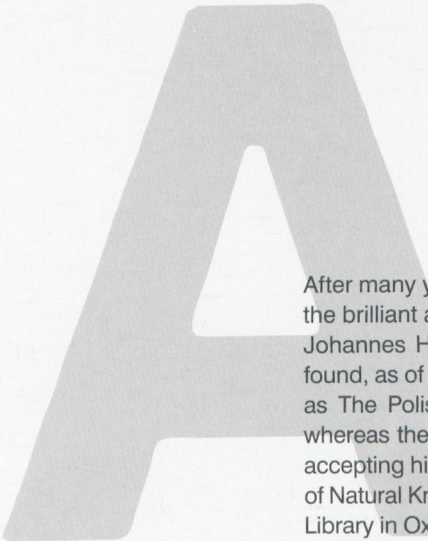


Teresa Grzybkowska

Andreas Stech's Portraits of
Johannes Hevelius in Gdańsk and
Oxford. At the Origins of the Portrait
of the Early Modern Scholar



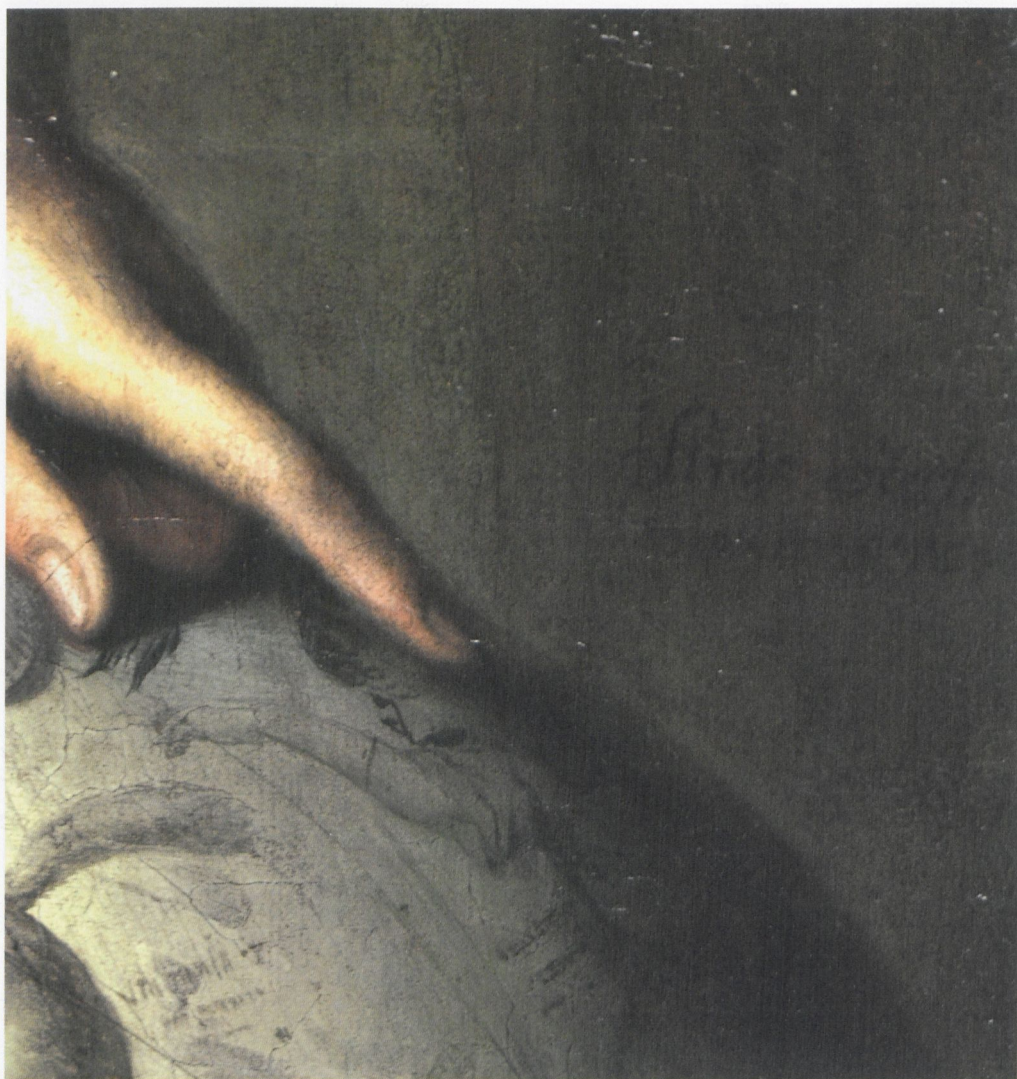
After many years I am returning to the subject of two portraits of the brilliant astronomer, the citizen of Gdańsk (German *Danzig*), Johannes Hevelius (1610–1687)¹. One of the paintings can be found, as of 1681, in the Gdańsk City Council Library, now known as The Polish Academy of Sciences Gdańsk Library [Fig. 1]², whereas the second, donated by the astronomer in gratitude for accepting him into the Royal Society of London for the Promotion of Natural Knowledge, could be found, as of 1679, in the Bodleian Library in Oxford [Fig. 2], after which, in 2001, it was moved to the city's Museum of the History of Science³. This return to my earlier research was provoked by the exhibition *Johannes Hevelius and Gdańsk of his Times* in Gdańsk Historical Museum⁴, which was organised in the summer of 2011 in celebration of the 400th anniversary of the astronomer's birth. After more than 300 years the two almost identical portraits of Hevelius hung next to each other, making it possible, for the first time, to directly compare them. For the first time it also became possible to notice and decipher in the Oxford portrait the barely visible, yet legible signature of Andreas Stech (1635–1697), located to the right of the astronomer's finger touching the celestial globe: *Andr. Stech/ pinxit 167[?]* [Fig. 3].



1. Andreas Stech, «Portrait of Johannes Hevelius», 1677, oil on canvas, 125 × 103 cm, Gdańsk, The Polish Academy of Sciences Gdańsk Library. Photo: © The Polish Academy of Sciences Gdańsk Library



2. Andreas Stech, «Portrait of Johannes Hevelius», 1677–1679, oil on canvas, 126 × 102 cm, Oxford, Museum of the History of Science (before conservation). Photo: © Bodleian Library

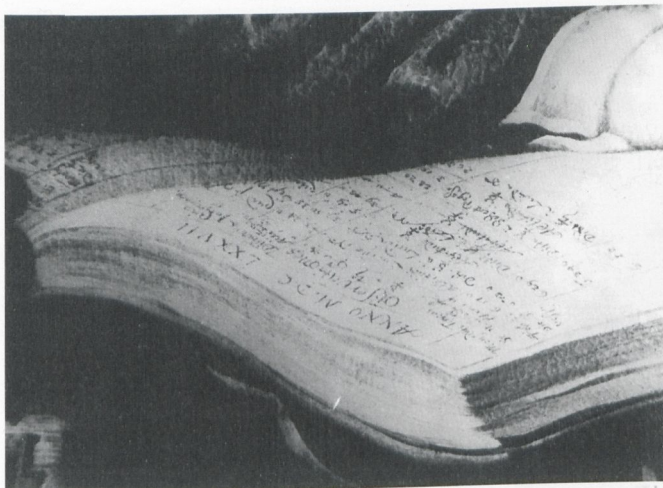


3. Andreas Stech, «Portrait of Johannes Hevelius», Oxford, detail of Fig. 3 – signature: *Andr. Stech/ pinxit 167[?]*.

The Gdańsk Portrait

The artist depicted Hevelius in his study, with bookshelves to his left and a decorative drape in the upper right-hand corner. He is sitting at a table, his bare head of graying, wavy hair reaching down to his shoulders. His facial hair – his moustache and small beard – do not hide his fleshy lips. The astronomer is dressed in loose, casually elegant attire of a costly, lustrous Chinese silk popular at the time, in a sophisticated dark brown color. The soft and profusely pleated cloth falls in folds parallel to the spines of the books on the shelves. The astronomer has wrapped a light-colored scarf around his neck. A short chain, almost certainly for hanging some kind of optical device, is visible on the silk fabric.

A pen, for the moment idle, sticks out from the scholar's right hand. He sits at a table covered by a table carpet, at work on the second volume of the *Machinae coelestis*, in which he is about to record his observations from 23 February 1677 [Fig. 4]. The full entry for that day can be read on page 789 of this work, published in 1679 [Fig. 5]⁵. From underneath the tome, at the edge of the table, a falling leaf with a map of the moon emerges recording an observation made in Gdańsk on 11 April 1644, the illustration of which can be found on page 311 of the *Selenographia* (published in Gdańsk in 1647; Fig. 6)⁶. The forefinger of the astronomer's left hand rests on the celestial globe – in exactly the place of the brightest star in the northern sky, known as Arcturus⁷. Hevelius points at Arcturus not by coincidence, for it is a first magnitude star and si-



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4. Andreas Stech, «Portrait of Johannes Hevelius», Gdańsk, detail of Fig. 1 – manuscript of *Machinae coelestis* with the beginning of the observation from 23 February 1677. Photo: K. Izdebski

5. Johannes Hevelius, *Machinae coelestis pars posterior*, Gedani, 1679, p. 789: observations from 23 February 1677, depicted in the Hevelius portrait in Gdańsk. Photo: © The Polish Academy of Sciences Gdańsk Library

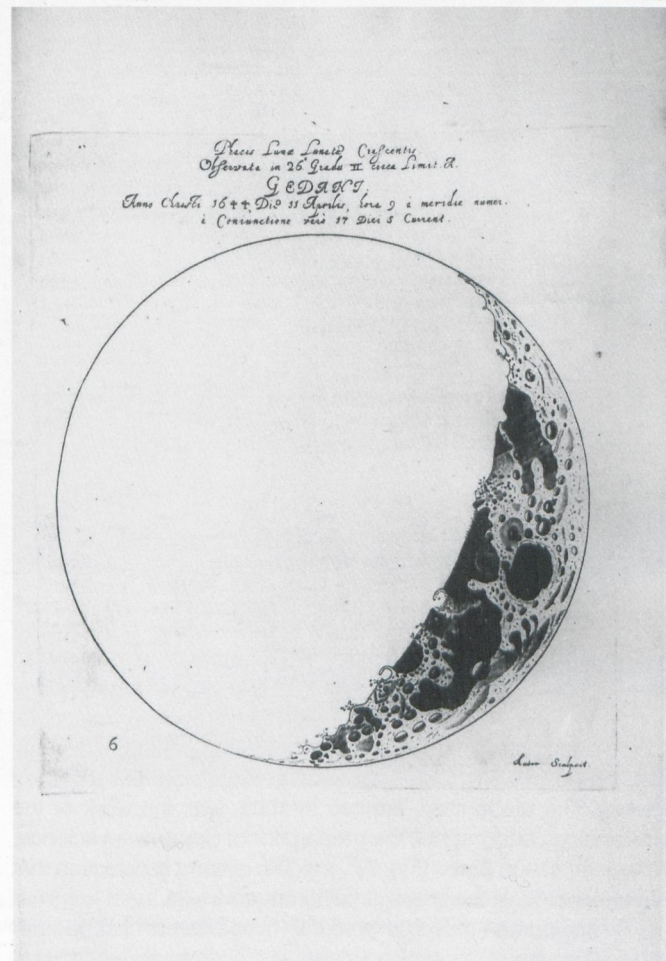
6. Johannes Hevelius, *Selenographia*, Gedani, 1647, Fig. 16: Moon phase of 11 April 1644, depicted in the Hevelius portrait in Gdańsk. Photo: © The Polish Academy of Sciences Gdańsk Library

MACHINÆ COELESTIS LIB. II. 789
ANNO M. DC. LXXVII.

