

A portrait of Christiaan Huygens together with Giovanni Domenico Cassini

C.J. Verduin

*Department of Psychology, Leiden University,
P.O. Box 9555, 2300 RB Leiden, The Netherlands
verduin@fsw.leidenuniv.nl*

1 Introduction

It is only a thin line that separates the realm of fantastical notions from that of conjectures. It is the availability of enough sound arguments and evidence that supports the transition from a fantastical notion to a conjecture. Supported with irrefutable evidence it may in the end even enter the realm of certainty. In this article, I want to build a case on the assumption that a portrait of Christiaan Huygens can be found in a painting by Henri Testelin representing the *Establishment of the Academy of Sciences and foundation of the Observatory, 1666/1667*, in the *Musée National du Château et des Trianons* in Versailles. This painting was actually intended as a tapestry cartoon based on designs by Charles Le Brun for the Gobelins factory, as part of the tapestry series '*l'histoire du roi*'¹.

I should mention that I do not claim to be the first one who ever identified Christiaan Huygens in this painting, but to my knowledge no one has presented any tangible evidence and I believe this portrait deserves to be drawn out of the state of relative anonymity that it has been in for over three centuries.

The painting served in many publications as an image of the birth of scientific academies in the 17th century, to the point that it was merely seen as an emblem, and not so much as a group portrait. The familiarity of the painting as an emblem made its actual content virtually invisible to the beholder, with the exception of the very recognizable figures of Colbert and Louis XIV.

This story started in November 2003 when I looked for an illustration to use in a talk on Christiaan Huygens' work on probability. I found a small image of the aforementioned painting and then it occurred to me that Christiaan Huygens might be represented in that painting. I managed to obtain better images as well as background information from the internet database of the *Reunion des Musées Nationaux* (RMN) of the whole picture (Figure 1) and

¹ Apart from the large version by Testelin (MV 2074) that measures 348 x 590 cm, the Versailles museum owns a smaller, more sketch-like version (MV 6344; 52 x 90 cm), which is considered to be a draft version for the projected tapestry. A third small version was painted by Eugène Deveria in 1828-1835 as part of a ceiling decoration ('*Puget présentant sa statue de Milon de Crotone à Louis xiv, dans les Jardins de Versailles*') in the third room of ancient ceramics in the Louvre. An engraving of the painting made from a drawing by Massard was done by Thibault.

of a group of men situated at the left side (Figure 2), whom I assumed to be the members of the Royal Academy of Sciences.



Figure 1 Establishment of the Academy of Sciences and foundation of the Observatory. 1666/1667 by H Testelin (Photo RMN, ©Gérard Blot)

Being neither an historian nor an art historian by profession, I groped my way around through various texts on the history of the Academy of Sciences (see the list of reference documents consulted) and through the various portraits of Academy members, which I discovered to be scarce or even non-existentⁱⁱ.

The painting shows Prime Minister Jean-Baptiste Colbert in the centre, seemingly towering over the rest of the people present, introducing the members of the Royal Academy of Sciences to Louis XIV who is seated next to him.

To the right of Louis XIV behind the table are three men, with the Duke of Orleans, the king's brother, in the centre. Directly to the left of Colbert we find Charles Perrault, assistant to Colbert, in charge of royal buildings and the author of the Mother Goose stories. To the left of Charles Perrault and starting with the clergyman dressed in blue, we see the members of the Academy, of whom I have more to say later. The other people near the left and right borders of the painting are (in my humble opinion) just props: the two men handling the globe at the left side, brighten this otherwise dark corner in the same way as the martial looking figure does at the right side of the painting. The men standing on ladders and carrying various objects could be assistants ('élèves'). The only person I am not sure of is the elderly man standing behind Colbert and Louis XIV.

ⁱⁱ I found some images of De la Chambre, Mariotte, Claude (and Charles) Perrault, and Picard on the internet; but pictures of e.g. Carcavy, Duclos, Du Hamel, Frenicle de Bessy and Roberval in any form seem harder to come by.

