Ernst Zinner's "Die Kepler-Bildnisse" (1930), short summary

Translation from German into English: DeepL

In German:

Ernst Zinners "Die Kepler-Bildnisse" (1930), kurze Zusammenfassung

Franz Krojer, Munich 2021

The occasion for this summary is the essay: "How a fake Kepler portrait became iconic" Steven N. Shore und Václav Pavlík, August 2021, https://arxiv.org/abs/2108.02213

Their conclusion: "Wikipedia and the portrait appeared there for the first time in 2005. Thereafter, it becomes ubiquitous." And: "More to the point, the portrait ... is likely not even Kepler but we will argue that it is a 19th century forgery that could be based loosely on an official academic portrait from life of Michael Mästlin ..., Kepler's teacher and promoter."

So, before 2005, the fake Kepler portrait was hardly common, only after it became an eye-catcher in the German Wikipedia, it became "ubiquitous".

Although the authors refer to the publication of "Ernst Zinner: Die Kepler-Bildnisse, p. 337-345, Kepler-Festschrift, Regensburg 1930", it is not emphasized enough that already Ernst Zinner had classified the Kremsmünster painting very clearly as not authentic. Moreover, even before 2005, the painting was more widespread in German-language literature than the authors assume.

Here now follows no own analysis of the Kepler portraits, but primarily a reproduction of the Kepler portraits occurring and analyzed in Zinner's book, with some quotations and comments. Admittedly, at the very end, the matter takes a somewhat unforeseen direction for me.

1. The Kremsmünster painting, thus falsely spread by Wikipedia since 2005:



Plate XXIII.

Alleged portrait of Kepler from the year 1610. This copy (after a lost original) belongs to the Benedictine Abbey of Kremsmünster.

Zinner, in discussing expert opinions, etc., writes in this regard:

"All these circumstances can speak for the fact that the scholar depicted on the Kremsmünster painting can be Mästlin rather than Kepler." He calls it an "alleged portrait of Kepler" on plate XXIII.

This portrait is now only in second place at Wikipedia (as of August 2021) with the note: "Whether this picture shows Kepler is recently disputed", with reference to the essay by Shore and Pavlík. However, it has been disputed since 1930 at the latest.

Update: Since September 15, 2021, the image has completely disappeared from the Wikipedia article resp. has been relegated to the discussion page.

Controversial, but already "present" before Wikipedia. Because also here it is already reproduced for a larger circle of readers: Johannes Hemleben: Johannes Kepler, 19th - 21st thousand, April 1977 ("Rowohlts Monographien"), full sized at page 6, thus very highlighted, but still with the caption: "Johannes Kepler. Controversial portrait, 1610".

Template for the Kremsmünster painting could have been:

2. Michael Mästlin, painting owned by the University of Tübingen:



Plate XXIV.

Michael Mästlin, Kepler's teacher and friend.
1619.

After a painting in the possession of the University of Tübingen.

Zinner: "In this painting from 1619, Mästlin wears a pleated millstone collar on his robe and holds a compass in his right, very fleshy hand; the same is the case with the scholar in the Kremsmünster painting."

Zinner analyzes a number of other portraits of Kepler. The most important, most authentic one seems to be for him:

3. "The best known and most widely copied of Kepler's paintings is the Straßburg painting."

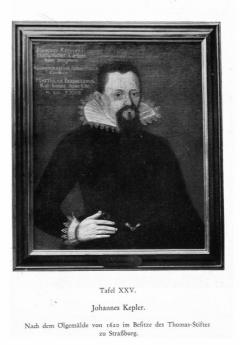


Plate XXV. Johannes Kepler.

After the oil painting from 1620 in the possession of the Thomas-Stift in Straßburg.

Zinner: "Numerous are the illustrations that have been made after this Strasbourg painting." Also in the German Wikipedia this portrait is now in first place.

Volker Bialas writes about this in his book "Johannes Kepler" (Munich 2004, Beck) on p. 157 f.:

"What did Kepler look like? According to his own description, similar to his mother, i.e. small in stature, of delicate build and black-haired; as far as we can form a picture, with a serious expression on his face.

Around 1620 Kepler was painted. A portrait was created that shows the naturalist at a ripe old age, but did not resemble him much. He sent it to his friend Bernegger in Straßburg, who forwarded it to the city's library a few years later. Today the picture is in the Thomasstift in Straßburg. Schickard compared the portrait with the sitter, but found little correspondence. This was also expressed by the jurist Thomas Lansius (1577-1657) in the epigram accompanying this engraving:

, Kepler's name, he carries the picture which is completely missed.

But tell me, why so the artist is mistaken?

The earth's course is to blame, it moves according to Kepler's rule,

leads with the force of the turn also the forming hand away!

If the earth did not turn and always remained at rest.

The Keplerian picture would not be so badly distorted!

(KB II, 187; KGW VIII, 479)"

A slightly different statement, namely that only the copies of the painting had become miserable, I found in Walter Gerlach and Martha List "Johannes Kepler" (Munich 1987) on p. 15: "Johannes Kepler, 1619. The painter of the only Kepler picture from later years is unknown. Matthias Bernegger, to whom Kepler had given it, gave it to the library in Straßburg in 1627. In 1620 Jakob von Heyden made an engraving after it, but it differed considerably from the original; Kepler himself rejected it, but it became the model for most later Kepler pictures."

Mechthild Lembke in her book "Johannes Kepler" (Rowohlts Monographien, 1995) writes on p. 117: "Meanwhile Matthias Bernegger had an engraving made in Strasbourg after the picture that Kepler had sent to him in Strasbourg. The commissioned artist Jakob van der Heyden 'improved' Kepler's portrait in such a way that Kepler's friends agreed that it had little resemblance to the model." And then quotes Thomas Lansius and shows van der Heyden's engraving:



In the imprint of Lembke's book there is also this statement about the Straßburg painting: "the only picture of Kepler which he authorized, even if with restrictions". But we will see shortly that Volker Bialas describes the following discussed portrait as only "authorized" by Kepler.

4. The cover picture "Temple of Astronomy" in the 1627 published Rudolphine Tables $\,$



Phot. Otto Nüfile, Regensburg

Tafel XIV.

Titelbild zu Keplers Rudolphinischen Tafeln vom Jahre 1627.

Im Unterbau links Kepler in Ieinem Arbeitsraum. Kupferstich von Georg Cöler-Nürnberg.

Plate XIV.

Cover picture of Kepler's Rudolphine Tables from 1627. In the substructure on the left, Kepler in his workroom. Engraving by Georg Cöler, Nürnberg.

