitly refers to the Archbishop as *Iuvavensi Apollinis*—the Apollo of Salzburg,

... indicative of both Firmian's pastoral role in Apollo's aspect as the patron defender of flocks, as well as *Apollon Musegetes*, the leader of the Muses and director of their choir. (Barentine, 2016: 51).

Looking down on the scene is the messenger Mercury; as in the Scaliger frontispiece, Mer-

cury appears in the same engraving as Urania. He is whispering to Jupiter, who seems slightly distracted by an imperial eagle, who is clearly relishing being given attention by the King of the Gods. Zeus, the father of Urania, presumably makes an appearance here to give his imprimatur to the special honour being accorded Firmian. As the messenger god, Mercury may be relaying Firmian's thoughts on all that is happening, but he also represents the scientific act of knowledge and interpretation. In the Roman pantheon, Mercury (the Greek god Hermes) is equated with the Egyptian god Thoth, who is responsible for all human knowledge. In his left hand, Mercury holds a 'heralds staff'. "The heralds' staff was a plain shaft (or stick) of wood, on top of which were a set of wings, and intertwined on the staff were two intertwined snakes with their heads uppermost." (Dykes, n.d.). Here Mercury wears a cap with wings; the upper portion of the staff is not shown (Figure 12).



Figure 12: A detail of the frontispiece, showing Zeus and Mercury (Cunningham Collection).

As the imagery is dominated by icons, which can easily be dismissed in our technocratic age, I turn to an analysis by the French philosopher of science François Dagognet (1924–2015) to elucidate what is being presented.

There is no discipline, indeed, which does not benefit from iconicity... The mistake would be to regard them as mere didactic aids, as convenient illustrations, while in fact they constitute a privileged heuristic instrument: not an ornament, a simplification, or a pedagogical means to facilitate transmission, but a true new form of writing, capable, alone, of transforming the universe and inventing it. (Dagognet, 1973: 86).

Far from just a mere excuse to have a colourful frontispiece to his atlas, Thomas presents us with a deeply thoughtful tableau combining the mortal Firmian and the immortal Urania. By giving us beautiful imagery of the constellations, along with a new one, Thomas is clearly intent on not just presenting the universe in his atlas, but transforming it.

In his 1973 book, Dagognet led the way "... to a reconceptualization of science, focused

upon this neglected dimension of scientific practices." (Simons, 2022: 93). Very pertinently to the image we see, Dagognet (1973: 110) wrote of

... what I believe to be one of its founding moments, the one by which it makes us truly masters of the universe that surrounds and overflows us: the geometric iconicity, a certain writing that transposes the world, projects it and renews it.

Strewn along the bottom of the frontispiece, literally at the feet of Urania and the globe, are the actual tools of geometry and mapmaking: dividers, compass, and a back-staff. Writing that transposes the world is prominently projected from the mouth of Urania along a narrow triangle that directly connects her with the mortal Firmian (Figure 13). Imbued with the celestial radiance projected by Urania, Firmian is able to transcend his mortality by projecting his own celestial beam to the globe. Naturally, it shines upon the constellation Thomas had just created in his honour by renaming Corona Borealis. These beams of light were, I believe, inspired by real beams of light seen in the sky since ancient times (Figure 14).