Mens. Dies	Temp. secundū horolog. ambul.	Her. Min. Sec.	Observationes	Distantia & Altitudinis.	Grad. Min. Sec.	Quo Instrumento.
Martis.						
10	6 23 30		Altitudo Capiti Andromeda		37 30 0	Quod p. O.
10	6 29 0		Distantia ☉, a Pallicio Eadem distantia		23 31 0 23 31 0	Sex. M. O.
10	6 38 0		Distantia ☉, a Praxone Eadem distantia		30 42 20 30 42 15	Sex. M. O.
10	6 46 0		Distantia ☉, a Castore II		19 39 45	Sex. M. O.
<i>Nova Stella in Cello Ceti equali Mandū</i>						
Observationes Lunæ.						
<i>Nova Stella in Cello Ceti decreverit quasi videbatur Lunæ splendens.</i>						
Observationes Mercurii, Saturni, Martis & Fixarum.						
10	6 3 0		Altitudo ☿	circ.	8 15 0	Quod p. O.
10	6 17 0		Altitudo Lucida ♃		43 24 0	Sex. M. O.
10	6 23 0		Distantia ☿, a Lucida ♃ Altitudo ☿	circ.	39 50 35 5 0 0	Sex. M. O. Quod p. O.
10	6 29 0		Distantia ♃, a Lucida ♃ Altitudo ♃	circ.	39 48 0 4 0 0	Sex. M. O. Quod p. O.
10	6 34 0		Distantia ♃, a Sclera Pegasi Altitudo ♃	circ.	28 20 0 1 15 0	Sex. M. O. Quod p. O.
10	6 41 0		Distantia ♃, a Sclera Pegasi Altitudo ♃	circ.	28 18 30 2 30 0	Sex. M. O. Quod p. O.
10	6 52 0		Distantia ♃, a Lucida ♃ Eadem distantia		20 38 25 20 38 20	Sex. M. O.
10	6 38 0		Distantia ♃, a Lucida Latere Persei Eadem distantia		32 31 0 32 31 5	Sex. M. O.
10	7 6 0		Distantia ☉, a Pallicio Eadem distantia		25 26 30 25 26 30	Sex. M. O.
10	7 12 0		Distantia ☉, a Praxone Eadem distantia		28 52 5 28 52 0	Sex. M. O.
10	7 20 0		Distantia ☉, a Pallicio III Eadem distantia		19 43 5 19 43 0	Sex. M. O.
10	7 27 0		Altitudo Lucida ♃ Eadem altitudo		33 43 0 33 30 0	Quod p. O.
<i>Nova in Cello Ceti minor Mandū major tamen eā in Ore Ceti.</i>						
			Lucida ♃, & Pallicium Eadem distantia Dens		35 32 15 35 32 20 35 32 20	Sex. M. O.
Observationes Saturni & Martis.						
10	6 54 0		Altitudo Pallicio		44 41 0	Quod p. O.
10	7 7 0		Distantia ♃, a Pallicio		14 49 0	Sex. M. O.
10	7 15 0		Distantia ♃, a Lucida Latere Persei		32 39 5	Sex. M. O.
10	7 21 30		Distantia ☉, a Pallicio		28 12 50	Sex. M. O.

G E E E E 3 Anno

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7. Willem Blaeu, «Celestial Globe», 1603, Cracow, Jagiellonian University Museum. Photo: © Jagiellonian University Museum in Cracow

multaneously the head of the constellation Boötes, which Arabian astronomers had called “the keeper of heaven”. In the scholar’s research Arcturus did not play a particularly important role, but it could have personal significance, for Hevelius could have identified himself with Arcturus – the keeper of the northern region of the sky. The globe itself, created in 1603, was the work of the outstanding cartographer, the propagator of Copernican science, Willem Jonszoon Blaeu [Fig. 7]⁹. It is with evident satisfaction that Hevelius points at the globe, it being his work tool.

In this portrait Hevelius presents himself as an astronomer and continuator of Copernican ideas, with notable evidence of his

scientific success – the manuscripts *Selenographia* and *Machinae coelestis*. Nor did he omit his humanistic interests. It is a well-known fact that his library consisted of 3000 volumes and also included literary works⁹. A bust reminiscent of antiquity stands next to a rearing horse on the highest shelf. The bust almost certainly depicts Hipparchus or Ptolemy – ancients whom Hevelius held in especially high esteem¹⁰ – for they appeared next to Copernicus and Tycho Brahe in the frontispiece of the first part of his *Prodromus astronomiae*¹¹. On the other hand, the horse was a symbol of diligence, of striving towards excellence¹². Pegasus the flying horse appears in the sky of the northern hemisphere [Fig. 8],

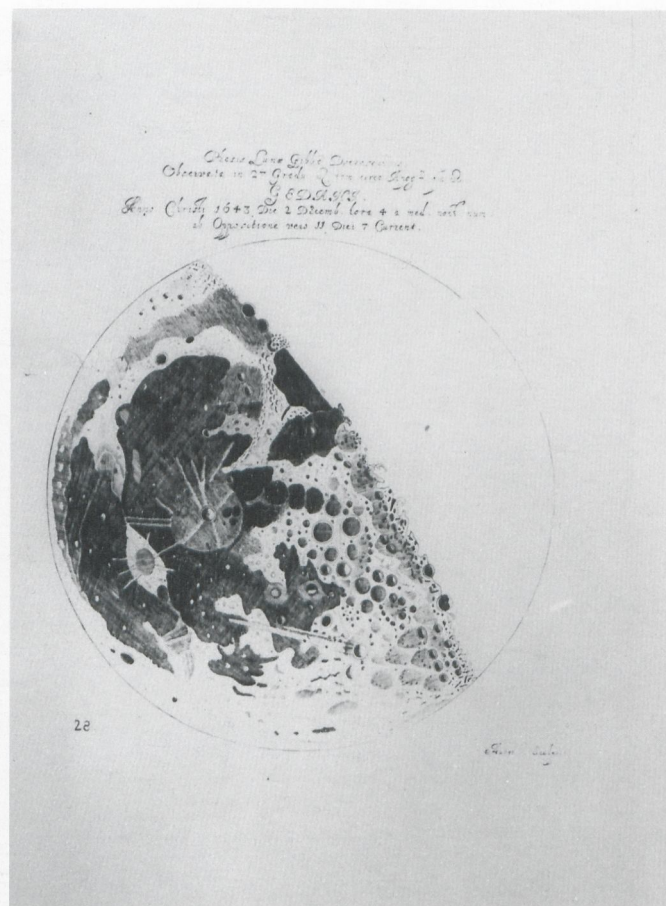


8. Andreas Stech (del.), Charles de la Haye (sculp.), «Hemisphere of the Northern Sky», engraving from: Johannes Hevelius, *Prodromus astronomiae cum catalogo fixarum et firmamentum Sobiescianum*, Gedani, 1690. Photo: © The Polish Academy of Sciences Gdańsk Library



9. Giovanni Georgi, «Frontispiece», engraving from: Andrea Argoli, *Primi mobilis tabulae*, Padua, 1644

drawn by Stech for the *Prodromus astronomiae*. The horse can also signify reason – *ratio* – winged with geometry and mathematics, as in the frontispiece executed by Giovanni Georgi for Andrea Argoli's work, *Primi mobilis tabulae*, published in Padua in 1644 [Fig. 9]¹³. Here, Pegasus carries Bellerophon, the slayer of the Chimera, on his back. This mythological hero was, according to one version of the myth, an astronomer¹⁴. Pegasus' bridle, on which the word *RATIO* is written, was given to Bellerophon by Minerva, the goddess of wisdom. The word *OBSERVATIONES* – observations – was written on Bellerophon the astronomer's shield. The rider points at the sun, located between *Virgo* (the Maiden) and *Libra* (the Scales). The wings on which the horse floats are provided with the inscriptions *ARITHMETICA* and *GEOMETRIA*, thanks to which the astronomer makes observations consistent with *ratio* (reason), for it is calculations and observations that