On the lower left, somewhat hidden, the portrait of Kepler, and therefore extra enlarged:

-8-



Plate XV.

Kepler in his workroom.

Detail from the title page of the Rudolphine Tables.

(Compare plate XIV.)

Made even more visible by Mechthild Lembke on p. 7:



Kepler-Bildnisse

Zinner (p. 343): "This engraving, made in 1627 by Georg Cöler in Nürnberg, is unfortunately not very suitable to test the Straßburg painting for its fidelity. Kepler's correspondence, as far as it is published by Frisch, and also Kepler's introduction to this work do not allow to determine whether Kepler's painting was designed by himself and whether he agreed with the copper engraving (plates XIV and XV)."

In contrast, in the same Kepler Festschrift of 1930 Paul Schulz writes in his essay "Das Kepler-Denkmal in Regensburg" on p. 118:

"It is well known that it is disputed how Kepler looked like. The existing paintings contradict each other partly considerably. The Regensburg monument [from 1808, see below] was made according to a picture that is no longer available today and can hardly be checked for its correctness. It is very important that, as P. Placidus Heinrich states, the head of the monument here corresponds well with the small portrait of Kepler in the frame of the title page just described. However, this was produced during Kepler's lifetime under his eyes and may well have a claim to correctness. We may therefore assume that the bust of Kepler in Regensburg does some justice to the true appearance of the great astronomer."

Volker Bialas in his essay "Kepler und die Geburt einer neuen Astronomie" (Sterne und Weltraum 12/2009, p. 45):

"The only portrait authorized by Johannes Kepler himself appeared in 1627 as a part of the frontispiece of his Rudolfin Tables. Numbers written on the tablecloth express the lack of money to finance the paper. The printing of the work was made possible by the Emperor Rudolf II. His grant is symbolized by fallen coins scattered on the table."

Volker Bialas in his book "Johannes Kepler" (München 2004, Beck), p. 41 f.: "Of this frontispiece, a design by Kepler's own hand has survived (Fig. 6).":



Abb. 6: Keplers Entwurf zum Frontispiz der Tabulae Rudolphinae

Figure 6: Kepler's design for the frontispiece of the Tabulae Rudolphinae.

Kepler himself is missing in this design, but he was involved in the creation of the title copy and one may assume that the portrait on this "Temple of Astronomy" at least depicts Kepler as he would have liked to be seen.

Volker Bialas, "Johannes Kepler", on p. 158:

"We can perhaps best imagine Kepler as he was depicted on the frontispiece of his great table work. Sitting at the work table, calculating on astronomical tables and thinking about the construction of the world, emaciated by the hardships of an arduous life, but still awake with a wide eye for the secrets and wonders of nature."

5. "The oldest Kepler portrait belongs to the Pulkovo observatory." (Zinner)

Zinner: "There are three oil paintings on copper in medal form. Two of them, in the size 46:60 mm represent Kepler and his first wife Barbara Müller; offenibly they are made at the same time and by the same painter and should still belong to Kepler's Graz time. They would have been made in the period from

February 9, 1597, the day of the marriage engagement, until the beginning of 1600, when Kepler traveled to Bohemia to visit Tycho Brahe. Kepler still appears quite youthful in this painting, which is emphasized by the absence of the beard. Of these paintings of Kepler and his wife, Plate XVIII gives illustrations. Already earlier, the Photographic Institute Brandseph in Stuttgart had produced small photographs of these paintings, a pair of which belongs to the Historical Society in Regensburg. In an old hand was written on these photographs: ,M. Jo. Kepler' and ,Keppler's first wife Barbara v. Mühlegg in her bridal state (1597)'. The third of the small oil paintings in Pulkovo depicts J. Bartseh, who had married Kepler's daughter Susanna. Its largest diameters are 78 and 97 mm. As the illustration proves, it is painted by a different hand than the other two paintings (Plate XIX)."

Here only plate XVIII:



Plate XVIII.

Johannes Kepler and his first wife Barbara, née Müller von Mühleck, from the period 1597-1600.

After the miniatures of the Pulkovo observatory.

In summary: three portraits of Kepler have survived with some reliability:

- 1. the much-copied Straßburg portrait
- 2. the picture on the title copperplate of the Rudolphine Tables
- 3. the portrait of youth (Pulkovo)

These pictures were produced during Kepler's lifetime, and especially the Straßburger served as a model for further copies. The fact that even during Kepler's lifetime it was argued whether he had been "hit" well is quite normal and would also lead to similar discussions today with contemporary pictures and photographs.

The pictures, monuments and busts in Regensburg and in the Walhalla (located about 10 km east of Regensburg, downstream from the Danube) represent a separate complex.

First, something "fake".

6. Zinner: "Alleged Kepler painting ... in the possession of the Historical Society of Oberpfalz and Regensburg"

Zinner depicts two variants of this:



Kepler-Bildnisse

Plate XXVIa.

Alleged Kepler painting.

After a photograph of the painting, which is in the possession of the "Historischer Verein von Oberpfalz und Regensburg" and which, according to earlier assumption, represents Kepler, but according to newer research Ludwig X. of Bayern-Landshut.



Plate XXVIb.

The Regensburg painting XXVIa after the reproduction of the architect W. Grueber.

What is particularly interesting here: this fake Regensburg painting served as a model for the bust in the Walhalla!:

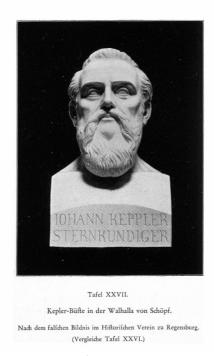


Plate XXVII.

Bust of Kepler in the "alhalla by Schöpf.

After the false portrait in the "Historischer Verein zu Regensburg".

(Compare plate XXVI.)

Zinner: "The bust erected in the Walhalla in 1842 was made by [Peter] Schöpf for 550 florins according to picture XXVI. This bust replaced an earlier bust purchased for 770 gulden, which the sculptor [Philipp Jakob] Scheffauer in Stuttgart had made in 1808 according to a bust sent from Regensburg."

Hermann Nestler in "Ist das Keplerbild in der Walhalla echt?" (Verhandlungen des Historischen Vereins für Oberpfalz und Regensburg 81. Band (1931)): "The files and the examination of the pictures prove that the portrait in the collections of the "Historischer Verein" served as a model for the sculptor Schöpf. But since Kepler is not represented by this portrait, a wrong picture came into the Walhalla. The error could be rectified if the bust of Kepler by

Scheffauer, which was originally intended for the Walhalla and which had been displaced by the wrong picture, were to be found again and to be honored anew. It would be a thankful task to investigate the fate of this bust by Scheffauer."