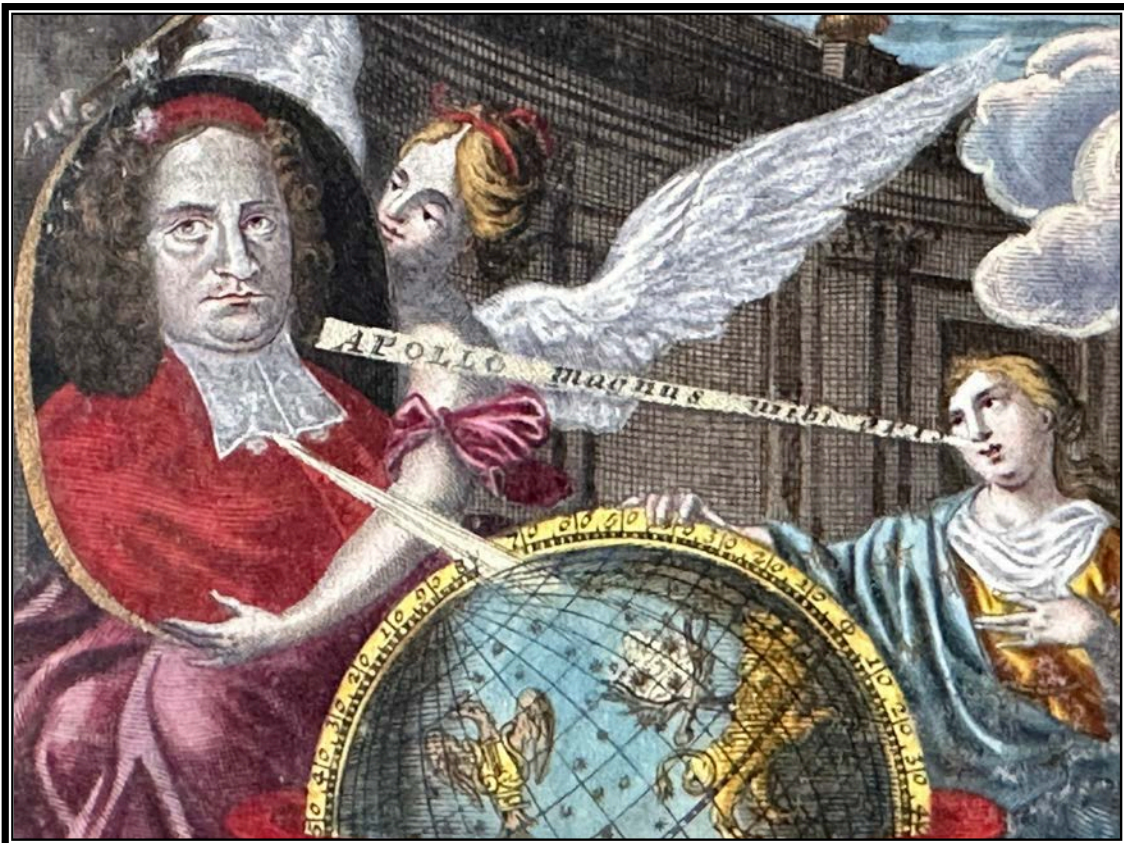


Figure 13: A detail of the frontispiece, showing Firmian, Fame, Urania, and the celestial globe (Cunningham Collection).



Figure 14: A naturally-occurring beam of light such as this one must have inspired artists to include something similar in depictions connecting mere humans with an astral agency (photograph: C. Cunningham, taken in The Woodlands, Texas, on 9 December 2023).