The painting does not only contain people, but also a number of items that symbolise the various fields of scientific research and activity of the newly-founded Academy: a terrestrial globe, a celestial globe, a telescope, and a quadrant in the front; an armillary sphereⁱⁱⁱ hanging from the ceiling at the left; animal skeletons in the back; diagrams and maps on the table and the right wall^{iv}; the Observatory behind the king; and last but not least a small item that I will reveal shortly.



Figure 2: Detail of Figure 1, with members of Academy (Photo RMN, ©G rard Blot)

2 Identifying Huygens

After it occurred to me that this picture might contain a portrait of Huygens, I generated a few arguments that could be tested by simply checking the painting.

The first argument was one of necessity. Huygens was what we would now call the scientific director of the Academy. The astronomer Ismael Boulliau called him *omnium caput*^[3] and Robert Moray ‘Director of the designe’^[3]. Therefore, as a high-ranking member, he simply had to be present in a painting that commemorates the start of the Royal Academy of Sciences.

The second argument was based on Huygens’ age. Huygens was one of the youngest members at the time of the establishment of the Academy, as I determined from the information on the founding members^{[5][7][8]}.

ⁱⁱⁱ An armillary sphere is a skeletal celestial sphere with a model of the Earth or, later, of the Sun, placed in the centre.

^{iv} The large map hanging from the wall shows the Canal du Midi that connects the Atlantic Ocean with the Mediterranean Sea. The construction of this canal was officially started around the same time that the Academy of Sciences was founded.

I therefore had to look for a young man among the members of the Academy who, at the same time, was represented as a man of importance and status.

After some preliminary guesswork, I focused my attention on the two young men in the centre of the members of the Academy who both appear to differ enough in style of clothing to set them apart from the other gentlemen. My first fumbling hypothesis was that the man in the flamboyant yellow ochre gown could be Huygens. I soon discovered from engravings and paintings that this is actually Giovanni Domenico Cassini. I noticed that other images of Cassini (see e.g. Figure 3) seem to be based on the portrait in the Versailles painting. (It was common practice in that time for artists to paint portraits from other portraits, if they did not have access to the subject.)



Figure 3: G.D. Cassini
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libraries,
<http://www.sil.si.edu/>

When one compares the Cassini engraving with the painting one can appreciate the various details by which they can be matched: the face with its protruding, dimpled chin, the elaborate wig with the long curl hanging on the eyebrow, the gown with its creases. Even the left hand holding a glove in the painting, is kept in the same position in the engraving holding a small telescope (?).

I then moved to the young man to the right of Cassini. I would like to present the following arguments for identification of this man as Christiaan Huygens.

The first argument is based on his position: he is situated next to Cassini in the 'centre of gravity' of the Academy members. Secondly, this man, together with Cassini and the clergyman dressed in blue (whom I consider to be Jean Baptiste Du Hamel), is the only Academy member who is painted (almost) full length. This is a clear indication of status. In addition, his clothing tells a similar tale: a rich, expensive, and differently styled attire,

when compared with other scientists, points in the direction of wealth and status.

The next argument is based on the fact that “Constantin Huygens” is mentioned as being present in the painting^v, which is an obvious error, but also a clue. Possibly the presence of a monsieur ‘Huygens’ in the painting is mentioned (in a document?) and someone confused the father with the son. It has occurred more than once that events pertaining to Constantijn sr. were ascribed to Christiaan Jr.^{vi} In this case, it seems to be the other way around.

The final argument presented itself almost by accident: I wondered about Huygens’ right hand which he seems to hold carelessly in front of his chest, while he looks at Cassini (Figure 4). Then I noticed, that following the line of Huygens’ arm and hand which passes through the two heads of the men standing right of Huygens, one arrives at the clock in the background. This is the only item I omitted earlier from my list of objects in the painting: the pendulum clock – Huygens’ own invention! I will have more to say on this pointing gesture by Huygens.



Figure 4: Cassini, *Huygens and clock* (Photo RMN, modified by author)

^v The name is mentioned in the RMN database and in [13]

^{vi} An erotic poem written for Ninon de Lenclos by C. Huygens Sr. is by many later authors, starting with Voltaire, incorrectly ascribed to Chr. Huygens (See e.g. [4] p. 133; [2] p. 231; [1] p. 25, who seems to follow Bertrand). In the biography of Descartes by Baillet (1692) a number of similar errors occur as Chr. Huygens pointed out to P. Bayle^[14].