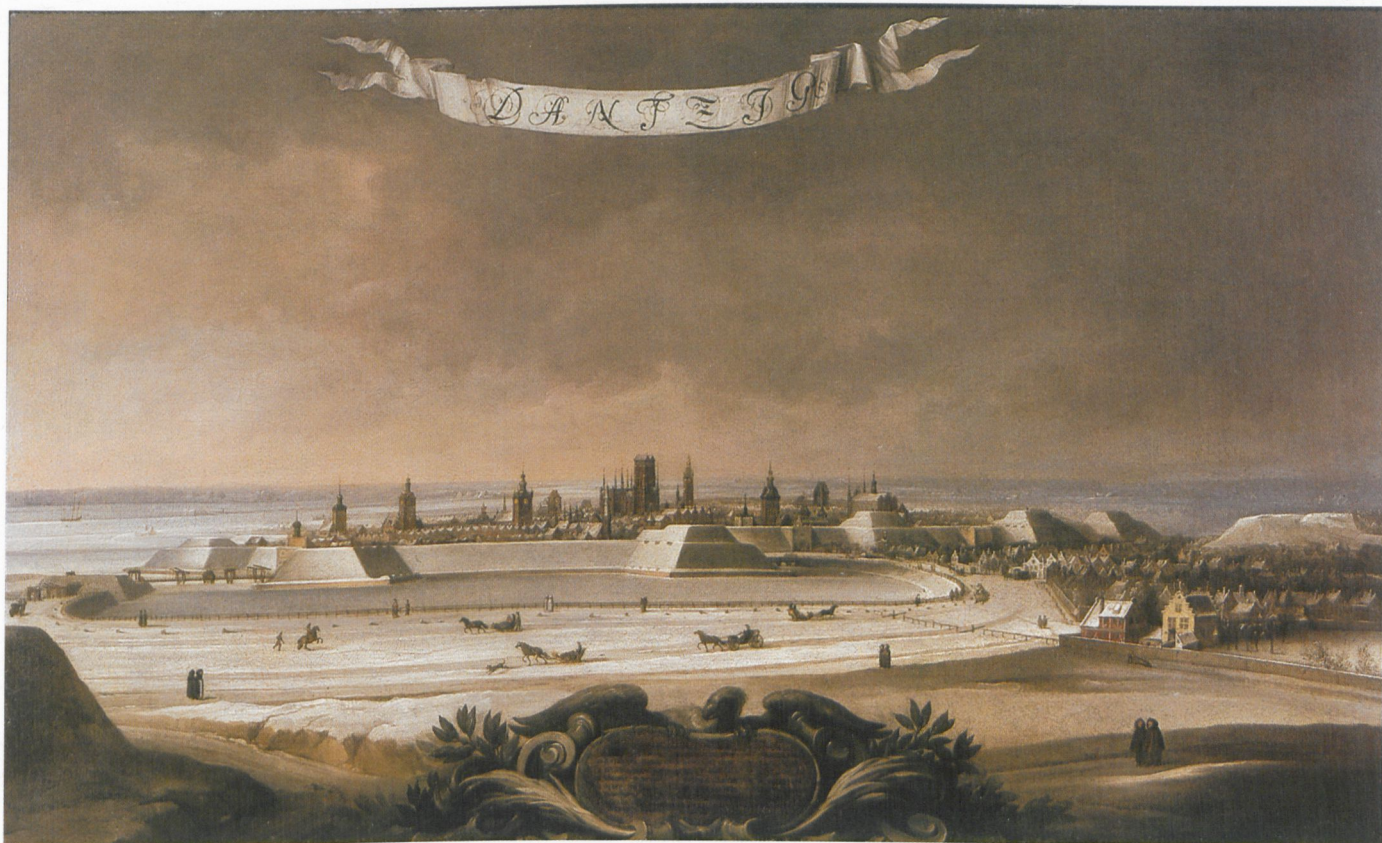


10. Johannes Hevelius, *Selenographia*, Gedani, 1647, Fig. 28: Moon phase of 2 December 1643, depicted in the Hevelius portrait in Oxford. Photo: © The Polish Academy of Sciences Gdańsk Library

underlie his work. Bellerophon the astronomer was depicted as a knight defending the truth of observation against the chimeras of false theses. The efforts of scholars can be compared to the struggles of knights, who defend their ideals with courage and determination. On this frontispiece we look at the work results of the astronomer as a triumph of reason.

Comparing the Oxford and Gdańsk Portraits

An almost identical portrait of Hevelius signed by Stech can be found in Oxford. This painting differs from the one from Gdańsk in minor details. The Oxford portrait has more space, was made more carefully, is characterised by its precision in detail. The globe in the Oxford painting, visible almost in its entirety, was



painted with greater care; in the Gdańsk copy the globe has been cut off right after the constellation Coma Berenices. In the Oxford portrait, the painting with the horse is more distinct than in the portrait from Gdańsk. The divisions in the hour and diurnal circles, marked in the Oxford portrait, are missing on the Gdańsk globe. The cartouche on the globe in the Gdańsk painting is empty, whereas it is filled in with writing in the one from Oxford. We can identify the map of the face of the moon as an observation recorded on 2 December 1643 [Fig. 10]. The entry in the representation of the manuscript *Machinae coelestis* is also from a winter month (23 February 1677), and Hevelius lays particular stress on Arcturus – a northern star, as a result of which it is worth mentioning the *Winter View of Gdańsk* signed by Andreas Stech and dated 1679 [Fig. 11], recently discovered in England¹⁵. This winter landscape of Gdańsk was a portrait of the city in which, on 28 January 1611, Hevelius was born.

One can notice less significant differences in the shape of the inkwells: in the portrait from Gdańsk the inkwell is more barrel-shaped and has two pens, whereas the one in the Oxford portrait is more cuboid, with one pen perched on its edge. Three thongs hang from the manuscript of the *Machinae coelestis* on

11. Andreas Stech, «Winter View of Gdańsk», 1679, oil on canvas, 71.5 × 103.7 cm, Gdańsk, Historical Museum.
Photo: © Historical Museum in Gdańsk

the Gdańsk painting, two on the English one. The books are positioned differently on both paintings. The shelves in the Oxford one have a finished trim which is missing in the one from Gdańsk.

The portraits were painted in almost monochromatic local colours. The dark brown of the attire is lightened by the gleams of light and the white of the scarf. The reddish-black pattern of the table carpet and the dark purple drape lend color to the solemn interior, maintained in various hues of brown.

Dating the Paintings

The date at which the portraits were painted can be determined by the entry depicted in the *Machinae coelestis* manuscript: 23 February 1677, as a result of which they must have come into being during the first half of that year. In view of the date

recorded on the paintings, Bożena Steinborn's conjecture that the paintings came into existence in the second half of the year, on commission from the Polish king Jan Sobieski, while the monarch and the royal painter Daniel Schultz were being entertained in Gdańsk, seems groundless¹⁶. Regardless of when Hevelius sent the painting to Oxford¹⁷, a letter of thanks to Hevelius for the portrait, posted by Timothy Halton, the secretary of the Royal Society of London, didn't arrive in Gdańsk until 20 August 1679¹⁸. The Gdańsk portrait, as can be surmised, was painted with an aim to executing numerous replicas, but it was also intended for a specific, well-educated recipient. Carl Benjamin Lengnich, a historian living in Gdańsk in the eighteenth century, wrote that there were five likenesses of Hevelius in Gdańsk during the second half of the seventeenth century¹⁹. What one can see from this is that the Renaissance idea of circulating portraits of famous people, both rulers and leaders as well as scholars and artists, known from, among others, the museum of Bishop Paolo Giovio in Como, had also become widespread in the Polish city. The portraits of famous people were put in both palaces and public places, such as libraries or town halls. The Gdańsk copy from 1681 could be found in the Gdańsk Senate Library, having been donated by the mayor, Gabriel Krumhausen²⁰.

The Authorship of the Paintings

The disclosure of the signature has confirmed my hypothesis from long ago concerning Stech's authorship of the painting from England, posited in 1974²¹. Now we can attempt to verify the authorship of the Gdańsk copy, especially that the painting has been restored in the meantime. As concerns the iconographical content, the paintings are so similar to each other that they can be considered one artistic work.

Regarding the style and composition, the portraits differ only slightly. The Gdańsk portrait is painted in a slightly rougher manner, the Oxford one in a softer, more fluid style. The art conservator Józef Flik has stated that an x-ray image of the Gdańsk painting reveals clear changes in the compositional conception and therefore that it constitutes the prototype painted by Daniel Schultz, even though both paintings were painted on a linen canvas with a dark red emulsion ground, with a gray oil primer and oil paints *alla prima*, with applied layers of glaze²². But placed next to each other, the paintings do not give the impression of being the work of different artists. The signature on the Oxford copy, I think, settles it – both paintings are the work of Stech. The clear changes in the Gdańsk copy that are discernable when it is examined under x-ray can work in Stech's favor as we can state that it was he who was the author of the Gdańsk copy, which he did not sign for it remained in Gdańsk, where we was a well-known personage. Stech was Hevelius' permanent collaborator, the author of other



12. Andreas Stech, «Self-Portrait», 1675, oil on canvas, 64 × 55 cm, Gdańsk, National Museum. Photo: © National Museum in Gdańsk

13. Andreas Stech, «Portrait of Town Councillor Gabriel Friedrich Schumann», 1685, oil on canvas, 84 × 73 cm, Gdańsk, National Museum. Photo: © National Museum in Gdańsk

portraits of the astronomer, including those in frontispieces as well as scientific illustrations in the scholar's works [Figs 16–20]. Hevelius trusted Stech and regarded him as a friend, calling him *optimus pictor*. An almost familial intimacy tied the scholar to the artist, Hevelius becoming, on 19 April 1669, godfather to Stech's fourth son, Andreas Godfried²³.

A discussion about the authorship of both paintings has been going on for a long time; for many years they were regarded as being the work of Daniel Schultz (1615–1683)²⁴, the second most eminent painter to be born in Gdańsk, next to Stech. Not one portrait of Hevelius signed by Schultz is, however, known, nor any evidence of any other artistic cooperation between the painter and the astronomer. On the other hand, Schultz was a relative of Hevelius, and it was the astronomer who almost



13.

certainly recommended him to the king of Poland, Władysław IV Vasa, after whose death the artist remained in the service of later Polish kings: Jan Kazimierz Vasa and Jan III Sobieski. Their representational, full-figure portraits by Schultz were located for many years in the Main Town Hall in Gdańsk. Schultz, who was educated in Holland, was a painter of kings and the aristocracy; signed portraits of his of members of the Gdańsk patriciate are not known. On the other hand, Andreas Stech was a painter of this very patriciate, being also familiar with European artistic trends and creating art under the influence of Italian and French painting – for example, the *Self-Portrait* (1675; Fig. 12), English painting – for example, *Portrait of the Town Councillor Gabriel Fryderyk Schumann* (1685; Fig. 13) as well as Dutch painting – for example, *Portrait of the Collector Heinrich Schwartzwaldt* (1682) and *Portrait of the Mayor and Bibliophile Fryderyk Gabriel Engelcke* (1686)²⁵. Around 1673 he painted *A Walk Outside the Walls of Gdańsk*, done in the genre of walking depictions, which were then popular in the aristocratic city of The Hague: outside the city two richly dressed patricians are taking a stroll in the company of a boy wearing a traditional Polish costume. Dominique Vivant Denon recognised this painting as worthy of being found in the Louvre in Paris, at the time known as the Musée Napoleon²⁶.