7. The Kepler Monument in Regensburg



Tafel XII.

Kepler-Denkmal zu Regensburg.

Errichtet 1808 nach einem Entwurf von Emanuel d'Herigoyen.

Plate XII.

Kepler-Monument at Regensburg.

Erected in 1808 according to a design by Emanuel d'Herigoyen.



Plate XIII.

Bust of Kepler by Döll and relief by Dannecker in the monument at Regensburg.

Zinner: " ... was erected in 1808; inside is a bust made by Döll of Gotha from a model then in Gotha."

The bust by Friedrich Döll for the Kepler-Monument in Regensburg was thus made after a lost model from Gotha. Döll's bust, in turn, served as a model for the bust by Philipp Jakob Scheffauer, which was actually intended for the Walhalla, but is now in the Kepler Museum Regensburg (Keplerstr. 5). Instead, a bust by Peter Schöpf was placed in the Walhalla, as described earlier.

Somewhat confusing. Also the Kepler monument of 1808 in Regensburg has a long history, especially a pre-history. Read in addition:
Doris Becher-Hedenus: "Wir durchlaufen alle eine exzentrische Bahn",
Die deutsche Kepler-Rezeption im 18. Jahrhundert und das Regensburger
Denkmal von 1808, Universitätsverlag Regensburg 2010.

I quoted above Paul Schulz: "There it is now very essential that, as P. Placidus Heinrich states, the head of the monument here corresponds well with the small Kepler portrait in the frame of the title page just described. However, this was made during Kepler's lifetime under his eyes and may well have a claim to correctness. We may therefore assume that the bust of Kepler in Regensburg does some justice to the true appearance of the great astronomer."

The Benedictine monk, university teacher and natural scientist Placidus Heinrich wrote an approximately 30-page memorandum "Monumentum Keplero Dedicatum Ratisbonae" (1808) on the occasion of the dedication of the Kepler-Monument in Regensburg. In the appendix the monument is described, with illustrations. One of them shows Kepler:



Kepler-Bildnisse

With some justification, it could be counted among the reasonably well-supplied Kepler images, making a total of four.

The explanation for this image is:

19

TAB. III.

Protope Kepleri.

Opus celeb sculptoris Gothani Doell ex marmore Carrarieusi, magnitudine humanam excedente.

De Kepleri effigie haec nobis innotuere. Keplerus ipse effigiem suam penicillo ad vivum expressam dono dedit Joanni Gringalleto, suo Lintus amanuensi, et in subducendis calculis adiutori: Gringalletus Berneggero celeberrimo Argentoratensium Professori, hic denique Bibliothecae Argentoratensi, 1. Jan. 1727 intulit. Ectypon huius tabulae sibi fieri curavit Hanschius, epistolarum Keplerieditor, aeri insculptum publicaturus, ni morte praeventus fuisset.

Prodiit autem effigies Kepleri aeri incisa primo quidem a. 1620 curaute ipso Berneggero, dein iterum recusa in J. J. Boissardi Bibliotheca calcographica 1669 Cont. II Mm. 4. Francof. Neutra tamen, ut fertur, Prototypo exacte similis — Denique post has alibi passim.

Aiunt Gothae Saxonum verum Kepleri ectypon haberi, quo ex fonte, incertum.

Nostrum quidem opus satis bene concordat cum parva Kepleri effigie, quae in frontispicio Tabularum Rudolphinarum, in basi monumenti levissime adumbrata cernitur.

De orthographia Nominis variant authores, ipso Keplero sibi uon constante. Nos in programmate usitatiorem sequuti sumus, in Protope autem antiquiorem, meritoque subscripsimus: Kepplerus.

It is also said here that the Saxons had the true image (ectype) of Kepler – whose image again would then have been brought by Friedrich Döll from Gotha to Regensburg.

Appendices

The story continues. This was to be expected.

Appendix 1

I got: Kepler-Kommission der Hochschule Linz: Johannes Kepler, Werk und Leistung, Linz 1971. An exhibition catalog with several scientific contributions.

As frontispiece in this book a Kepler portrait, the so-called "Linzer". The image description on p. 175 reads:

"Portrait of Johannes Kepler - 17*10 cm. Mixed media on paper. Quality work by an unknown 17th century painter, acquired by the Oö. [Upper Austrian] Landesmuseum in 1941."

A miniature, damaged and repaired several times over the centuries.



Abb. 2: Das Keplerbild vor der Restaurierung.

Kepler-Bildnisse

This image "before restoration" is taken from:

Gisela de Somzée and Benno Ulm: Das Ölbild Johannes Keplers im Oberösterreichischen Landesmuseum, Jahrbuch des Oberösterreichischen Musealvereines 1973, Band 118a, S. 161-166. Containing: "1. Restaurierungsbericht" [Restoration Report] and "2. Kunsthistorische Überlegungen" [Art historical considerations].

Conclusion 1 (Gisela de Somzée):

"From all this it is clear that the picture has enjoyed great esteem throughout the centuries, that attempts to save it were made again and again, probably more for the personality depicted than for the inconspicuous, repeatedly damaged work, which was undoubtedly painted by a very good, unfortunately unknown portrait painter."

Conclusion 2 (Benno Ulm):

"The Linz Kepler painting may - although many questions still need to be clarified - be called a precious incunabulum of the Upper Austrian State Museum. The tradition out of reverence for the sitter conveys an unconventional-familiar portrait of high quality and expressiveness of an important man of the 17th century: All indications speak for Johannes Kepler."

Surprisingly, Steven N. Shore and Václav Pavlík have not yet mentioned the image in their August 2021 essay either. But their attention was drawn to this "Linzer" image, they now depict it as an "e", have revised their essay and write about it:

"Note after acceptance – After placing the preprint on arXiv, we were contacted by Dr. Alena Solcová who pointed out several typos in the original arXiv version and suggested that we also include the Linz miniature."

Appendix 2

Not mentioned in Ernst Zinner's essay of 1930, but mentioned by Shore and Pavlík (fig. "d") is the "Prague" portrait of Kepler by Hans von Aachen, which is exhibited in Kolowrat Castle (Eastern Bohemia).



They write about it:

"Presumed Kepler portrait. Attributed to Hans von Aachen. It is assigned around the same year as the fake portrait, likely 1612". And: "These two portraits cannot be simultaneously the representation of the same person."