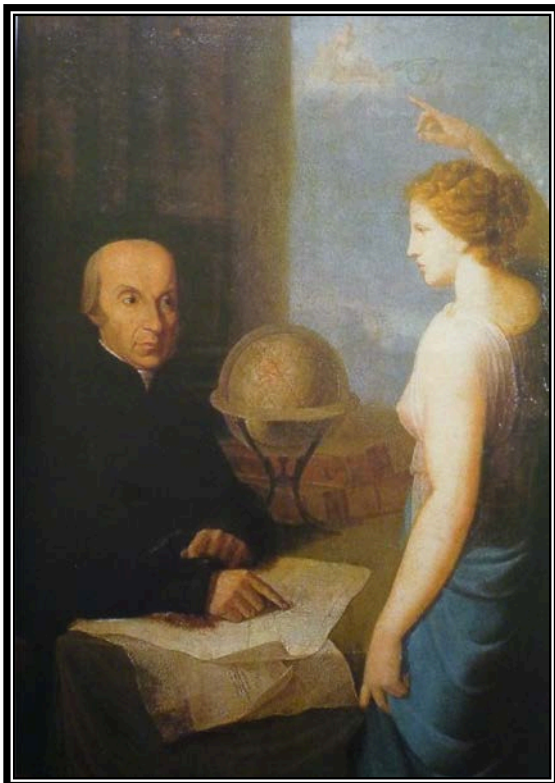


Figure 15: An 1808 painting by Francesco Farina, depicting Giuseppe Piazzi looking into the eyes of the Muse Urania. The Muse points to the goddess Ceres in the sky, riding her chariot: an allusion to the 1801 discovery of Ceres as the first asteroid. (courtesy: Palermo Observatory).

Urania displays

... an unnatural position of fingers, in which the third and fourth digits are held together, as if almost fused, and the second and fifth fingers are separated from the central ones. (Lazzeri et al., 2019: 526).

A study of this positioning, which was widely used in Renaissance paintings, revealed no 'hidden meaning.' Rather, "... this feature signified grace, elegance and refinement." (Lazzeri et al., 2019: 532). Notably, it appears this is the only depiction of Urania to exhibit this aesthetic finger placement.

3.4 The Temple of Sicilian Urania

In 1801, shortly after Giuseppe Piazzi co-discovered the first asteroid, Ceres, the German astronomer Baron Franz von Zach dubbed Piazzi's observatory in Palermo "... this temple of Sicilian Urania." (Zach, 1801: 578). Urania was subsequently depicted with the Ramsden Circle that Piazzi used to first see Ceres (Cunningham, 2011) and seven years after the discovery the most iconic portrait of Piazzi was painted by Francesco Farina (1778–1837); he depicts Urania looking directly into the eyes of Piazzi (Figure 15). As I wrote in Cunningham (2016: 32),

It is almost as if we are witnessing the apotheosis of Piazzi, a figure more at home with the gods than with mortals. What we see in the painting by Farina is both a psychological reality (Piazzi's terrible intimacy with Urania) and a theatrical tableau with all the props appropriate to the sitter as an astronomer, one intent on projecting to future observers the importance of his discovery of Ceres. A discovery so important, indeed, that a mere chart of a planetary orbit (which sufficed for Herschel) was inadequate. But central to the portrait is the eye contact between Piazzi and the Muse. What are they sharing? Farina is here employing the notion of anecdote in the original meaning of 'things not given out' (from the Greek *anecdota*), in the sense of unpublished, secret, or private narratives.

As the German astronomer Bruno Buergerl (1875–1948) rather whimsically wrote, "The goddess Urania is a most fascinating lady, and they who have once been enthralled by her beauty remain her victim all their lives." (Buergerl, 1911: 24). That was certainly the case for both Tycho and Piazzi, separated by two centuries.

4 CONCLUDING REMARKS

What Being, therefore, since the birth of
Man
Had ever more abundant cause to speak
Thanks, and if favours of the heavenly
Muse
Make him more thankful, then to call on
verse
To aid him, and in Song resound his joy.

When William Wordsworth (1907: 126) wrote these lines in his poem *Home at Grasmere* he was expressing what had been known for centuries: Urania was an inspiration to poets, and poets returned the favours of Urania by praising her. Even when Urania was not specifically mentioned, she becomes the subtext of poems such as Wordsworth's *I Wandered Lonely as a Cloud*, where he makes a comparison of stars to flowers (Dauphin, 2020). And in the eighteenth-century scientific poems of Erasmus Darwin, "... he develops what one might call an Epicurean 'theory of natural seduction' at the heart of which are love and pleasure, under the aegis of the Muse Urania." (Dauphin, 2021: 1).