In the eyes of their contemporaries, the artistic personalities of Stech and Schultz merged together and were difficult to differentiate not only in the seventeenth and eighteenth centuries but also for later researchers²⁷. Regardless of their ostensible similarities, both artists, however, differed significantly in the manner in which they portrayed the figures in their paintings. As Bożena Steinborn, Schultz's monographer, has shown, this painter depicted his models in such a way as to convey their grandeur as well as their privileged place in society²⁸. Their faces are serious, without a shadow of a smile, which proves, as Steinborn writes, his familiarity with Dutch art theory or his having studied the Dutch and Flemish masters²⁹. We can add that the faces of the figures painted by Schultz always emanate a certain noble melancholy, which is completely foreign to the work of Stech. The countenances of Hevelius on the paintings analysed are characterised by optimism, a certain "cheerfulness of the soul", typical of the characterization in Stech's portraits, which were not so much created by him as they were reconstructed from nature. He gained experience in this scope by making scientific illustrations not only for the works of Hevelius, but also the books of Jakob Breyn, a resident of Gdańsk and one of the most exceptional European botanists of the seventeenth century, who remained in contact with, literally, the entire world. The 110 illustrations of plants and flowers that were made by Stech for Breyn's work *Icones exoticarum Plantarum centuria prima* (published in Gdańsk in 1678) are regarded as the most beautiful botanical illustrations of the epoch³⁰. Stech was, at the same time, a versatile artist, a painter of religious and historical scenes, portraits, genre scenes, still lifes, designs for engrav-

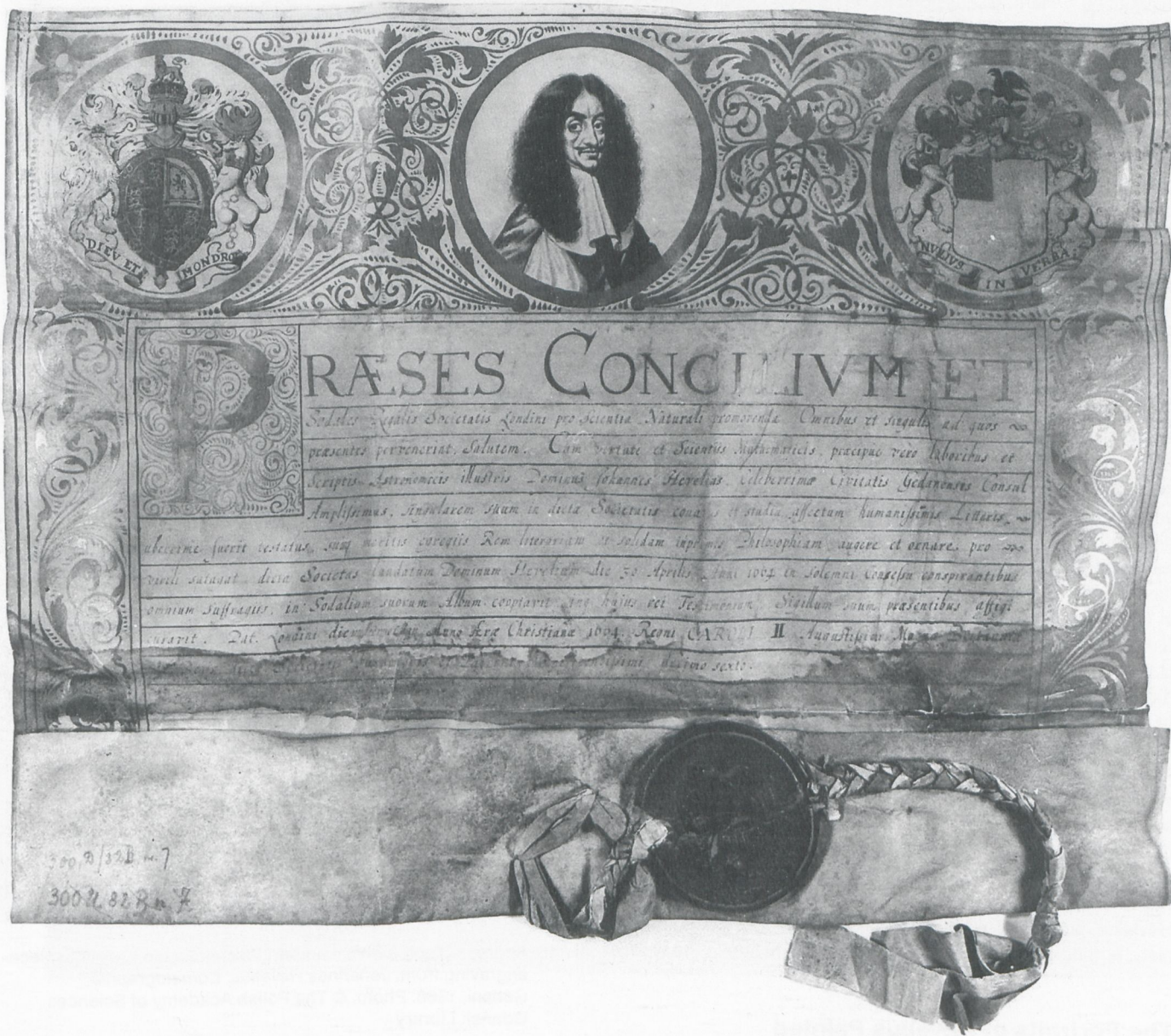
ers³¹. His signature was also recently discovered on a painting depicting the *Battle of Chocim in 1673*, of which the hetman Jan Sobieski, later King Jan III, was the victorious commander. The artist depicted the future monarch on his horse at a moment full of the tension of combat³².

The Character of Hevelius and the Destination of the Painting

Johannes Hevelius was one of the most exceptional observational astronomers of the seventeenth century³³. In this century, a pivotal split occurred between observational and theoretical astronomers³⁴. Hevelius belonged to the first group, now called "real astronomers"³⁵, along with Tycho Brahe (1546–1601), Galileo Galilei (1564–1642), Johannes Kepler (1571–1630), Pierre Gasendi (1592–1655), Domenico Cassini (1625–1712), Christopher Huygens (1629–1695), Isaac Newton (1642–1727) and Edmund Halley (1656–1742). All of them, besides being astronomers, were involved in other activities as well. They were affiliated with math and medicine, nearly all of them practiced astrology. Up until more or less the middle of the seventeenth century, astronomers worked mainly at courts and universities, there establishing observatories. The patronage of the ruler enabled one to further one's career.

Hevelius was both an astronomer and a merchant, a producer of beer³⁶, a Gdańsk city councillor, a dabbler in art; he drew and engraved, he was an art connoisseur and collector³⁷. Like other German-speaking residents of Gdańsk, he was a Lutheran and a loyal subject of the Polish king. He owed his financial independence as well as his ability to conduct unhampered scientific work to the well-run family breweries. He gained the financial patronage of Louis XIV and Jan III Sobieski, who called him *astrologus noster*. The differences between the profession of astronomer and that of astrologer were fluid; the former were not differentiated from the latter³⁸. Horoscopes assisted in the healing of the sick; making predictions of what would happen in the future ensured success. For these reasons and more, every ruler had his own astrologer. Worthy of our attention, however, is Hevelius' lack of interest in the astrology that was then commonly practiced, which his rational mind did not accept³⁹. One can assume, however, that he drew up horoscopes for certain personages, say, for the king.

Hevelius never worked in the king's court but in his own observatory in Gdańsk, where kings would pay him visits⁴⁰. He was invited to the courts of the Brandenburg elector Frederick William, Christina, Queen of Sweden, and Charles II, King of England⁴¹. The astronomer received his intellectual background in Gdańsk, in the renowned university-level Academic Gymnasium as a pupil of Peter Krüger, who had initiated astronomical research in the city and who remained in contact with



such eminent scholars as Johannes Kepler, Tycho Brahe and Pierre Gassendi⁴². Hevelius went on a three-year tour of the Netherlands, England and France, during which he met distinguished scholars with whom he corresponded for the rest of his life, and who sometimes paid him a visit in Gdańsk⁴³. His wealth allowed him to build, starting in 1641, the previously mentioned observatory. He constructed the costly astronomical devices himself, sometimes selling them, and he was in possession of his own print shop where he published de luxe edi-

14. «Diploma of the Royal Society of London for Johannes Hevelius», 30 April 1664, Gdańsk, State Archives, inv. no. Gd. 300D.82. Photo: © State Archives in Gdańsk

tions of his works⁴⁴. He belonged to that group of researcher-practitioners who regarded university teaching as barren and backward, and who conducted research in scholarly societies, which, as of the seventeenth century, had become professional

institutions⁴⁵. Here, discussions took place concerning concrete works and not ideas. Their aim was the development of science, not of a new philosophy. The most illustrious society of this sort was the Royal Society of London for the Promotion of Natural Knowledge, founded in 1660 with an aim to supporting empirical research in the natural sciences, initiated by Francis Bacon (1561–1621), and operating under the patronage of King Charles II. The superbly educated Elias Ashmole (the founder of the Ashmolean Museum in Oxford) and Robert Moray played a decisive role in its creation. Hevelius became a member of this elite circle at an early date, already in 1664, on April 30. The diploma honoring this distinction can today be found in the State Archives in Gdańsk [Fig. 14].

The portrait, which was after the English fashion, was clearly painted with an English recipient in mind. The painting definitely arrived at the Royal Society before 20 August 1679, as can be confirmed by the previously mentioned letter from Timothy Halton, the Vice-Chancellor of Oxford University⁴⁶. Proof that the painting had been received came at an important moment in the scholar's life for it was in the spring of 1679 that Hevelius achieved his most important scientific success. John Flamsteed and Robert Hooke had been questioning Hevelius' research methods for a long time. Hevelius demanded arbitration from the Royal Society. Twenty-three-year-old Edmund Halley arrived in Gdańsk on 26 May 1679, bringing with him the latest equipment. More than a month of joint research confirmed the accuracy of the measurements of Hevelius, at that time 68 years old. On departing from Gdańsk, Halley left behind, in the form of a letter, a report testifying in favor of Hevelius to the positive results of their work. The astronomer was completely satisfied, and there is nothing strange in his regarding Halley's stay as the happiest time in his life⁴⁷. It might have been Halley who, after arriving in England, reminded everyone of the necessity of confirming the receipt of the portrait of the astronomer, whose research accuracy he had so recently testified to. In any case, the date of Halley's return and the confirmation date coincide. Hevelius' portrait could be found in the gallery of the Royal Society, amongst those of the most eminent scholars in the world.

