

Antonina Žaba

BARTHOLOMEW STROBEL'S DRAWING COMPARED TO PETER KRUEGER'S PUBLICATION

Abstract

Bartholomew STROBEL (1591-1650), within his artistic heritage, left a drawing entitled *The Allegory On Liberated Arts At The Time Of The Thirty-Years' War*. It presents, inter alia, an interesting geometric motif. The researchers presenting their opinions on the said motif reached no agreement whether this is a substantial geometric structure or a symbolic reference to geometry. The authoress of this paper established that the elements composing the described geometric motif were published before STROBEL's drawing, including without limitation the work *Tetraginismvs circvli per lineas: quem Nicolavs Raimarvs fyndamento svo astronomicotranscursim inferuit, expeditiori structvra et evidentiori demonstratione productus* by Peter KRUEGER (1580-1639).

Keywords

Baroque, Silesian art, geometric drawing.

1 Introduction

The time of thirty years' war (1618-1648) was long perceived as time unfriendly to the development of science and art. Recently, more comprehensive research was started in Poland over the artists of the time and the works then created. Bartholomew STROBEL [8], a Baroque painter born in Wrocław enjoys large interest of the researchers. Despite being a Lutheran, he worked as a court painter of Emperor Matthias II Habsburg (1557-1619). Later, due to the growing religious oppressions, he left Silesia and became the court painter of King Ladislaus IV Vasa (1595-1648). Few works of the artist were preserved. The persons dealing in geometry shall probably become interested in *The Allegory On Liberated Arts At The Time Of The Thirty-Years' War* [1636] (fig. 1).

An attempt to find a structure corresponding to the motif of the drawing discussed was made by Jan HARASIMOWICZ¹. He made a thorough research on the works by Johannes KEPLER (1571-1630). However, he did not find such structure [5/p.118].



Figure 1: The drawing-pen picture *The Allegory On The Liberal Arts At The Time Of The Thirty-Years' War* (1636) (B. STROBEL - The collection of The Kornik Library of The Polish Academy of Sciences).

2 Peter KRUEGER'S Publication

The authoress of this paper, inspired by the research, considered that the search should be focused on the circles related to Gdańskie Gimnazjum Akademickie (Gdańsk Grammar School - established in 1580). Two arguments opted for it. The drawing was made in Gdańsk and was dedicated to a disciple of this Lutheran School, whereas STROBEL himself lived in

¹ Compare with [7/p.90].

Gdańsk. Numerous interesting figures were related to the Gdańsk school². One of them was a master of philosophy, mathematician, astronomer, town surveyor - Peter KRUEGER³. In the years 1607-1639 he worked at Gdańskie Gimnazjum as a professor of mathematics and poetry. KRUEGER maintained correspondence with Johannes KEPLER, Jan BROŻEK, Philip MUELLER, Martin HORTENSIVS, and his studies were visited by numerous famous people (e.g. Ludwig KEPLER son of Johannes). Polish king Sigismund III Vasa (1566-1632) conferred him a privilege in 1623. It forbid the free reprinting of one of KRUEGER's books on pain of high monetary penalty.

The publications of the versatile and very active scholar were highly valued. They comprised the issues of mathematics, astronomy, physics, geography, chronology and calendariography. Presently many of them are in the Library of the Jagiellonian University in Krakow. In one of the works of 1607 *Tetragonismus circuli per lineas: quem Nicolaus Raimarvs ...*, there is a drawing (fig.2) presenting a structure similar to the straight-line drawn part of the motif (in STROBEL on the right). It precedes the quadrature of circle by KRUEGER⁴. It may have been used in other works.

The other curvilinear element (in STROBEL on the left), is not present in KRUEGER's work. However, in the drawing presenting the circle quadrature structures he applied "the golden cut". It seems that STROBEL did the same. A small hand drawing does not allow for explicit evidence to the thesis. We will assume, however, that this is the case and both diagrams are related to the quadrature of circle $\pi = 3,147447733$ (see fig.3).

3 Conclusion

The intriguing drawing made by STROBEL during the thirty years' war time awaits a more complete interpretation. The key issue here is the explanation of the geometric motif. In the authoress' opinion, the preliminary search results included herein are not sufficient for such interpretation. The search should also comprise the publications in the scope of examining proportions in art. Similar structures (re.: the curvilinear

²Inter alia: Johannes HEVELIUS the astronomer (disciple and co-researcher of KRUEGER), Martin OPITZ and Andreas GRYPHUS the poets.

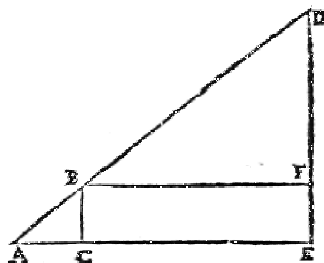
³ The information on KRUEGER developed basing on [1] and [2].

⁴ Stanisław Pułłowski (1597-1645) criticized the quadrature of KRUEGER. The criticism was not published [3/p.724]

THEOR. V. PROP. XII.

Triangula æquiangula seu similia habent latera circum æquales angulos proportionalia, & contrà. 4. VI. Eucl.

