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STAROWOLSKI'S BIOGRAPHIES OF COPERNICUS

by

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A dissertation submitted to the Graduate Faculty in History in partial fulfillment of the requirement for the degree of Doctor of Philosophy. The City University of New York.

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I

STAROWOLSKI'S FIRST BIOGRAPHY OF COPERNICUS

A little book entitled *Scriptorum polonicorum* ἑκατοντάς; *seu centum illustrium Poloniae scriptorum elogia et vitae* was published in 1625 in Frankfurt am Main.[1] This groundbreaking work and its author, the Polish polyhistor Simon (Szymon) Starowolski (1588-1656), might by now have been reduced to an obscure bibliographical entry, were it not for the fact that among the one hundred short laudatory lives of eminent Polish writers was included that of the first modern astronomer, Nicholas Copernicus (1473-1543).[2] In this concise biography, numbered LXVII,[3] Starowolski stated that he did not need to outdo himself "in glorifying Nicholas Copernicus, who is praised by the world itself, which has been enlightened by him through his celebrated belief in the uninterrupted motion of the earth."

Starowolski continued:

> Copernicus was born at Toruń in Prussia, and acquired the rudiments of the mathematical sciences at the University of Cracow. He visited various German universities and then others, where these studies flourished at that time. He was esteemed, mainly for his exceptional learning, by the outstanding men in Prussia who occupied the highest positions. Among them were Johannes Dantiscus, bishop of Varmia, and Johannes Tidelman, bishop of Chełmno, who enrolled him afterwards in the Chapter of the Canons of Varmia.

> In order to transmit the benefit of his knowledge to later generations too, Copernicus applied himself to writing down what he had correctly thought out and observed. About the year 1540 he discovered a reckoning of the heavenly bodies that was new and unknown to the ancients. In this regard not only did he find very many other followers, but among his disciples he also had that genius, Tycho. For in fact, just as Hercules held up the heavens when Atlas became tired, so when his fellow-countryman Johannes Regiomontanus passed away, Copernicus revived the science of the heavenly motions for his students, and helped all mathematicians very much by his work. For further information about him, see Nicholas Müller's preface to Copernicus' *Revolutions*.
>
> His remaining manuscripts are preserved in the library of the bishops of Varmia. These manuscripts were recently examined by that eminent man Jan Brożek, professor of mathematics at the University of Cracow. His *Arithmetica integrorum* has just been published, and we expect other works by him any day now, as he promised at the end of that little book.[4]

Immediately after his biography, Starowolski placed two poems by little-known authors, Nicholas Zoravius (Zorawski) and Johannes Scrobcovicius (Skrobkowicz).[5] These poems may be translated as follows:

Nicholas Zoravius

> When Jupiter saw that the man Copernicus had with his mind created a world contradicting the laws of nature; when Jupiter saw that the firmament was held firmly in a stationary position and that the stars were quite motionless while the earth moved, he remembered what the wars of the Giants were able to do, and was worried that perhaps some god survived on the earth. Jupiter asks all the mothers of the gods whether there is any of them who admits that she gave birth to so great a man. "We are not his parent," the goddesses answered the Thunderer, "but the learned Jagiellonian University is."

Joannes Scrobcovicius[6]

> Divine Mathematics, you who reduce all things to exact numbers, why don't you put an end to Fate? Behold, your founder is dead. He who measured time had to succumb, alas, to time itself.

In the margin, alongside the text, Starowolski had two notes printed in italics. The first note is placed alongside the statement that Copernicus "acquired the rudiments of the mathematical sciences at the University of Cracow," and it relates that "Jacob Cobilinius, who wrote the *Astrolabii declaratio*, was Copernicus' schoolmate." A little lower, parallel to the words "Copernicus' fellow-countryman, Johannes Regiomontanus," a second marginal note reads: "Jo. Regiomontanus, of Prussia, an eminent mathematician." These marginal notes are discussed below, in Chapter III.