The Portraits of Hevelius Painted by Andreas Stech

Stech had long experience of composing portraits showing Hevelius at work. The frontispiece to the *Cometographia* [Fig. 15], executed by Stech and engraved by Isaak Saal, was a kind of preparation for the large canvas. The scenography of this frontispiece was determined by the astronomer himself, as other observers of the sky would have done during those times, such as Kepler or Brahe⁴⁸. In the portraits of Hevelius that we are discussing, one's attention is drawn by the lifelike gesture of the hand

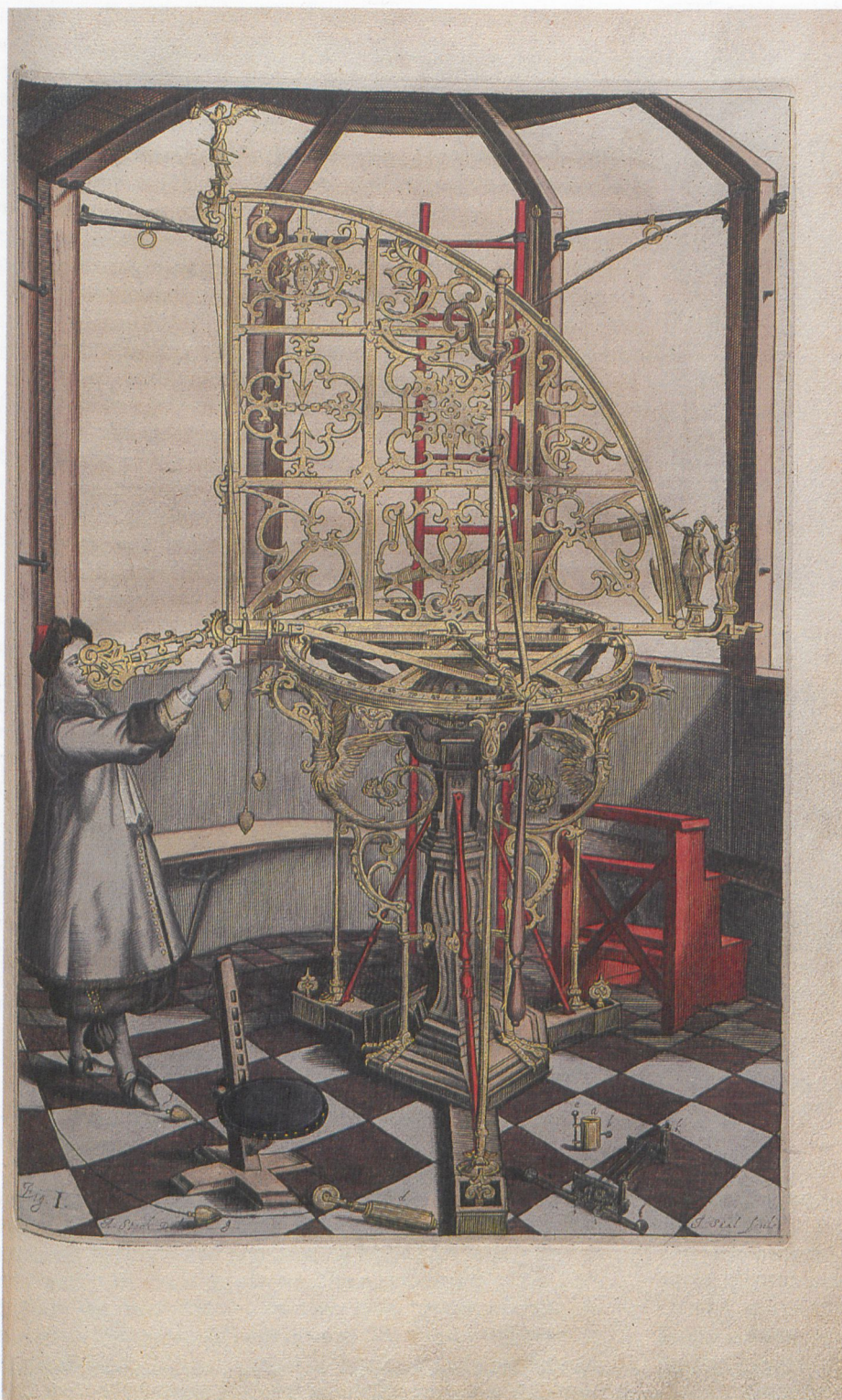


15. Andreas Stech (pinx.), Lambert Vischer (sculp.), «Frontispiece», engraving from: Johannes Hevelius, *Cometographia*, Gedani, 1668. Photo: © The Polish Academy of Sciences Gdańsk Library

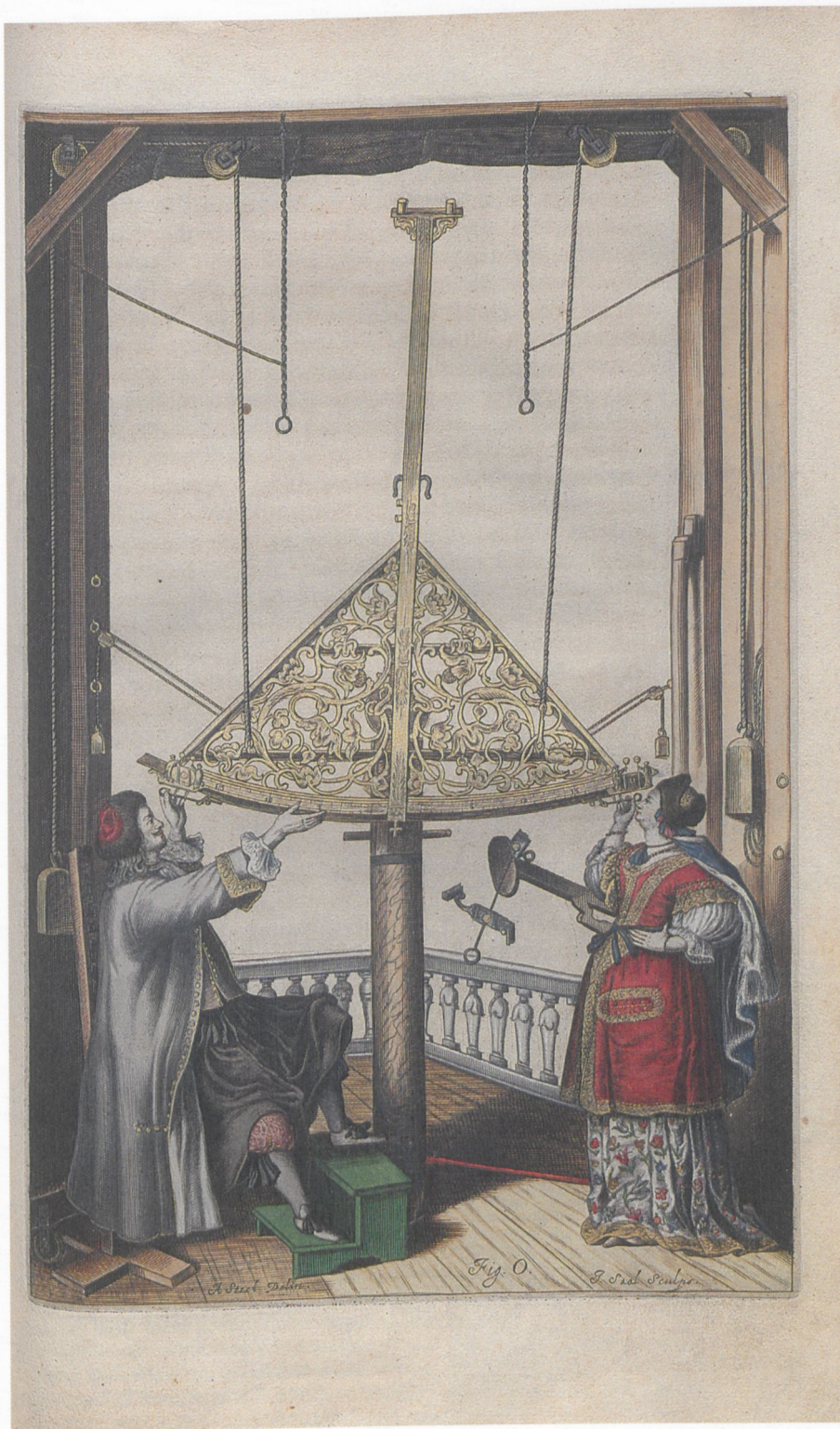
with the forefinger pointing at the globe. A similar gesture can be observed on the frontispiece mentioned above. Hevelius sits at a table covered with an expensive Persian table carpet, having an animated discussion with Kepler and Aristotle, his finger pointing at a graph charting the direction of a comet. Of course, such a sublime scholarly debate could never have taken place⁴⁹, but this drawing of the imagination is evidence of the teachings of the ancients having played a role in the scholar's intellectual



16. Andreas Stech (pinx.), Isaak Saal (sculp.), «Observatories on the Roofs of Hevelius' Houses», engraving from: Johannes Hevelius, *Machinae coelestis pars prior*, Gedani, 1673, Fig. EE. Photo: © The Polish Academy of Sciences Gdańsk Library



17. Andreas Stech (pinx.), Isaak Saal (sculp.), «Hevelius with Azimuth Quadrant», engraving from: Johannes Hevelius, *Machinae coelestis pars prior*, Gedani, 1673, Fig. I. Photo: © The Polish Academy of Sciences Gdańsk Library



18. Andreas Stech (pinx.), Isaak Saal (sculp.), «Hevelius and His Wife Katherine with a Great Octant», engraving from: Johann Hevelius, *Machinae coelestis pars prior*, Gedani, 1673, Fig. O. Photo: © The Polish Academy of Sciences Gdańsk Library



19. Andreas Stech (pinx.), Isaak Saal (sculp.), «Hevelius with Assistant», from: Johannes Hevelius, *Machinae coelestis pars prior*, Gedani, 1673, Fig. W. Photo: © The Polish Academy of Sciences Gdańsk Library



20. Andreas Stech (pinx.), Isaak Saal (sculp.), «Great 45 m Focal-Length Telescope of Hevelius», from: Johannes Hevelius, *Machinae coelestis pars prior*, Gedani, 1673, Fig. AA. Photo: © The Polish Academy of Sciences Gdańsk Library



21. Andreas Stech (pinx.), Lambert Vischer (sculp.), «Portrait of Johannes Hevelius», from: Johannes Hevelius, *Machinae coelestis pars prior*, Gedani, 1673. Photo: © The Polish Academy of Sciences Gdańsk Library

life. On the building's roof terrace we can see the scene preceding the debate, namely, the observing of the course of a comet through various telescopes of a kind which belonged to Hevelius. The frontispiece was supposed to show the kind of knowledge contained in the book. The reader obtained ready-made arguments, supported by current observations made in discussion with, among others, the ancients⁵⁰.

In turn, in the illustrations to *Machinae coelestis pars prior* from 1673 Stech portrayed the astronomer while observing the sky⁵¹. It is evident from these drawings that astronomy was Hevelius' lifelong passion; the scholar, completely absorbed by his work, is totally committed to making these observations, as if he were united with these specific instruments which he had constructed himself. Hevelius was not a solitary astrologer but, since he worked with assistants, a new type of scholar. Finally, he is not wearing a coat typical for an astrologer but is attired in costly apparel⁵².

Stech depicted the renowned observatories erected on the roof terraces of Hevelius' homes [Fig. 16], showed the researcher himself next to the azimuth quadrant [Fig. 17], with his second wife Katherine next to a great brass octant [Fig. 18]⁵³ as well as with an assistant [Fig. 19]. The artist also recorded the assembly of a great 45 m focal-length telescope in the meadows outside of the city [Fig. 20]. No other contemporary astronomer left such a complete documentation of his observatory. It is worth adding that Hevelius colored all of the engravings in the copy that can be found in the Gdańsk Library. It is thanks to these engravings that we know what the observatory looked like, it having burned down in the fire in 1679 which was so tragic for Hevelius. Until the observatory in Paris came into being in 1672 and then two years later the one in Greenwich, it was the largest observatory in Europe, for the observatory on the island of Uraniburg belonging to Tycho Brahe no longer existed⁵⁴.