Currently, this "Prager" portrait is used as a frontispiece in the book: Erich Meyer: Auf den Spuren von Johannes Kepler. Zu seinem 450. Geburtstag, bearbeitet und herausgegeben von Gudrun Wolfschmidt, Hamburg 2021.

Appendix 3

This addendum could be strikingly titled with:

And the alleged fake portrait is real after all!

On the rehabilitation of the Wikipedia author "ArtMechanic"

The discussion page for the Wikipedia article "Johannes Kepler" states: "The originator ArtMechanic was very active in WP, but has since passed away. He gives no other provenance for the image. It gives me pride and horror to see how far it has spread after being inserted into WP! - Bleckneuhaus"

I find at http://www.specula.at/adv/monat_9803.htm:

"Object of the Month from the Kremsmünster Observatory Museum, March 1998".

With the caption:

"Portrait of Johannes Kepler in the Kremsmünster Observatory".

In addition the "fake portrait" is shown.

And there it is written:

"The Kremsmünster Observatory keeps in its possession an oil painting on wood by an unknown painter in Prague. It shows Johannes Kepler at the age of 39 (inscription top right: Aetatis suae 1610). The painting was in the possession of Kepler's relatives in Weil der Stadt and was sold there by the notary Gruner. In 1864 the director of the observatory and abbot of the monastery Augustin Reslhuber bought it for 200 gulden. Investigations at the Academy of Fine Arts in Vienna (Prof. Dr. Helmut Kortan) proved in 1968, contrary to earlier assumptions, that the inscription corresponds to the age of the painting."

Let us read: in contrast to earlier assumptions, it is now assumed that the portrait was actually painted in 1610, i.e. that it no longer merely originates from the 19th century. And it belonged to the property of Kepler's descendants.

So if the Wikipedia author ArtMechanic would have found this web page sometime at the beginning of the 2nd millennium, then he would have acted quite correctly in my opinion to take the Kremsmünster Kepler portrait as largely authentic and to include it in Wikipedia. We also saw: almost every Kepler portrait is more or less "controversial". And "Kremsmünster" now claims: in former times our portrait was considered as "fake", but since 1968, after the appraisal of Prof. Dr. Helmut Kortan, no longer. A Wikipedia author can ultimately only adhere to the "average" scholarly opinion, as a precaution one could have written in Wikipedia at most a "disputed".

Further I found in Georg Wacha: Keplers Trauung [marriage] in Eferding, Oberösterreichische Heimatblätter, Jahrgang 25, Heft 3/4, Juli-Dezember 1971, in footnote 2:

"The question of the authenticity of this portrait ... has not yet been clearly clarified. It remains to be emphasized that the examination by an expert (university professor Dr. Helmut Kortan, Master School for Conservation and Technology at the Academy of Fine Arts in Vienna) has shown firstly the simultaneity of the painting and the inscription, and secondly the determination that both the technical structure of the painting and the overall material character do not contradict this inscription (letter to the author, dated June 6, 1968, Stadtmuseum [City Museum] Linz). Martha List again rejected the authenticity in her lecture at the Kepler Symposium in Linz in August 1971."

So the author Georg Wacha has asked the expert Prof. Kortan again, not only because of the inscription, but also because of the technical aspects of the painting, that also here there is no reason not to date this portrait to 1610, although a Martha List has continued to deny its authenticity. (This probably refers to Martha List's lecture "Kepler im Bild", given at the Linz Kepler Symposium, August 13-14, 1971; see Robert S. Westman: Continuities in Kepler Scholarship. The European Kepler Symposia in Historiographical Perspective, Vistas in Astronomy 1975 Vol. 18, p. 68. Unfortunately, Martha List's lecture does not seem to be available in printed form).

Georg Wacha also refers to the book by the art historian Justus Schmidt: Johann Kepler. Sein Leben in Bildern und eigenen Berichten, Linz 1970.

The book by Justus Schmidt (1903-1970, more on Wikipedia, also on Helmut Kortan) is splendid, with very many photographs and illustrations, very readable and nice to leaf through. The Kremsmünster "fake" portrait adorns the cover and is the frontispiece; Justus Schmidt is also the client for the 1968 expert opinion and remarks:

"The painting was in the possession of Kepler's relatives in Weil der Stadt and was sold there by the notary Gruner. In 1864, the abbot of Kremsmünster Abbey Augustin Reslhuber acquired it for two hundred gulden. It was examined in 1926 by restorer Serafin Maurer in Vienna and described as a copy, explained by E. Zinner in 'Die Kepler-Bildnisse', Kepler-Festschrift, Regensburg 1930, p. 338, as a probable portrait of Mästlin. The X-ray examination arranged by the author in the Master School for Conservation and Technology at the Academy of Fine Arts Vienna (Prof. Dr. Helmut Kortan) in 1968 proved,

however, that the inscription corresponds to the age of the painting and also the technical structure of the painting as well as the overall material character of this inscription does not contradict."

Since the painting is inscribed with "Aetatis suae 1610", it would be a clear forgery if it had been painted in the 19th century, for example. Now, however, the expert opinion of 1968 shows that the picture could very well have been painted around 1610. But this does not clarify that it is Johannes Kepler, but in any case it is an astronomer or mathematician.

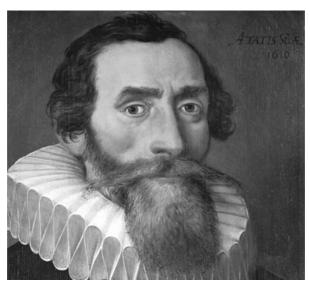
But Justus Schmidt goes one step further on page 172/173. There, a strong enlargement from the frontispiece of the Rudolphine Tables is shown with Kepler, a portrait that is also estimated as very authentic by Volker Bialas (see above), for example. Justus Schmidt now compares the Kremsmünster portrait with the picture from the Rudolphine Tables and comes to this conclusion: "The strong enlargement of the copper engraving detail reveals a far-reaching

"The strong enlargement of the copper engraving detail reveals a far-reaching agreement with the oil painting (p. 3). All other representations of Kepler are worthless."

Now the Kremsmünster portrait is no longer a "fake", as Shore and Pavlík claim, because according to the expert's report it could actually have been created around 1610 and because a strong similarity with the image in the Rudolphine Tables is still recognized, and thus only these two portraits count, while the rest of the Kepler portraits are now "worthless".