The only known portrait of Christiaan Huygens from the same period as the Versailles painting is by Caspar Netscher, painted in early 1671 (Figure 5) when Huygens was in The Hague recovering from an illness.



Figure 5 Huygens by
Caspar Netscher.
Collectie Haags Historisch
Museum

The Versailles portrait is reproduced in mirror fashion next to the Netscher painting in Figure 6, to facilitate comparison.



Figure 6: The two
portraits

Both faces show the raised eyebrows, heavy eyelids, protruding lower lip and the slightly dimpled chin that in later portraits of Huygens becomes more prominent. The Versailles portrait is more ‘*en face*’ than the Netscher portrait, which complicates a comparison. Both paintings show a rather lean face with wide cheekbones, tapering toward the chin. The similarity between the two portraits leaves perhaps something to be desired, and would be insufficient as an argument in itself, but combined with the previous arguments I believe that it strengthens the validity of my case.

3 Reading the picture

Although a lot has been said, still more can be learned by studying the painting in more detail and trying to be receptive to what it has to tell. Hence the heading ‘Reading the picture’. A problem with this approach can be that one starts with preconceived notions that may obscure the real story, or worse, are completely wrong and lead one up the proverbial garden path. I will therefore try to approach the painting as open-mindedly as possible by first presenting some observations.

3.1 The event

The question of whether this depicted event in which the Academy was established really took place or is a reconstructed event is an academic one. As I mentioned already above, I am inclined to consider the painting as a presentation of how, according to Colbert and Louis XIV, the Academy should have started and not how it really did. Some evidence can be gleaned from Fontenelle’s text on the arrival of Cassini: “...*M. Colbert avoit désiré qu’il eut avec l’Académie dès le tems que ce Ministre songea à la former. Cette Correspondance nous autoriseroit à compter M. Cassini dans le nombre des premiers Académiciens...*”^{vii}.

Pictorial rhetoric is the key word here: what is the message of the painting, what does it convey, and how does it accomplish its objective?

If we assume that we are looking at a reconstructed event, it is no longer necessary that all the people depicted were actually presented at a specific place and time. The absence of the depicted does not have to pose a problem to a painter. In 1538, Titian painted an ‘*en profile*’ portrait of Francois I using only a medallion made by Benvenuto Cellini^[15].

There are many instances of people depicted in paintings who obviously could never have met in real life or could never have been present at the time or place the depicted event took place. We could look at paintings that depict historical events, e.g. religious and historical paintings. Religious painting also can be construed as historical, depending on the approach of the biblical stories. Most religious paintings show scenes from the lives of saints, the holy family, apostles and evangelists, next to the (family of the) commissioner, plus influential people from the time that the painting was made. Historical painting, which in the Hierarchy of Genres was considered the noblest form of painting^[16], lets us discern between ancient (e.g. Greek or Roman) topics and more modern ones.

- Domenico Ghirlandaio combined scenes from the Bible and portraits of contemporary Florentines in his frescoes in the Tornabuoni chapel in the Santa Maria Novella, Florence, and welded them into seemingly anachronistic works of art^[17].