For the *Machinae coelestis pars prior*, published in 1673, Stech executed a small portrait of Hevelius in gouache, which served the engraver Lambert Vischer as a design for making the engraving [Fig. 21]. This signed image, colored by the astronomer himself, came about four years earlier than the representational portrait discussed here; it is an exceptional depiction of the scholar for it shows him not at work but as a gentleman in a silk coat, with a column nearby, in the rim of a laurel wreath, with panegyric verse by the Gdańsk poet Peter Titius. This sort of image would have made readers aware of the high position of the scholar in the social hierarchy⁵⁵.

The Place of the Hevelius Portrait in Seventeenth-Century Painting

The pictorial representations of astronomers can be divided into idealised and real ones⁵⁶. In 1568, Jost Amman illustrated vari-

ous professions in Hans Sachs' *Eygentliche Beschreibung aller Stände auff Erden*, published in Frankfurt am Main⁵⁷. Illustration 114 [Fig. 22] depicts the ideal astronomer – an old, lonely man, bent over a celestial globe, a compass in his hand. The image of a wise man lost in his thoughts does not have a representational

22. Jost Amman, «Astronomer», woodcut from: Hans Sachs, *Eygentliche Beschreibung aller Stände auff Erden*, Frankfurt am Mayn, 1568. Photo: © British Museum





23. Samuel Bottschild (del.), Johann Mausfeldt (sculp.), «Astronomers», engraving from: Pierre Petit, *Von Bedeutung der Cometen*, Dresden–Zittau, 1681

character. The text placed at the bottom makes it clear that the astronomer sees the positions of the stars, thanks to which he can arrange calendars and tell the future. He does not himself take an active part in life. What sets him apart are his specialised instruments as well as his attire; his fur-lined coat lends him an air of grandeur. It is not the attire of a young man. The seclusion of the astronomer is accompanied by billowing clouds outside the window, indicating that this is an ominous place. This person can tell the future and is capable of deciphering the signs in the sky, so he has power, which is useful in politics. The dangerous power of astrologers was softened by caricatures, like the one drawn by Samuel Bottschild and engraved by Johann Mausfeldt, which decorated the title page of Pierre Petit's book *Von Bedeutung der Cometen*, published in 1681 in Dresden and Zittau [Fig. 23]⁵⁸.

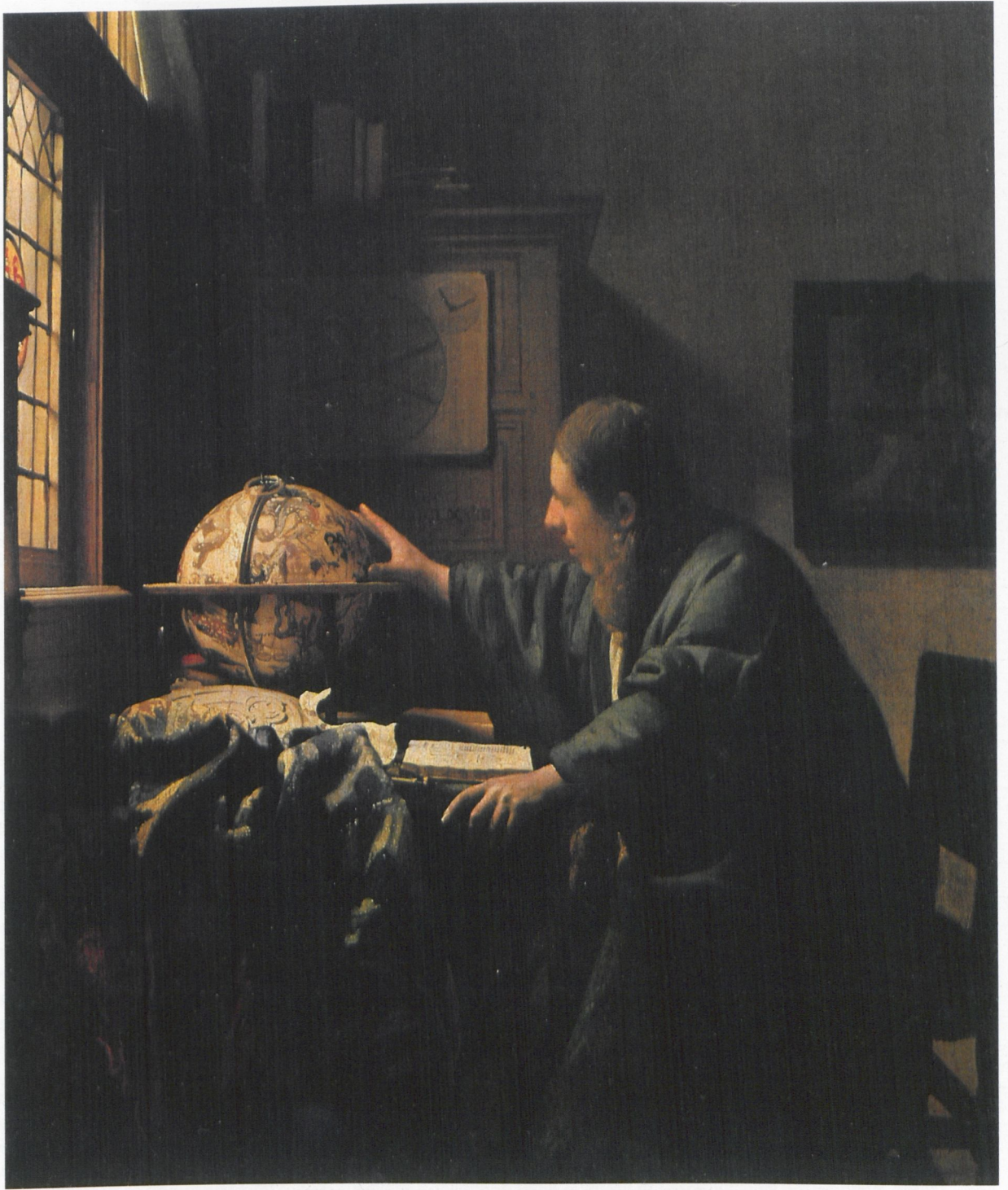
As has already been mentioned, the distinction between astronomy, astrology and black magic was extremely fluid. Representations of astronomers according to the drawing by Amman were popular throughout the seventeenth century. The mental



24. Rembrandt, «Portrait of Johannes Witenbogaert», 1635, etching, Warsaw University Library, Print Room. Photo: © Warsaw University Library, Print Room

disposition of the astronomer and philosopher were universally regarded as melancholic⁵⁹. Dürer showed the personification of *Melancholia* with vanity devices but also scientific instruments: an hourglass, a compass and a sphere. This pictorial type was made use of in the images of holy men and philosophers in the art of Rembrandt, Livens and Gerrit Dou, as well as their followers. The countenances of these wise men do not express feelings but rather an atmosphere to match their thoughts about the passage of time.

In the works of Rembrandt, alongside the paintings of solitary philosophers appear portraits of specific personages, maintained in the convention of the portrait of the scholar. To these belong the etching from 1635, from the collection of Stanisław Kostka Potocki, now in the Print Room at Warsaw University Library, depicting Johannes Witenbogaert (1557–1644; Fig. 24). He was one of the most important theologians in the young Dutch Republic⁶⁰. This etching depicts the pastor sitting at a table full of books. Spread out before him are some blank pages over which he casts a sad look. This turning of the face in the



25. Johannes Vermeer, «Astronomer» (Antonie van Leeuwenhoek?), 1668, oil on canvas, 50 × 45 cm, Paris, Musée du Louvre. Photo after A. K. Wheelock Jr, *Jan Vermeer*, New York, 1985, Fig. on p. 107



26. Johannes Verkolje, «Portrait of Antonie van Leeuwenhoek», 1686, mezzotint, Amsterdam, Rijksmuseum. Photo after A. K. Wheelock Jr, *Jan Vermeer*, New York, 1988, Fig. 3

direction of the viewer might suggest a certain compositional connection to the portrait of Hevelius, though both images differ diametrically in the thick atmosphere of melancholy, totally foreign to the work from Gdańsk.

Johannes Vermeer's renowned painting in the Louvre from 1668, *The Astronomer*, also fits in the tradition of the melancholy wise man [Fig. 25]. Even if it has been suggested that the artist painted a well-known person, the inventor of the microscope Antonie Leeuwenhoek (1632–1723)⁶¹, this painting is not considered a portrait⁶². The same person posed for *The Geographer*⁶³, but neither one nor the other painting represent a figure who can be identified by specific scientific achievements. The rather small painting (50 × 45 cm) *The Astronomer* shows the globe of Jodocus Hondius, an astrolabe, a compass and a book by Adriaen Metius⁶⁴, but the model is turned in the direction of the celestial globe, which in principle means that he is reaching for divine spiritual guidance⁶⁵. The painting on the wall depicts *The Finding of Moses*, which has a theological dimension⁶⁶, but also a scientific one – Moses explored the whole wisdom of Egypt in great depth, in other words that of astronomy-astrology⁶⁷. The man represents the traditional type of astronomer, or rather, astrologer – solitary,

busy with his own thoughts. He does not look at the viewer, has a long coat and attributes which lend him grandeur: a globe, a compass, a book. Arthur Wheelock believes that Leeuwenhoek could have been the model in both paintings; also, that he may have commissioned them as well. It is intriguing that Vermeer did not equip his scholar with the specific, individualised attributes of an actual scholar as Johannes Verkolje did when he depicted van Leeuwenhoek with a microscope and celestial globe [Fig. 26]⁶⁸, at the same time giving his face a cheerful expression. It is interesting to note that a portrait of the Gdańsk doctor and collector Christoph Gottvaldt was painted in the same convention by Stech and engraved by Edelinck [Fig. 27]⁶⁹.

The portrait by Verkolje, though rather small in size and done nine years later, is close in composition to the image of Hevelius, similarly to the portrait of Johannes Heinrich Voigt, painted in 1687 by David Klöcker Ehrenstrahl, from the Nationalmuseum in Stockholm, maintained in the representational convention of “real astronomers” [Fig. 28]⁷⁰. Voigt was not as brilliant an astronomer; he did not conduct systematic observations like Hevelius but rather remained an astrologer in the court of Charles XI of Sweden, drawing up horoscopes for the king. He was depicted by the court painter as sitting on a sumptuous armchair, against the background of a curtain, at a table on which he had placed his hand, as if keeping in place a piece of paper on which his name was written along with the title “Royal Astronomer to the Swedish King”. There is a look of melancholy on Voigt's countenance, characteristic of a saturnine, Faustian sage. He is surrounded by objects necessary to the practice of astrology: an armillary sphere, a telescope, a compass and a large celestial globe.