Finally, the two portraits for comparison (taken from Justus Schmidt's book), and as a contrast the one by Mästlin:





Kepler-Bildnisse



Appendix 4

We have seen that the authenticity or at least authentic representation of Kepler portraits has almost always been doubted by someone, and I speak here of expert opinions. With these uncertainties one wishes for an assistance by an objective dating method, one suspects it: radiocarbon! Certainly also it would make only a contribution to the total analysis, because e.g. also if by means of "C-14" a certain alleged Kepler portait would originate demonstrably from the early 17th century, it would be still by no means proved that with this exactly Kepler is represented, this would be to be determined only from other accompanying circumstances.

What modern analytical methods can and cannot do has recently been illustrated in the case of a modern counterfeit:

Hendriks et al.: Uncovering modern paint forgeries by radiocarbon dating, PNAS July 2, 2019 116 (27) 13210-13214; first published June 3, 2019; https://doi.org/10.1073/pnas.1901540116

Measurements were made by means of "AMS":

"Conventional decay counting involves counting ¹⁴C atoms that decay within the measurement period of several days. In contrast, ¹⁴C measurement with accelerator mass spectrometry (AMS) determines the ¹⁴C/¹²C ratio present in the sample by detecting the isotopes themselves. This has reduced the amount of sample needed for dating from several grams to less than one milligram of carbon. The measurement time is also only a few hours versus several days." (https://www.leibniz.uni-kiel.de/de/ams-14c-labor/radiokarbonmethode)

Under investigation was:

"Village Scene with Horse and Honn & Company Factory, $40.8~\rm cm \times 51.1~cm$. In the lower right-hand corner, the painting is signed ,Sarah Honn May 5, 1866 AD.""

It was known that it was a modern forgery. Popular among today's counterfeiters is to use old canvas to circumvent modern testing methods, because of this museums are still most likely to "sacrifice" something for samples, if at all.

The dating by means of "AMS-C14" resulted in three possible time intervals for the canvas after the calibration: 1678-1765, 1773-1776 or 1800-1940 AD. Thus, the proof of a modern forgery would not have been possible.

Now, however, a sample was also taken from the paint layer. "Radiocarbon dating of the binder is a complex task, as the paint sample is a heterogeneous mixture of pigments within an organic binding medium."

Here the dating by means of "AMS-C14" resulted in two possible intervals after calibration: 1958-1961 (peak by nuclear tests) or 1983-1989 AD. And in addition the confession of the forger: "With the statement by Trotter, who confessed to have painted the Sarah Honn forgery in 1985, the ¹⁴C age thus proves that the forged piece of art was created between 1983 and 1989."

What can we learn from this for the Kepler portraits? (And let us calmly assume that they are not deliberate or even modern forgeries, but that we are only uncertain when they were created).

First of all: that it will not be so easy, no matter if it is a canvas or a paint, to determine unambiguously by means of "AMS-C14" whether the painting is from the 17th or the 19th century, for example. It can, but does not have to succeed, depending on how the calibration curve happens to run.

Especially in the restoration report on the "Linz" miniature of Kepler I found further that in the course of many decades and centuries occassionaly also the picture support was repaired, i.e. newly underlaid and glued, thus: "The linen-like structure of the older glue (I) gives cause for thought. It justifies the assumption that the picture has undergone the following fate: Painted on solid scoop paper, later torn across, it was glued on linen, puttied and retouched sometime in the 18th century. After a new bend at eye level, the canvas was peeled off and most of the glue was removed (II) in about the 19th century, with the paper peeled a little thin in the area of the left front. Then the painting was glued on cardboard, this time without cementing and retouching the upper creases." (Gisela de Somzée, see Appendix 1)

Arbitrarily taken samples would therefore possibly not even reach the oldest, relevant layer. The taking of samples would therefore already require the greatest scientific caution and would have to be carried out by proven experts. All this is not quick and easy to handle.

It would be desirable that all important Kepler portraits would be subjected to a renewed analysis, whereby "AMS-C14", as just seen, can deliver important data, which however can be quite ambiguous and must be embedded in more comprehensive investigations. In other words, a project that could probably only be carried out by several people over a longer period of time. And the owners of the Kepler portraits, i.e. museums and galleries, would also have to agree that samples may be taken from the portraits for "AMS-C14". Since this newer method requires far less material to be taken, the resistance is likely to be less, but still very great.

The keyword is "non-destructive C14 analysis". I searched for it and found what I was looking for:

Nicole Mai: Revolution in der Radiokarbondatierung, Spektrum.de, 23.10.2010, https://www.spektrum.de/news/revolution-in-der-radiokarbondatierung/1026036

"Marvin Rowe and his colleagues at Texas A&M University in Qatar have now developed a new variant of 'non-destructive radiocarbon dating' in which the age of an object can be determined even without a sample. For this purpose, the object as a whole is placed in a small chamber after acid-free cleaning and exposed to a plasma - an electrically charged gas. This then slowly and gently oxidizes the surface of the object, forming carbon dioxide that can be used for C-14 analysis. The big advantage is that this oxidation leaves no permanent damage."

However, this method seems to me to be absolutely unsuitable, especially for paintings. Because canvas, colors, frames can come from very different times. The samples must therefore consist of a uniform material or, if not, then at least be so old that the times of origin of the different materials are negligible.

Then, another objection, the usually very valuable and expensive object must be shipped from the museum as a whole to the laboratory. The owners will often be very reluctant to do this. And then they have to be taught that the valuable object is oxidized, i.e. chemically altered, but to such a small extent that nothing at all will be noticed. And if a mistake is made?

I could imagine that this "non-destructive radiocarbon dating" is most likely to be accepted for new finds, which have not yet been brought to the museum and for which one is still interested in new analysis results anyway, but not for already valued, well-kept museum pieces. But as I said, for paintings and the like, this kind of non-destructive dating seems unsuitable to me anyway.

Appendix 5

As frontispiece for his book "Johann Kepler, Astronom und Naturphilosoph" (München 2004/2012, 2nd edition) Volker Bialas has chosen a modern interpretation:

Robert Oppeneiger, Linz ca. 1980: Johannes Kepler with Temple of the Astronomers and Imperial Eagle. Here in part, for the purpose only the face:



The imprint says: "The picture was commissioned by the freelance artist Robert Oppeneiger. It was the wish of the client to portray Johannes Kepler as faithfully as possible after the well-known small picture in the frontispiece of the Rudolphine Tables. Kepler and the imperial eagle are dominant in the picture. The gold pieces falling from the imperial eagle as a protector are supposed to symbolically represent the outstanding salary of Kepler, who catches a part of it. The picture is in private ownership."