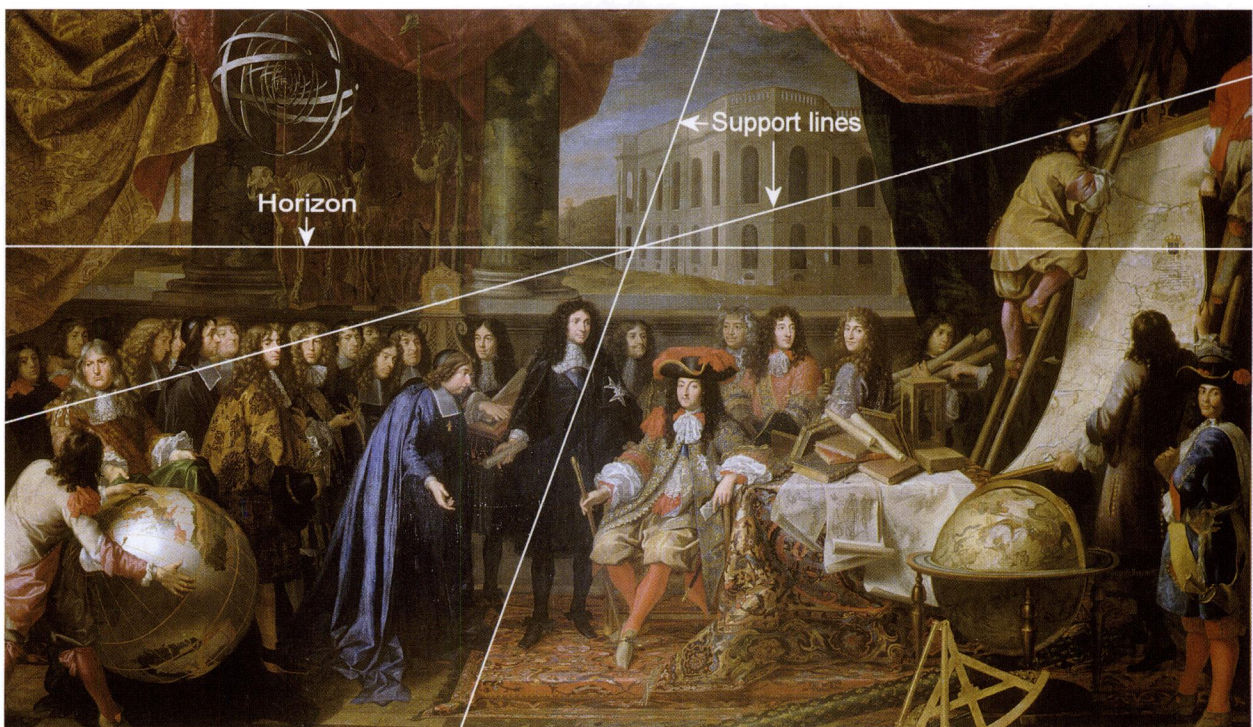
^{vii} “Mr. Colbert had wanted him to be a member of the Academy from the time this Minister dreamed of creating it. This information warrants us to reckon Mr. Cassini among the number of the first Academicians...” [5] Vol.I p111

- Mantegna's frescoes in the Palazzo Ducale in Mantua show people that were already dead or had not yet been born at the time of the event that is depicted ^[18].
- Velazquez painted the Surrender of Breda around 1635. It shows an event that took place some ten years earlier, on June 5, 1625 ^[19]. The event is well documented, but the painter was not present at the site and therefore had to reconstruct the event using visual elements to convey the message of a strong Spanish army and the conquered Dutch, but at the same time showing the victorious Spinola treating his opponent (who presented the key of the city) with respect. (Only two years after Velazquez finished the painting, the Dutch recaptured Breda, turning a triumph into a bad memory.)

These examples show that a painting can not always be trusted to present the 'truth', but might tell a story in a specific way according to how the person who commissioned it wanted the event to be remembered.

3.2 The composition

Figure 7: The use of perspective in the painting



This, however, would also have the viewer look slightly down on the people in the painting. This is not how the people seem to be painted. They are looked at from a normal viewpoint: all the heads are about the same level instead of being depicted higher up the painting the more a person is situated in the background. I then noticed that from Colbert to the right, all the

people of importance and the table in the middle are situated on an elevated platform about 15-20 cm above the marble floor tiles. Although this explains the difference in height between Colbert and the Academy members, it does not explain the awkward use of perspective in the painting. The people that are depicted are not situated in the space according to the rules of perspective. The presence of two different viewpoints in the painting might suggest that parts of the painting showing people are designed independently from the surrounding parts of picture, like the skeletons and columns in the background.

3.3 Position, posture and gestures

Again, I would like to stress that a painting like this one is not an accidental image, but a rhetorical tool with a design and a purpose. Especially when it contains people and has a public relations function like the picture at hand. I mentioned before that it was to become part of a series, commemorating important events in the life of Louis XIV.

This painting should not be seen as depicting a real event per se, as I argued above, but as a statement of how at that time the Academy was or was supposed to be seen, according to who commissioned the painting, i.e. Louis XIV and Colbert. In other words the painting probably shows a biased reconstruction. And what it shows is that Huygens is more or less obscured by Cassini: a matter of priority?