The nineteenth-century literary historians criticized Starowolski's *Hekatontas*, some of them rather severely. In his article on Starowolski's *Hekatontas*,[7] Starnawski quotes many such criticisms which focused on Starowolski's numerous factual errors, his pompous and unsupported yet overabundant epithets, and his meager and often erroneous chronological references. These criticisms are counterbalanced by Starnawski, who emphasized the inadequacy of the works by Polish authors prior to Starowolski. Thus Starnawski shows Starowolski to have been a pioneer in the field of Polish biography, a pioneer who took a gigantic step forward. In this respect Starnawski follows in the footsteps of Michał Wiszniewski, the author of a voluminous history of Polish lit-

erature, who contended that Starowolski "managed to preserve many interesting details which would have been lost forever," had they not been recorded by him.[8] Nevertheless, the most substantial nineteenth-century German biographer of Copernicus, Leopold Prowe, characterized Starowolski's verbal portrait of Copernicus as "an extremely scanty biographical sketch of barely twenty lines, in which, to boot, some bad errors occur."[9]

The author of that scanty and erroneous "biographical sketch" was born the fifth son of a poor farmer in the eastern Polish province of Volhynia (now USSR). Around the year 1610, Starowolski accepted the position of tutor to the young princes Constantine and Janusz Ostrogski, whom he accompanied on their European tour. Sometime after his return from abroad, Starowolski was able to further his education by entering the Jagiellonian University on 10 December 1612.[10] He graduated with a bachelor of arts degree in February 1618.[11] While still an undergraduate, Starowolski showed an interest in depicting the characters of eminent historical figures, an interest which later developed into a lifelong occupation. In 1616, Starowolski picked as the subject of his dispute at the university the works of Sallust,[12] a historian known for his masterful description of famous (and infamous) people. As an admirer of Sallust, Starowolski devoted his creative energies mainly to the writing of short, eulogistic biographies.[13]

Starowolski's prolific writing was so extensive that it became a subject of jokes. For example, we read that "the

Cracow printers complain [of lack of work]... and only Father Starowolski supports them."[14] But, on the serious side, Stanislaus Stoslavius, an otherwise unknown poet, says, in a eulogy of Starowolski printed in the *Hekatontas*, that the latter's greatest merit is that he did not allow the excellence [of the Polish men of value] to remain hidden.[15]

NOTES TO CHAPTER I

1. The 1625 edition of Starowolski's *Hekatontas* was reprinted in Frankfurt in 1644 and in Wrocław in 1733. An enlarged and somewhat improved edition was published by Starowolski in Venice in 1627. He undoubtedly was not aware of the 1644 edition. Otherwise he would have insisted on the reprinting of the enlarged 1627 version, possibly with some further improvements.

2. Latin text in Appendix I.

3. In his opening biography, Starowolski explains why he uses the method of numeration employed by Albert Miraeus (Le Mire, 1573-1640) in his book *Elogia Belgica sive illustrium Belgiae scriptorum ... vitae breviter commemoratae* (1609). In that book Le Mire lists the Belgian writers according to the importance of the offices they held. Starowolski considers such a method superior to the alphabetical or chronological arrangement. The Le Mire-Starowolski method produced results at variance with our judgments. For example, Bernard Wapowski, a mediocre chronicler, now known primarily on account of his friendship with Copernicus, was assigned the number XXXIV, that is, far ahead of Copernicus' LXVII. But, while alive, Wapowski occupied the prestigious position of royal secretary while Copernicus was merely a Varmian canon.

4. This translation is based on the 1625 edition of the *Hekatontas*, pp. 88-89. Unless otherwise indicated, all the translations used herein are mine.

5. For an account of these poets see Appendix XIII.

6. The recent Polish translation of the *Hekatontas* renders Skrobkowicz's name incorrectly as "Scrobovic" throughout (24 times); Szymon Starowolski, *Setnik pisarzów polskich albo pochwały i żywoty stu najznakomitszych pisarzów polskich*, translation and commentary by Jerzy Starnawski, introduction by Franciszek Bielak and Jerzy Starnawski (Cracow, 1970); hereafter *Setnik*.