It is therefore a replica from the portrait in the frontispiece of the Rudolphine Tables and is similar to it. But it also resembles the Kremsmünster portrait, like a mixture of both.

The Rudolphine Tables were published in 1627 and they show Kepler as he might have looked at that time or at least wanted to be seen. On the Kremsmünster portrait, however, there is a "1610", and if, supposedly, these two

portraits are so similar, then there is something wrong with the dating of the Kremsmünster portrait.

This indicates that the Kremsmünster portrait is a later forgery: it takes the Kepler from the Rudolphine Tables as a model and "stamps" it wrongly with a "1610", i.e. almost twenty years too early.

There are, of course, other scenarios that would indicate no forgery. For example, that the Kremsmünster portrait was actually created in 1610 and that this then became the model in the Rudolphine Tables. Kepler, hard to say but somehow, resembles already more a sixty-year-old on these portraits than a forty-year-old.

So one could assume: the Kremsmünster portrait depicts Kepler, copied from the portrait in the Rudolphine Tables, but lies with the "1610", and is insofar not authentic, was produced later, would ultimately be a witting forgery.

Summary

Set as probable: the Kremsmünster Kepler portrait was painted at the beginning of the 19th century. But why should it depict Mästlin or another unknown mathematician or astronomer? Yes, someone could have commissioned a painting of Mästlin. But the sitter in the Kremsmünster painting strongly resembles Kepler on the frontispiece of the Rudolphine Tables, as also confirmed by the painting of Robert Oppeneiger. It is thus much more probable that the painter of the Kremsmünster portrait intended to depict exactly Kepler. This claim is further supported by the fact that just in those years, Kepler was increasingly valued by educated circles. So there was a market for Kepler portraits, especially ones with an old provenance. It can thus be assumed with some certainty that the Kremsmünster Kepler portrait was created as a forgery and advertised as being from the astronomer's lifetime, in order to achieve a high purchase price.

Further additions 2022 (translation from German again with Deepl)

First addition

Reading: Ludwig Günther, Ich greife Gott mit Händen, Johannes Kepler in christlicher Sicht, redesign of the text, Dr. Johannes Günther, Berlin 1958.

Frontispiece is the Kremsmünster portrait. The imprint states:

"This book is based on Ludwig Günther's work ,Kepler und die Theologie' [1905]. It has been thoroughly revised by his son: the Protestant congregations are to receive here a book in which the unification of natural science and Protestant consciousness is shown by an outstanding example.

The preceding portrait reproduces an oil painting on wood, which is said to have belonged to descendants of Kepler's siblings and passed into the possession of Kremsmünster Abbey in 1864. It shows Kepler in the professorial costume of that time. A painter's mark is missing from the picture. The inscription of the year of origin and the age of our astronomer has not been reproduced in order to avoid errors, because Ludwig Günther proved that the inscription of the year and age is not correct. But he considered it to be the best Kepler picture. He published it in the issue of the ,Somnium'".

So let us still read what Ludwig Günther wrote in the edition of his Kepler's "Somnium" (1898):

"List of illustrations and figures.

The true portrait of Joh. Kepler after the original painting in the Benedictine monastery at Kremsmünster [page] IV"

And on page XX:

"I want to add some accompanying words to the Kepler portrait, which I have added to my book. I consider it to be the true portrait of the great astronomer. The original is in the possession of the Benedictine Abbey at Kremsmünster; it is painted on a plate of oak wood in oil on a dark background, 37 cm wide and 50 cm high, and depicts Kepler in the costume of the professors of that time. According to the notes that I owe to Father Hugo Schmid, monastery librarian

there, the painting belonged to a notary Gruner, who sold it in 1864 to the current abbot of the monastery, Reslhuber. A painter's name or sign is not to be discovered on the panel, the inscription on the back – placed in our reproduction under the portrait – is of much later date; also nothing is known about the origin and the time of creation.

Wolf¹ says about it: ,An even prettier oil painting [than the original in Strasbourg] painted on wood in 1610, which was in the possession of descendants of Kepler's siblings, passed by purchase to Abbot Reslhuber in Kremsmünster in 1864⁴. Whether the portrait is an actual original painting, in the sense of one drawn from nature, or a later product, I will not decide here, in any case it is of great beauty; the painter has masterfully understood to unite in the facial expression the witty features of the Strasbourg picture, the traces of hard blows of fate and the traces of the most strenuous, intellectual work. The impression it produces, especially when viewed for a longer time, is an uplifting, powerful one: one believes to see the true face of the great astronomer!"

Second addition (continuation of the first addition)

I am still looking at Wolf's "Geschichte der Astronomie", find the quote just mentioned on p. 308, but before that there is something very strange:

"Of Kepler's original pictures, first the one was known, which he gave to his friend of many years, Mathias Bernegger, who was born in 1582 in Hallstadt in Austria, and died in 1640 in Strasbourg as a professor of history and eloquence, which later came to the library in Strasbourg and was copied photographically to good luck, since it unfortunately perished in 1870 during the siege."

Very strange, since this Strasbourg painting, along with the Kremsmünster one, is one of the most reproduced Kepler portraits ever and is considered, especially after the publication of Shore and Pavlík again, to be far more authentic.

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¹ Rudolf Wolf, Geschichte der Astronomie, München 1877. p. 308.

But if the Strasbourg portrait was destroyed in 1870, where do the colored images come from? Were there colored copies of the original before that, or were colored portraits repainted later after the black-and-white photography Wolf speaks of? Or does the original still exist in Strasbourg?

As places where the Kepler portrait is currently exhibited/stored, I find mainly two mentioned for Strasbourg: mostly the Thomasstift, but sometimes also the Musee de l'Oeuvre Notre Dame.

It is true that in the essay by Ernst Zinner (Kepler-Festschrift 1930) on p. 341 it says: "is now in the St. Thomas-Stift of the university. So it has not been destroyed during the siege of Strasbourg, as Wolf states in his History of Astronomy."