The representatives of the court are literally elevated with respect to the other people on the painting: a sign of difference of status. There seem to be a few exceptions: some assistants share this same 'high level', while supporting the great map and carrying scrolls.

The centre of the painting is dominated by Louis XIV sitting and Colbert standing and pointing to an ecclesiastical dignitary dressed in blue in a humble, slightly stooped posture, in front of (representing?) the members of the Academy. He keeps his right arm partially stretched and his right hand open towards the king. All this is part of presenting oneself in a submissive way to someone higher in rank. This posture brings to mind paintings of St Francis, e.g. by Giorgione (*"Pala del Castelfranco"*, 1502-1505), where he can be seen in this very posture, showing his stigmata, with his left hand placed on his breast. Although this last detail is not shown in the large Testelin painting, the smaller version (see footnote i on page 157) copies this posture in every detail. The question arises whether Testelin just used a 'nice' posture from a painters' book of examples, or if possibly something else is implied.

Huygens' gesture of pointing backwards with his right hand while looking in the opposite direction is, like the previous posture, probably based on an image that was frequently used by painters. This way of pointing (i.e. backwards, over the chest or the left shoulder) is almost uniquely connected with John the Baptist while pointing at the infant Jesus sitting on Mary's lap, or at the Agnus Dei. Examples can be found in the work of Italian masters like Veneziano (*"Madonna Manolia and saints"*, before 1446), Ghirlandaio (*"Adoration of the Magi"*, 1488) and Rafael (*"Madonna de Foligno"*).

Again: is it just a ‘nice’ posture or is another layer of meaning implied? John the Baptist was the announcer of the Messiah to come. Huygens’ act of pointing in this particular way to the pendulum clock could be interpreted as indicating the pendulum clock would become ‘the saviour of the world’ by solving the longitude problem. In a more general sense, the gesture of pointing is used as a visual reference code to guide the eye of the observer and to establish a link between the two parts of the painting.

3.4 Determining a date

We can start by expanding this heading into ‘determining the date of an event suitable to trigger the creation of the painting and the date the painting was created’, with the date of the painting being obviously after the date of the trigger event. In the RMN database, the painting is dated at the third quarter of the 17th century (i.e. 1750-1675). From the title of the painting: *Establishment of the Academy of Sciences and foundation of the Observatory. 1666/1667*, one could be tempted to date the trigger event at 1666/1667 and the painting between 1666-1675. The presence in the painting of Cassini, who arrived in Paris on April 4 1669 ‘on loan’ from Rome, however, complicates matters.

It is exactly for the reason of dating the trigger event at 1666/1667 that some authors like Schiller^[20] reject the idea of Cassini being present in the painting, because he was not present at the date the Academy was founded. At the same time they seem to ignore the pictorial evidence presented above, which confirms that Cassini is in the painting. From a letter from Henri Justel to the Royal Society, dated Dec 8, 1668, we can infer that very little had been accomplished before 1669 to warrant the creation of the painting: “Our society is still meeting, but it has produced nothing as yet...”^{[3], p158}

If one accepts the identification of Cassini as correct, this would set the date for the trigger event after April 1669, and therefore the date of the painting after that. This would also partially circumvent the ongoing debate as to whether Abbé Jean Baptiste Du Hamel or Abbé Jean Gallois is depicted in the painting. This debate was caused by assuming that the painting was created in 1668-1669 in the absence of Du Hamel. For almost two years Du Hamel accompanied Colbert de Croissy on diplomatic travels to Aix-en-Chapelle (Aachen) and England (April 1668-early 1670)^[21]. Gallois took over the function of secretary of the Academy until the return of Du Hamel.

In 1671 Cassini became director of the royal observatory, and in September of that same year even started to live at the observatory, which was at that time still under construction. Even then it would have been odd to include Cassini in a painting of this sort, given that he supposedly was only present in France on a temporary basis. In that same year the Academy published the first edition of *Mémoires pour servir à l’Histoire naturelle des Animaux*.