Astronomers in Italian portraits from the seventeenth century look completely different. The dramatic situation of the astronomer is evoked by Niccolò Tornioli in his paintings in the Galleria Spada in Rome, or by Velázquez in *The Geographer* from the Musée des Beaux-Arts in Rouen, alluding to the representation of the “laughing Democritus”⁷¹.

The portrait of Hevelius differs from all of these images by its almost reportorial character; the astronomer ostentatiously wanted to show himself at work on specific manuscripts. An exceptional energy, pride and optimism radiate from the astronomer's countenance, but also a peace and inner joy – emotions not unknown to portraits of *gentiluomo*, here, however, interpreted more in the English fashion. The casual pose, so typical of Italian portraits since the Renaissance, was replaced by a self-confidence characteristic of the British Isles. The melancholy reflection of wise men gave way to the active life beaming from Hevelius' face, the satisfaction that flows from the realization of one's desires, the consciousness of success, the feeling of dignity. The portrait of Hevelius differs from the image of Vermeer's astronomer, whose cognition was dependent on the truth of faith, in Hevelius' conviction that cognition must be rational. *Ratio* – reason is the main



27. Andreas Stech (pinx.), Gerard Edelinck (sculp.), «Portrait of Christophorus Gottvaldt», c. 1680, engraving, The Polish Academy of Sciences Gdańsk Library. Photo: © The Polish Academy of Sciences Gdańsk Library



28. David Klöcker Ehrenstrahl, «Portrait of the Astronomer Johann Heinrich Voigt», 1687, oil on canvas, 145 × 123 cm, Stockholm, Nationalmuseum. Photo: © Nationalmuseum in Stockholm

character of the painting, which is certainly not without relation to the portrait's having been created for the Royal Society of London and its *par excellence* representational character.

The views of conservative humanists who voiced the opinion of Sebastian Brant (1457–1521), the author of the renowned satire *Das Narrenschiff* (1494)⁷² – which propagated the idea that it was arrogant to interfere in divine matters, as a result of which research on nature, the stars and the Earth should be abandoned – could still be heard in the middle of the seventeenth century. They rejected knowledge based on empirical research. Hevelius, who had an extremely emotional relation to phenomena in the sky, would spend almost every fair-weather night in Gdańsk observing the stars overhead, both with the naked eye and through his telescopes⁷³. They awakened his admiration and respect for their Creator, as expressed in the simple notes on the title pages of his lesser treatises: *Enarrant Dei gloriam* (Declaring the glory of God). Meanwhile, the solar tables included in the *Prodromus astronomiae* are preceded by a separate page with the following words in large print: *Magna opera Jehovahae* (Jehovah's great works). The reflection engendered in contemplation of the sky, placed at the end of the aforementioned *Machinae coelestis pars prior: Conditori machinae mundanae Universal O.M. sit honor gloria* (Honor and praise be to the creator of the world-machine, the best and most supreme) bears testimony to his admiration of the work of creation.

It is worth adding that his work is completely lacking in philosophical treatises⁷⁴, not to mention a disapproval of astrology. The portrait by Stech clearly expresses the rational character of the astronomer. His practical mind concentrated on what could be observed or measured, and he steered his thoughts towards actual pictures in the world. As a result of which the painting also stands out due to its rationalism and almost reportorial character: the astronomer wanted ostentatiously to portray himself at work on manuscripts containing finished research on the sky. The iconographical uniqueness of the Gdańsk original and the Oxford replica confirm that it was the astronomer himself who determined the painting's program. This conjecture finds confir-

mation in new research on the images of astronomers and astrologers as well as the frontispieces to their works⁷⁵. In seventeenth century painting I am not aware of a single earlier image than the portrait of Hevelius of such a planned and composed astronomer-practitioner⁷⁶, portrayed as a man of action and not one of melancholy and reverie. The researcher commissioned a portrait from an artist whom he knew well and who had already painted him at work numerous times.

Hevelius wanted to be remembered as a rational scholar with a Cartesian countenance, admiring the work of creation but also researching it empirically. Together with the artist he rejected the vain and melancholic tradition of representing astronomers. Stech also represented Hevelius as a refined person, dressed in fashionable elegance, in contrast to the abnegation of life and timeless attire of wise men and astrologers. A new type of portrait of the early modern scholar was created in collaboration between the scholar and the artist – that of the specialist in a specific branch of knowledge.

This is one example of a work that came about in friendly collaboration between a scholar and an artist. In the relation between Hevelius and Stech, we can trace the relationships between scholars and artists dating back to the Quattrocento, a relationship typical of the renaissance abolition of the separation between science and art. As Panofsky wrote years ago, Leonardo the painter needed the scholar-anatomist Marcantonio della Torre, just as Stephan von Calcar, a brilliant designer of woodcuts, was in need of Vesalius, a learned anatomist. Leonhard Fus, a botanist, shared his work and fame with three illustrators⁷⁷.

Hevelius' observational work heralded the approaching Enlightenment. The new currents in science were especially noticeable in England, particularly in the activities of the Royal Society of London. With his observations of the sky, Hevelius won the recognition of this elite circle and was accepted into their group as one of those who were creating a new world of science. The portrait of Hevelius painted by Stech as a "real astronomer" heralded the approaching new times both in science and in art.

- 1 T. Grzybkowska, "Andrzej Stecha portrety Heweliusza" [Andreas Stech's Portraits of Hevelius], *Biuletyn Historii Sztuki*, 36, 1974, pp. 237–251; *eadem*, "Die Hevelius Porträts von Andreas Stech", *Niederdeutsche Beiträge zur Kunstgeschichte*, 15, 1976, pp. 167–186.
- 2 The Polish Academy of Sciences Gdańsk Library, Gdańsk, oil on canvas, 125 × 103 cm.
- 3 Museum of the History of Science in Oxford, oil on canvas, 126 × 102 cm.
- 4 The exhibition in Gdańsk History Museum, located in the medieval Main Town Hall, took place between 11 May 2011 and 29 January 2012. The Portrait of Johannes Hevelius, on loan from the Museum of the History of Science in Oxford, was part of the exhibition through 20 August 2011. No catalogue accompanied the exhibition.
- 5 J. Hevelius, *Machinae coelestis pars prior*, Gedani, 1673.
- 6 J. Hevelius, *Selenographia sive lunae descriptio*, Gedani, 1647.
- 7 Hevelius was wont to denote stars with the names of parts of the body, both of people and of animals, constituting a certain connection to astrology, from which, besides, he had dissociated himself, for example, in the *Cometographia*, Gdańsk, 1673, p. 19. The majority of contemporary astronomers, taking J. Bayer (d. 1625) as a model, were already denoting the stars with letters from the Greek alphabet.
- 8 Blaeu's original globe is located in Cracow at the Jagiellonian University Museum. On Blaeu's globe: O. Muris, G. Saarmann, *Der Globus im Wandel der Zeiten. Eine Geschichte der Globus*, Berlin, 1961, p. 161, Fig. 55.
- 9 Hevelius' hand-written library catalogue can be found in the Bibliothèque de L'Observatoire in Paris. Some of the works are owned by The Polish Academy of Sciences Gdańsk Library.
- 10 The custom of decorating libraries with sculptures and busts of great men, in particular Homer, was initiated, according to Pliny (who was well-known in Gdańsk), by Asinius Pollio, a writer, patron of the arts and friend of Julius Caesar. J. Held, "Rembrandt's Aristotle", in *idem*, *Rembrandt's Aristotle and other Rembrandt studies*, Princeton–New York, 1969, pp. 22–23.
- 11 I. Elmqvist Söderlund, *Taking Possession of Astronomy. Frontispieces and Illustrated Title Pages in 17th-century Books on Astronomy*, Stockholm, 2010, pp. 293–303, Fig. 111, and pp. 376–378 (Appendix). Describing this exceptionally erudite frontispiece, the author gives it as an example of a work which came into being at the bidding of the astronomer.
- 12 There is no analogy in portraits of scholars of a painting with the image of a rearing horse arranged on a shelf with books. The statuette of a horse placed on a shelf in the painting of St Jerome has ties to antique sculpture. Here, a rearing horse could signify the image of an emblem whose inscription proclaimed relentless fortitude in aspiring to virtue: *Emblemata. Handbuch zur Sinnbildkunst des XVI. und XVII. Jahrhunderts*, ed. A. Henkel, A. Schöne, Stuttgart, 1967, col. 497, 498.
- 13 Elmqvist Söderlund, *op. cit.*, pp. 278–279, Fig. 104. The author of this erudite 400-page book omitted the portraits of Hevelius in Gdańsk and Oxford.
- 14 *Ibid.*, p. 278.
- 15 The painting is currently on loan at Gdańsk Historical Museum. It was discovered by Andrzej Ciechanowiecki at the Rafael Vallas Gallery in London in the 1990s.
- 16 B. Steinborn, *Malarz Daniel Schultz. Gdańszczanin w służbie królów polskich* [The Painter Daniel Schultz. A Citizen of Gdańsk in Service to the Polish Kings], Warsaw, 2004, p. 41.
- 17 The circumstances in which the painting was sent are given by K. Jackowska, in *Aurea Porta Rzeczypospolitej. Sztuka Gdańska od połowy XV do końca XVIII wieku* [Porta Aurea of the Polish Commonwealth. Gdańsk Art from the Mid-Fifteenth Century to the Eighteenth Century], exh. cat., National Museum in Gdańsk, May – August 1997, ed. T. Grzybkowska, Gdańsk, 1997, p. 269; see also: *eadem*, in *The Scholar and His Study*, exh. cat., Jagiellonian University Museum, 12 May – 28 August 2005, Cracow, 2005, pp. 59–61.
- 18 W. Olhoff, *Excerpta ex litteris illustrissimorum et clarissimorum virorum ad Johannem Hevelium conscriptis iudicia de rebus astronomicis eiusdemque scripta exhibentia*, Gdańsk, 1683, p. 121.
- 19 C. B. Lengnich, *Hevelius oder Anekdoten und Nachrichten zur Geschichte dieses grossen Mannes: in Briefen mit erläuternden Zusätzen und Beylagen*, Danzig, 1780, pp. 56–57; Steinborn, *op. cit.*, p. 42. Three of the paintings were supposed to be by Schultz and two were copies.
- 20 Lengnich, *op. cit.*, *passim*.
- 21 See footnote 1.
- 22 J. Flik, "Portrety Jana Heweliusza w Gdańsku i Oxfordzie. Studium warsztatu malarskiego" [The Portraits of Johannes Hevelius in Gdańsk and Oxford. A Study in Painting Technique], *Ochrona Zabytków*, 2, 1995, pp. 160–180.
- 23 B. Makowski, "Der Danziger Maler Andreas Stech", *Zeitschrift des Westpreussischen Geschichtsvereins*, 52, 1910, p. 153. The baptismal certificates from the parish church of St Katherine have survived only till the year 1667; T. Grzybkowska, *Andrzej Stech malarz gdański* [The Gdańsk Painter Andreas Stech], Warsaw, 1979, p. 16.
- 24 The dispute over Daniel Schultz's authorship of the two portraits of Hevelius has been going on for many years; see Jackowska, 1997, *op. cit.*, p. 144. I myself was inclined in 1996 to accept the authorship of Schultz in regards to the Gdańsk portrait of Hevelius; see T. Grzybkowska, "Andreas Stecha i Daniela Schultza portrety Heweliusza" [Andreas Stech and Daniel Schultz's Portraits of Hevelius], in *eadem*, *Artyści i patrycjusze Gdańska* [The Artists and Patricians of Gdańsk], Warsaw, 1996, pp. 75–85. I now retract this opinion.
- 25 Grzybkowska, *Andrzej Stech*, catalogue notes: A.23 on p. 132, A.32 on p.135, A.31, p.135; A.33 on p. 135.
- 26 *Ibid.*, pp. 89–95, catalogue note A. 21 on p. 131, Fig. 53.
- 27 Makowski, *op. cit.*, *passim*; W. Drost, *Barockmalerei in der Germanischen Ländern*, Potsdam, 1926, *passim*.
- 28 Steinborn, *op. cit.*, p. 63.
- 29 *Loc. cit.*
- 30 C. Nissan, *Die botanische Buchillustration*, Stuttgart, 1951, p. 89.
- 31 Grzybkowska, *Andrzej Stech*, *passim*.
- 32 This enormous painting, measuring 675 × 550 cm, was meant for a parish church in Żółkiew (present-day Zhovkva, Ukraine), which served as the mausoleum for the Żółkiewski and Sobieski families. Z. Żygulski Jr., "Bitwa pod Chocimiem" [The Battle of Chocim], in *Gdańsk dla Rzeczypospolitej. W służbie króla i kościoła* [Gdańsk for the Republic. In the Service of the King and Church], exh. cat., Historical Museum in Gdańsk, Warsaw, 2004, pp. 118–119.
- 33 J. Hevelke, *Gert Hevelke und seine Nachfahren*, Danzig, 1927. On Hevelius, among others, D. Wierzbicki, "Żywot i działalność Jana Hewel-