The use of Neo-Latin poetry praising an astronomer in the sixteenth and seventeenth centuries was not unusual. For example, the famous book by Johannes Hevelius (1647), *Selenographia*, contains no less than nine such poems in praise of Hevelius' book (Tautschnig, 2022). However, the personal self-aggrandisement of the *Elegy to Urania* in Tycho's supernova book stands apart in its hubristic nature. The foundation of such poetry, where humans interact directly with deities, was established by Ovid and other ancient poets; and just a few years before the *Elegy* was written, John Maitland paved the way for Tycho to emulate them, and it continued into the latter seventeenth century. A prime example is by Niccolo Giannettasio (1648–1715). In his poem *Piscatoria, et Nautica* from 1686,

Christopher Columbus is transported to
heaven by his 'mother,' the muse Urania,
and instructed in the harmony of the
spheres and the geography of the New
World below. (Haskell, 2014: 37).

Tycho's intentions in writing the *Elegy* have been explored in this study, which has uncovered unexpected connexions such as the link between Blaeuw's celestial globe and the *Elegy*; and the influence of Nifo's idea that a wise man could control the stars themselves. In a sense, Isaac Newton was able to control the stars by his universal theory of gravity. This was commemorated in an ode by Ed-

mund Halley, which was published in Newton's *Principia* in 1687.

As Fowler (1996: 33) has noted, astronomy in this period was an important area of intellectual renewal in many fields. "After Tycho Brahe's discovery of the 1572 nova, stellar imagery appeared throughout Europe in every context, from heraldry to architecture, painting to poetry." And in this age "Anybody who might think of sitting down to read books for pleasure was able to read Latin poems." (Jensen, 2004: 76) The role of Urania herself has also been thoroughly explored here, not just poetically, but also as an approachable deity who interacts with humans. This aspect reaches its penultimate expression in the painting of Piazzini in 1808. Interest in the subject of astronomical poetry in the Early Modern era has been on the rise in scholarly literature, and this author has been working further on the topic as it relates to the Great Comet of 1618; this will be published in a forthcoming book in the Historical & Cultural Astronomy series by Springer.

5 NOTES

1. There are only 20 copies of the 1573 book in public collections, with perhaps two or three more in private collections.
2. The inscription under the image of Tycho on the celestial atlas reads in part "The form of the heavens, the stars placed in it, as much as could be done diligently, we express here: in whose places to be consigned we have followed the abacus of the most famous and truly noble man, Tycho Brahe, our former teacher." See Dermul (1939: 107–108) for a complete Latin transcript of the cartouche under Tycho's portrait.

6 ACKNOWLEDGMENTS

Thanks to Dr. Roger Ceragioli for his translation and commentary on the Scottish epigrams. And especially to Dr. John Christianson at Luther College, Iowa, for his kind permission to publish his translation of select passages of Tycho's neo-Latin elegy; particularly for the first 52 lines, which appear here in English for the first time.

Additionally, I thank him for the outline of Zeeberg's 1993 analysis of Tycho's elegy, which was written in Danish. Thanks also to Dr. Florian Klaeger for his improving comments on an early version of this study. Finally, it gives me great pleasure to reference the *Hermes/Mercury* article written by my good naval friend in England, Godfrey Dykes RN.

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Clifford J. Cunningham has undergraduate degrees in Physics and Classical Studies from the University of Waterloo in Canada, and a PhD (mainly about William Herschel and the asteroids) from the Astrophysics Group at the University of Southern Queensland in Australia. Currently, he is a Research Fellow in the Astrophysics Group.

Clifford has written or edited 15 books on history of astronomy, including a 5-volume history of early asteroid studies published by Springer. He is a Series Editor of Springer's Historical & Cultural Astronomy books, and an Associate Editor of the *Journal of Astronomical History and Heritage*. In 2020 he was elected a member of the IAU.

Clifford's discoveries include identifying Charles Burney Jr. as the person who created the word 'asteroid', in 1802; showing that Manilius introduced the numerical six-magnitude system; and recognising a description of the aurora borealis in Milton's *Paradise Lost* which had eluded scholars for 350 years. In 1990 the IAU named asteroid 4276 'Clifford' in his honour.

Currently he is editing three books on aspects of historical astronomy for three different publishers.