Nevertheless unsettled, I write to the direction of the Strasbourg museums and receive from the "Médiathèque protestante du Stift" the answer that the picture actually still exists, namely it is in one of the "reception rooms of the Thomas chapter, the so-called "Salle du Chapitre". Attached is also a picture of the Strasbourg Kepler portrait (JPEG), but this one is quite obviously different, for example, from the Kepler portrait that has been at the top of the German Wikipedia article on Johannes Kepler for several months, that is, the one there, titled "Johannes Kepler (1620), Gemälde im Thomasstift, Straßburg." (as of 11.3.2022):



Kepler-Bildnisse

This portrait definitely does not correspond to the Thomas-Stift portrait as it was sent to me! But what then? First I read Zinner again and find this remark on p. 342:

"7. Around the same time [before World War I], the original [Strasbourg] painting was sent to Stuttgart to be copied for the German Museum in Munich. The copy, which now hangs in the room next to the Hall of Honor, is very free, for example, in the treatment of the face and the right hand, and also adds ingredients in the form of the left hand with compasses, the celestial sphere and spread leaves, which are suitable to draw the viewer's interest away from the head to the secondary details not present in the original. This arbitrary copy served now as model for the illustration in O. J. Bryk, Johann Kepler, Die Zusam-menklänge der Welten, Jena 1918, and for the portrait collection Corpus Ima-ginum of the Photographische Gesellschaft zu Berlin."

So I cycle to the "Deutsches Museum" to make sure which painting Zinner might actually have meant. The Hall of Honor is just above the main entrance, on level 1. In the Hall of Honor a Kepler bust is exhibited, but I do not find a Kepler portrait "next to the Hall of Honor" or anywhere else in its vicinity. So to the museum store – and here I find, more than I had hoped, a thick book for 45 euros:

Fabienne Huguenin: Porträtgemälde zwischen Wissenschaft und Technik, Die Sammlung des Deutschen Museums, Deutsches Museum Verlag, München 2018.

The portraits are numbered, we are now talking about portrait no. 135 on p. 402. That alleged Strasbourg portrait, with the globe etc., is actually by August Köhler (1881-1964), it was painted ca. 1910 and given to the "Deutsches Museum" in 1911, donor was King Wilhelm II of Württemberg. A full-page picture in the book is a "heliogravure after Köhler's Kepler portrait painting, made by the Photographische Gesellschaft, Berlin, ca. 1910-1920", which Zinner also mentions.

The painting is no longer in the "Deutsches Museum"; according to Huguenin, it was first donated to the Technical University of Munich in 1926 and then in

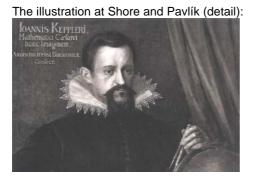
1940 "went to the newly opened Kepler Museum in the scientist's former birthplace in Weil der Stadt."

Concerning the "criticism of the painting" Huguenin writes: "From the minutes of the 8th meeting of the board of directors on October 4, 1911, it can be seen that Privy Councillor Dr. Walther von Dyck had still expressed himself positively about the Kepler portrait, which represented ,a well-done copy after the original painting in Strasbourg'. In 1949, on the other hand, Karl Bäßler described the oil painting as not very successful: "An oil painting, which was designed in the style of the original painting, made more pompous by additions, but not improved'. Since the work had already been given away in 1926, it can be assumed that it also aroused reservations at an earlier date and was perhaps replaced for this reason by a Kepler painting by Heinrich Knirr. But Bäßler chose the same critical words for this one, too." [This painting by Heinrich Knirr (1862-1944) is also discussed and illustrated in Huguenin's book, as No. 36, pp. 166-168].

Shore and Pavlík also depict the Kepler portrait with the globe as "his official portrait from 1620 (see Fig. 1c)" and further write:

"Johannes Kepler portrait. An engraving based on the 1620 Kepler portrait that was given to the Strasbourg library in 1627 (Courtesy of the Smithsonian Libraries and Archives, Image ID: SIL-SIL14-k001-08, https://library.si.edu/image-gallery/72833)."

However, there is a striking difference in the labeling between their illustration and the one discussed on Wikipedia:



Kepler-Bildnisse

And here the illustration on Wikipedia (detail):



So somehow two lines have been added. To this Huguenin:

"The image of the painting shown here [i.e., the already mentioned "helioengraving" of ca. 1910-1920] does not yet show the addition "Matthias Berneggervs | M.DC.XX.VII", which was added later and is now there. When this was added is unclear." In other words: older reproductions of the painting by August Köhler do not have this addition, but newer ones do.

In conclusion Ernst Zinner, again p. 342:

"In view of the inadequacy of the existing copies of the Strasbourg painting, it seemed necessary to add to this Festschrift as faithful a reproduction as possible. Therefore, through the mediation of the director of the Thomas-Stift, a good photograph of the painting was produced and the wayside shrine was made according to it (plate XXV)."

And the corresponding plate:



Third addition

I flip through the book:

Walther Gerlach und Martha List: Johannes Kepler, 1571 Weil der Stadt – 1630 Regensburg, Dokumente zu Lebenszeit und Lebenswerk, München 1971.

On page 99 I find an excerpt from the frontispiece of Rudolphine plates:



"But that's Kepler!", I spontaneously think to myself. That is exactly the one who is sitting further down there, dressed in exactly the same way. Above all the cap, the Phrygian cap. So still closer brought and to the comparison the Kepler of the pedestal:





It is Kepler, undoubtedly, I would say. And he measures an angle, the sight lines are even drawn in. An astronomer in the flesh in the center of the temple, surrounded by the greatest astronomers before him so far.

Admitting that Kepler is depicted twice on the frontispiece, another interpretation would immediately arise: the pressed Kepler as before on the one hand, but now also a triumphant Kepler in the center of the temple. Why have I not perceived this figure so far?

I'm also very surprised that I had never read about a Kepler-2 on this cover, that I'm even aware of any discussion of this figure, or did I just read over it all, forget?

E.g. I have now read extra:

Ewa Chojecka: Johann Kepler und die Kunst. Zum Verhältnis von Kunst und Naturwissenschaften in der Spätrenaissance, Zeitschrift für Kunstgeschichte, 1967, 30. Band, Heft 1. – And nothing found of the figure in the center of the "Temple of Urania".

Or also:

Nicholas Jardine, Elisabeth Leedham-Green und Christopher Lewis: Johann Baptist Hebenstreits Idyll on the Temple of Urania (in two parts), Journal for the History of Astronomy (2014/15). – Also nothing found about it.

But I did, here I just found something what I was looking for:

Mikael Rågstedt: About the Cover, Kepler and the Rudolphine Tables, Bulletin (New Series) of the American Mathematical Society, Volume 50, Number 4, October 2013.