In 1672, the observatory was officially finished (it was inaugurated on 1 May 1682^[1]) and Huygens had finished the text of his *Horologium Oscillatorium*, with a very politically correct dedication to the King: both events were important in the history of the Academy. Cassini’s position in the Academy, however, changed dramatically when he became a French

citizen in April 1673 and changed his name to Jean Dominique Cassini. Fontenelle writes “*Le Roy le reçut & comme un homme rare, & comme un Etranger qui quittoit la Patrie pour lui*”^{viii}. And this is, in my view, exactly what is represented by the fact that Cassini, French and Catholic, seems to obscure Huygens, Dutch and Protestant, in the painting.

So the year 1673 could be construed as an earliest date for the ‘scene’ within the Academy that the painting is supposed to represent. The year 1673 was also important for Huygens, as it is the year in which his *Horologium Oscillatorum* was published and presented to the King. This event might serve as an alternative and perhaps simpler explanation of Huygens’ pointing to the pendulum clock: it refers to the publication of the *Horologium Oscillatorum*.

This leaves us with an earliest date of 1673 for the start of the painting, to which at least one or two years should be probably added to get the year it was actually finished. The latest date can be derived from information on the painter. As it happened Henri Testelin was a Protestant and for that reason, he was expelled from the Academy of Painting in 1681^[23].

I would thus suggest 1673-1681 as the period in which the final painting was created. The studies by Charles Le Brun that Henri Testelin used for the painting could have been made any time between 1667 and 1673 in the form of individual portraits.

4 Concluding remarks

I have presented several arguments for the identification of Christiaan Huygens among the members of the Academy. The arguments comprise age, position and status in the group, a certain likeness to the Netscher painting and the link with the pendulum clock. I have presented arguments for dating the painting. But these just scratch the surface of what could very well be a pictorial treasure trove illustrating the dawn of the Academy of Sciences.

When I concluded my talk on April 14 2004, I finished with a short but ambitious ‘to do’ list:

- A list of the scientists present in the painting is needed. My earlier communications with the Versailles Museum had led me to believe that such a list actually existed. From an in situ inspection of the dossier on the painting, I learned that ‘the list’ was just a list of the members who were present at the founding meeting of the Academy in December 22, 1666. Therefore this list is still sorely needed.
- Portraits are needed of the still unidentified scientists. This item, like the previous one, still stands.

^{viii} “The King received him as a special man and as a stranger who left his country for him”^[22]



Figure 8: 'Huygens with microscope' by S. Le Clerc (1671)

- Other images of the Academy of Sciences may contain new portraits. As it happens, and unbeknownst to me at that time, this point is partly covered in a study by Watson [22] who discusses the various engravings by Sebastien Le Clerc between 1671 and 1714. His approach is not unlike mine, and he too tries to evaluate the probability that Academy members are present in certain pictures and absent in others, based on the smallest bits of information. See e.g. Figure 8. Matching my ideas with Watson's might lead to some new results.

Apart from working on the previous points, I would like to compare the animal skeletons in the background with the illustrations in the '*Mémoires pour servir à l'Histoire naturelle des Animaux*' mentioned above. The results could furnish extra support for dating the picture.

Another venue that might prove worthwhile to explore is to check the work of Charles Le Brun (in particular his drawings) for possible studies of the painting.

Last but not least: it seems strange that none of the obvious sources that I used (Du Hamel, Fontenelle, Huygens) mentions the Versailles painting at all. Is this a lack of interest or is there another reason? And why was the projected tapestry never finished (or perhaps never started)?



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This article is part of a larger project to study the painting in greater detail. More information will be made available via:

<http://www.leidenuniv.nl/fsw/verduin/stathist/huyproj.htm>

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- [7] Maindron, E. (1888) *l'Académie des Sciences*, Alcan, F. ed., Paris;
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No one should start a study on Huygens, without using the fruits of the previous Huygens events:

- [9] Bos, H.J.M. (ed) (1979) *Studies on Christiaan Huygens (A Symposium)*, Swets & Zeitlinger, Lisse
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And for a sparkling biography that does not shun the more obscure recesses of the human mind:

- [11] Andriesse, C.D. (1993) *Titan kan niet slapen. Een biografie van Christiaan Huygens*. Contact, Amsterdam.

Although not explicitly named in the article, these last three titles have been important in forming my ideas while preparing this text.

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