- iusza astronoma polskiego" [The Life and Work of the Polish Astronomer Johannes Hevelius], *Pamiętnik Akademii Umiejętności w Krakowie. Wydział Filologiczny i Historyczno-Filozoficzny*, 7, 1889, pp. 25–26; P. Rybka, "Heweliusz Jan" [Hevelius, Johannes], in *Polski Słownik Biograficzny*, vol. 9/4, Wrocław–Warsaw–Cracow–Gdańsk, 1961; *idem*, *Heweliusz*, Warsaw, 1989; M. Pelczar, "Nauka i kultura w Gdańsku" [Science and Culture in Gdańsk], in *Gdańsk. Jego dzieje i kultura* [Gdańsk. Its History and Culture], Warsaw, 1989, p. 530.
- 34 Rybka, *Heweliusz* (1989), p. 9.
- 35 Elmqvist Söderlund, *op. cit.*, p. 55.
- 36 In his breweries the ale *Jopenbier* was produced and sent mainly to England and the Netherlands.
- 37 K. Targosz, *Jan Heweliusz uczony-artysta* [Johannes Hevelius the Scholar-Artist], Wrocław–Warsaw–Cracow–Gdańsk, 1979.
- 38 Rybka, *Heweliusz* (1989), p. 70.
- 39 *Loc. cit.*
- 40 On the visits to Hevelius' observatory paid by King Jan Kazimierz and his wife Maria Gonzaga as well as the visits paid by Jan Sobieski: Rybka, *Heweliusz* (1989), p. 58.
- 41 *Ibid.*, p. 159.
- 42 This scholar also constructed telescopes by himself; see J. Włodarczyk, "Astronomia w Polsce" [Astronomy in Poland], in *Historia astronomii*, ed. M. Haskina, trans. J. Włodarczyk, Warsaw, 2007, p. 326.
- 43 For example, Jacob Usher, Samuel Hartleben, Pierre Gasendí, Ismael Bouilliau. As with a number of scholars in those days he kept up an extensive correspondence; see M. Bershon, *Kilka słów o Janie Heweliuszu astronomie gdańskim z w XVII i jego korespondencji* [A Few Words on Johannes Hevelius, the Gdańsk Astronomer from the Seventeenth Century, and his Correspondence], Warsaw, 1889; F. Scharz, "Hevelius Briefe", *Mitteilungen des Westpreussischen Geschichtsverein*, 24, 1925, pp. 64–72.
- 44 Elmqvist Söderlund *op. cit.*, pp. 73, 82, took notice of Hevelius' large outlays. Tycho Brahe and Johannes Kepler also had their own observatories and print shops, but the books published by Hevelius were particularly sumptuous.
- 45 S. Sharpin, "A Scholar and a Gentleman: The Problematic Identity of the Scientific Practitioner in Early Modern England", *History of Science*, 29, 1991, pp. 279–327.
- 46 Olhoff, *op. cit.*, p. 121.
- 47 Rybka, *Heweliusz* (1989), p. 75.
- 48 *Ibid.*, p. 281. The author proves that the contents of the frontispieces in astronomical books were strictly determined by the scholars themselves, who collaborated with the artists.
- 49 Elmqvist Söderlund, *op. cit.*, p. 282.
- 50 *Ibid.*, pp. 281–283.
- 51 A copy of the *Machinae coelestis* colored by the artist survives in The Polish Academy of Sciences Gdańsk Library.
- 52 Elmqvist Söderlund, *op. cit.*, *passim*. The author repeatedly notes how sumptuous Hevelius' apparel is: the long knee-length coat – *justaucorps*, and the short, wide pants, which fell into folds like a skirt, the so-called *rhingrave*, richly decorated with ribbons as well as shoes with a large bow. It was in a similar way that Stech portrayed the figures in *A Walk Outside the Walls of Gdańsk*, a painting from around 1670, now in the Herzog-Anton-Ulrich Museum in Braunschweig; see Grzybkowska, *Andrzej Stech*, p. 131, Figs 53–54.
- 53 Katherine is recognised as the first woman astronomer in Poland. She assisted her husband in his investigations of the sky and after his death she supplemented, finished and published *Prodrromus astronomiae*. Andreas Stech also provided the illustrations to this work, while Charles de la Haye, a Huguenot emigrant from France, did the engraving. The two large hemispheres of the sky which were printed in this book were used by the firm of Gerard Valck to create globes in 1715, and later by the German firm of Johann Gabriel Doppelmayr, which produced globes and maps; see K. Targosz, "Celestial Spectaculum of Hevelius", in *Cosmology. The Image of the Universe in the Early Modern Times*, ed. A. Olszewska, Cracow, 2009, pp. 51–52. Women – wives, daughters and sisters – of astronomers played a vital role as their assistants. As Katherine Hevelius was to Gdańsk, so Maria Clara Eimmart was to Nuremberg; see Elmqvist Söderlund, *op. cit.*, p. 55, n. 93.
- 54 P. Rybka, K. Targosz, *Johannes Hevelius and his Firmamentum Sobiescianum sive Uranographia*, in J. Hevelius, *Firmamentum Sobiescianum sive Uranographia*, Gedani, 1690 [facsimile 1987], p. I.; Rybka, *Heweliusz* (1989), p. 159.
- 55 Elmqvist Söderlund, *op. cit.*, p. 68.
- 56 *Ibid.*, pp. 55–59.
- 57 *Ibid.*, p. 59, Fig. 14.
- 58 *Ibid.*, p. 64–65, Fig. 17.
- 59 R. Klibansky, E. Panofsky, F. Saxl, *Saturn and Melancholy. Studies in the History of Natural Philosophy, Religion and Art*, London, 1964.
- 60 J. Talbierska, *Rembrandt. Prints and Drawings*, Warsaw, 2004, pp. 406–407. Two years earlier Rembrandt had painted his oil portrait, now located in the Rijksmuseum in Amsterdam.
- 61 A. K. Wheelock, Jr., *Jan Vermeer*, New York, 1988, p. 118.
- 62 Elmqvist Söderlund, *op. cit.*, p. 59.
- 63 Wheelock, *op. cit.*, p. 119; oil on canvas, 53 × 46.6 cm, 1668, Städtisches Kunstinstitut, Frankfurt am Main.
- 64 The globe and book were identified by J. A. Welu, "Vermeer's Astronomer: Observations on an open book", *The Art Bulletin*, 58, 1986, pp. 263–268.
- 65 Wheelock, *op. cit.*, p. 118.
- 66 *Loc. cit.*
- 67 Welu, *op. cit.*, pp. 263–268.
- 68 Johannes Verkolje, *Anton van Leeuwenhoek*, undated, oil on canvas 56 × 47 cm, Amsterdam, Rijksmuseum. In a compositional sense, a slightly different mezzotint, also in the collections of the Rijksmuseum, was executed according to this portrait.
- 69 Grzybkowska, *Andrzej Stech*, catalogue note G.35 on p. 165, Fig. 96.
- 70 Elmqvist Söderlund, *op. cit.*, pp. 65–66, Fig. 18.
- 71 W. Weisbach, "Der sogen. Geograph von Velazquez und die Darstellungen des Demokrit und Heraklit", *Jahrbuch der Preussischen Kunstsammlungen*, 49, 1928, pp. 141–143, Fig. 2.
- 72 S. Brant, *Das Narrenschiff*, Frankfurt, 1980.

73 Rybka, *Heweliusz* (1989), p. 160.

74 *Loc. cit.*

75 *Loc. cit.*

76 I have not come across models in the newer literature on the portraits of scholars, in particular astronomers, either. On the portraits of thinkers, however: *The Scholar and His Study*, *op. cit.*; A. Jasińska, *Nowożytnie por-*

trety profesorów Akademii Krakowskiej w zbiorach Collegium Maius [Early Modern Portraits of the Professors of the Cracow Academy in the Collection of Collegium Maius (in Cracow)], Cracow, 2010; *Portrait de la pensée*, exh. cat., Musée des Beaux-Arts Lille, 11 March – 13 June 2011, Lille, 2011.

77 E. Panofsky, "Artist, Scientist, Genius: Notes on the Renaissance-Dämmerung", in *idem*, *The Renaissance. Six Essays*, New York, 1962, pp. 123–183.

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