Regarding "Figure 1" (illustration of the "Temple") he writes: "Within the temple we see an ancient astronomer". So rather a "no name", in contrast to the statues marked by name in the foreground, and therefore this central figure is hardly thematized, I suppose. But no matter whether one regards this person as purely "ancient" or rather as living contemporary: with the "Phrygian cap" a clear reference is made to the similarly dressed Johannes Kepler further below. And even if the figure in the center is not labeled with "Johannes Kepler", one

can and should perhaps discreetly think that Johannes Kepler could be meant or at least symbolized herewith.

But what is important above all is which message in the astronomical-astrological context of that time (the late Renaissance) was meant by "Phrygian cap".

There is an interesting book on this:

Horst Bredekamp und Claudia Wedepohl: Warburg, Cassirer und Einstein im Gespräch, Kepler als Schlüssel der Moderne, Berlin 2015.

Here Renaissance paintings/frescos with representations of Perseus dressed in a Phrygian cap play an important role.



Baldassare Peruzzi: Perseus, Rom, Villa Farnesina, Sala di Galatea, 1510-1511

The two authors write about this Perseus (p. 20):

"He [Warburg] came to the conclusion that Perseus was the symbol of human virtus par excellence. The mythical hero was to be understood as the ,epitome of the victorious Renaissance man', who discovered his autonomy and took his fate into his own hands, instead of leaving it to fate controllers from beyond; the figure was a ,memory image' of earlier states, which had an ,energetic exemplary effect'. The heroic deed of Perseus, i.e. the victorious fight against the monster, symbolized a liberation from evil, indeed Perseus was equally almost elevated to a savior. But Warburg develops this thought even further: The Perseus myth with the motif of the liberation of Andromeda stands for the overcoming of human sacrifice and thus symbolically for spiritualization. Olympus, according to Warburg, is to be conquered in agony, and Perseus is the helper in the ascent into the divine sphere."

I do not claim now: Kepler wanted to represent himself as Perseus. But who puts on his cap, takes over the attributes of liberation linked with it.

Fourth addition

I have obtained:

Bettina Holzapfel and Heinz Balmer: Antlitze grosser Schöpfer², Basel 1961. Kepler is also honored in it.

Bettina Holzapfel was a sculptor and writer, planned the book and still wrote the preface, Heinz Balmer was a historian of science. The book consists of the various biographies with the portraits of the great creators and a detailed notes section.

Three portraits of Kepler are shown (p. 55): "Johannes Kepler, medallion painting (26 years old, 1597), oil painting in Strasbourg (49 years old, 1620) and engraving by Georg Cöler (56 years old, 1627)".

This plate 5 ,,shows the only three pictures which were really made in Kepler's presence", it says in the notes (p. 342 f.).

To the "youth picture" is noted at the end: "The picture is peculiar, but too outlined, too little executed, so that it almost reflects the face of a boy". I had always felt this similarly, but could not express it, and after all Kepler would already have been 26 years old.

Regarding the "Strasbourg Portrait" it is noted:

"The painting itself was later donated by Bernegger to the Strasbourg University Library. He communicated it to Kepler on February 23, 1627. The inscription on the top left of the painting testifies to the donation. Kepler wrote to him

 2 ,,With contributions by Adolf Portmann and Ernst Bohnenblust". The title translated: Portraits of great creators.

from Ulm on April 6: ,Velim equidem et imaginem meam ab illo loco publico abesse, praesertim cum parum admodum mei habeat. Obsecro illud plagium ad me remittas.' (I would like my image to disappear from that public place, especially since it has little of me. I implore you to send me back that scribble. – Kepler, Gesammelte Werke, Vol. 18, p. 285 below). But it remained there and hangs today in the Thomasstift, the Protestant seminary in Strasbourg. It is from there that we obtained the photographic original."

Now this has not been said very nicely by Kepler. But it is interesting in this note section that Martha List has commented on it (I assume to Heinz Balmer) in a letter on "July 17, 1960" (p. 344):

"It is certainly not painted by any great master; but the essence of the expression seems to be captured. Kepler meant, it does not resemble him; but which man is already satisfied with his likeness? The fact that he did not want to have it hung in the Strasbourg library surely arises from a restraint that also suited him in other respects." – "The typical features on the mouth and forehead in the Strasbourg picture are already revealed in the youth portrait. There, the understanding observer finds some traits of possible development; but the actuality of this unfolding is expressed in the Strasbourg picture."

The following is a detailed note on the title copperplate from the Rudolphine Tables.

And then it is discussed - the Kremsmünster portrait (p. 346):

"There is furthermore another Kepler picture with the inscription 1610, which shows the face similar to this age engraving. However, the mathematician holds a compass and ruler in his hands, wears a millstone collar and no cap. The depiction could have served as a model for the engraver Cöler, but could also have been created in reverse on the basis of Cöler's engraving as a later imitation."

Here again a possible dependence between the portrait from the Rudolphine Tables and the Kremsmünster portrait is pointed out.

Finally: "Whether it is a copy of an earlier painting is not known. Because of the collar, the beard and the too broad hand Zinner thought that the picture rather represents Mästlin; however, he looks too different on the painting of the University of Tübingen: a spherical head with round forehead, low eye sockets and woolly full beard over a strong figure. (Festschrift p. 337.)"

What Bettina Holzapfel has generally written in the introduction to this book might be quite accurate especially for the Kepler portraits (p. 11 f.):

"Only very rarely the features of great creators have come down to us. Unnoticed like the most beautiful and sublime forms of nature, like some snow crystals and flower stars, they usually live for a while among men, and when they have passed away, no one has recorded or preserved their features.

Even where they have been recognized, where an artist has tried to reproduce a great face, usually only an inadequate suggestion, a hint, a shadow has emerged. Painters or sculptors who reproduced the features of important people usually knew them only a little, hardly ever saw them in the state of creative work. Tired and disillusioned by an uncongenial conception, creative spirits have often consented only very reluctantly to the reproduction of their features. (This is handed down, for example, from Beethoven as well as from Pestalozzi).

Only the self-portraits of great artists make an exception here. Even if these people did not know themselves from the outside in a state of creative work, their inner life was so familiar to them that the fullest understanding of the soul and creative method had to flow into the artistic reproduction of their own face. ...

But even if such unique things have been given to us only in exceptional cases, the otherwise preserved portraits of great people, provided they were painted only sincerely, with talent and devotion, are expensive, irreplaceable legacies. Even a few traits, truly captured in their indelible character, are often more poignant and eloquent than much that mankind is otherwise able to give. Mighty mountains, though worn away by weathering and reduced many times over against the past, still bespeak a grandeur comparable to little else."

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