Quia sc. anguli BAC & DAE , utiq; ADE & ABC ex thesi sunt æquales: Ideo si AB ad AD ita applicetur ut AC in AE cadat, reliqua latera BC & DE necessario erunt parallela per 9. hujus. Atq; ita in triangulo ADE recta BC parallela basi DE



per 2. VI. Eucl. crura AD & AE secant proportionaliter, ut sit velut AD ad AB , sic AE ad AC . Ducta porro per B recta BF parallela basi AE , secabit eadem crura reliquum DE proportionaliter in F , ut sit velut AD ad AB , sic ED ad EF : velut AB ad BD , sic EF sive CB ad ED . Atq; ita, cum EF & CB æquantur, eris etiam

ut AB ad BD , sic AC ad CE , &

ut AB ad BD , sic BC ad DE , &

ut AC ad AE , sic BC ad DE . Erunt itaq; in

universum triangulorum æquiangulorum latera circa æquales angulos proportionalia.

THEOR. VI. PROP. XIII.

In triangulo rectangulo perpendicularis ex angulo recto in basin facit triangula similia inter se & toti. 8. VI. Eucl.

ut in

Figure 2: Drawing from *Tetraginismvs circvli per lineas: quem Nicolavs Raimarvs ...* (1607), P. KRUEGER.

BARTHOLOMEW STROBEL’S DRAWING COMPARED TO...

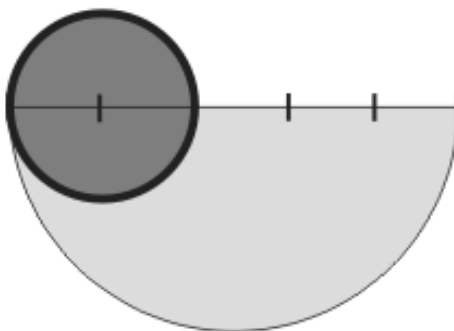
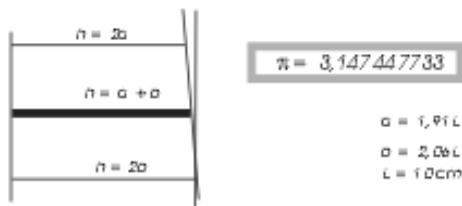
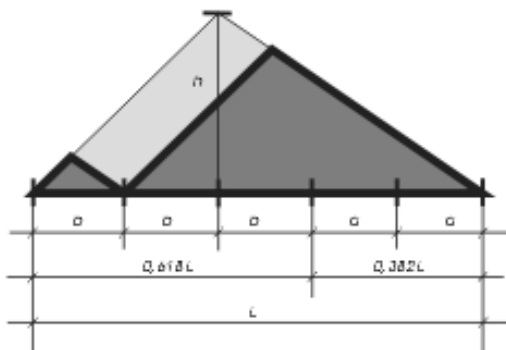


Figure 3: Comparison of selected fields of the surface from STROBEL’s geometric motif.

element) are included without limitations in the work by Jeronimo Prado VILLALPANDO SJ *De postrema Ezechielis prophetae visione* (1596-1604).

References

- [1] CZERNIAKOWSKA, Małgorzata: *Piotr Krueger (1580-1639) - gdański matematyk i astronom, nauczyciel Jana Heweliusza*, [in:] "Rocznik Gdański", t. XLVII, 1987, z.1, p. 197-230.
- [2] CZERNIAKOWSKA, M.: *Piotr Krueger (1580-1639) - nauczyciel i współpracownik naukowy Jana Heweliusza*, [in:] "Kwartalnik Historii Nauki i Techniki" 1987 nr 2, p. 369-386.
- [3] DIANNI J., WACHUŁKA A.: *Tysiąc lat polskiej myśli matematycznej*, PZWS, Warszawa 1963.
- [4] DIANNI J.: *Zagadnienie kwadratury koła w polskiej literaturze matematycznej*, [in:], "Kwartalnik Historii Nauki" I z.4, Warszawa 1956.
- [5] HARASIMOWICZ J.: *Problem „Prawa natury” w malarstwie czasów wojnytrzydziestoletniej*, [in:] KOZIEŁ A., LEJMAN B. (red): *Willmann i inni. Malarstwo, rysunek i grafika na Śląsku i w krajach ościennych w XVII i XVIII wieku*, Wrocław 2002.
- [6] KRUEGER, Piotr (CRUGERUS, Petrus M.): *Tetraginismvs circvli per lineas: quem Nicolavs Raimarvs fyndamento svo astronomicotranscursim inferuit, expeditiori structvra et evidentiori demonstratione productus*, Michael Latzenberger, Lipsiae 1607.
- [7] OSZCZANOWSKI P., GROMADZKI J.: *Theatrum Vitea et Morika, rysunek i malarstwo książkowe na Śląsku w latach ok. 1550 – ok. 1650*, kat. wystawy. Muzeum Historycznego we Wrocławiu, 9 II – 18 III 1996 Wrocław 1995.
- [8] TYLICKI J.: *Bartłomiej Strobel malarz epoki wojny trzydziestoletniej*, Toruń 2002.