7. Jerzy Starnawski, "Szymona Starowolskiego *Hekatontas* i początki bibliografii polskiej" [Simon Starowolski's *Hekatontas* and the Beginnings of Polish Bibliography], *Roczniki Humanistyczne*, XII (1964), 133-150.

8. Michał Wiszniewski, *Historya literatury polskiej* [History of Polish Literature] (Cracow, 1840-1857), VIII, 76; hereafter Wiszniewski.

9. "Simon Starowolski hat in seiner Schrift *Scriptorum Polonorum* [should be *polonicorum*] ἑκατοντὰς eine vita Copernici veröffentlicht. Die erste Ausgabe, welche 1625 erschien, enthält nur einen überaus dürf-

tigen Lebensabriss von kaum 20 Zeilen, in welchem ausserdem noch grobe Irrthümer vorkommen;" Leopold Prowe, *Nicolaus Coppernicus*, I[1] (Berlin, 1883; reprinted Osnabrück: Otto Zeller, 1967), 98, fn. *; hereafter Prowe.

Henryk Barycz, "Dzieło literackie Jana Brożka" [The Literary Work of Jan Brożek], *Pamiętnik Literacki* (Warsaw/Wrocław, 1954), *1-2*:80, fn. 24 [hereafter Barycz, "Dzieło"], agrees with Prowe's judgment of the biography of Copernicus. According to Barycz, "the first edition [1625] abounds in gross errors and inventions, characteristic of Starowolski's writings and historical technique."

10. *Album studiosorum universitatis cracoviensis*, IV, ed. Jerzy Zathey (Cracow, 1950), 32; hereafter *Album*.

11. *Statuta nec non liber promotionum philosophorum ordinis in universitate studiorum Jagellonica ab anno 1402 ad annum 1849*, ed. Józef Muczkowski (Cracow, 1849), p. 282; hereafter *Statuta*.

12. Jagiellonian University Archives, MS filed under the year 1616; cited in *Setnik*, p. 15.

13. Most of the titles of Starowolski's works are cited in the Introduction to *Setnik*, pp. 7-25.

14. *Ibid.*, p. 18.

15. *Ibid.*, p. 44.

II

STAROWOLSKI'S SECOND BIOGRAPHY OF COPERNICUS, AND A COMPARISON OF THE TWO BIOGRAPHIES

For the purposes of evaluating Starowolski's contributions to Copernican scholarship as well as his shortcomings, it will be helpful to compare the two versions (1625 and 1627) of his biography of the astronomer. Starowolski dedicated the second and enlarged edition of his *Hekatontas*[1] to Stephen Boniface Sobieski, a nobleman whom he tutored. In his dedication Starowolski explains that he decided to publish the book again in an enriched and improved form on account of the small number of copies printed in 1625. He also gives the reason why he considers the *Hekatontas* important. "Two years ago," he says,

> I published laudatory biographies of eminent Polish scholars together with a list of works they bequeathed to posterity. That opuscule is truly small in size and modest in style. Nonetheless, its content and the reason for writing it are of such importance that in no way may it be held in contempt. For among nations of high culture there are many men who -- to our greatest amazement -- not only proclaim us, who live up north, to be barbarians, but also believe us to be strangers to all culture. This, undoubtedly, is an impudent and barbarous belief, for nature is the mother of all, and she implanted the seed of vice and the spark of virtue equally into all. Likewise, she bestowed upon

> all the desire to know, regardless of whether they live in a warm or in a cold climate. Surely there is no land, under a lucky or unlucky star, whose sons would not have a multitude of vices and, at the same time, many virtues. Accordingly, even though we live close to the north pole, we are not immersed in the shadow of ignorance as is wrongly assumed by some of our neighbors, even those who are close to us. Illuminated by the same sun that shines on others, we have among us countless examples of most excellent virtues as well as venerable monuments left by men of great intellect.[2]

In this second edition of 1627, Starowolski enlarged his biography of Copernicus to read as follows:

> Nicholas Copernicus was born in Toruń, Prussia. His father was Nicholas Copernicus. His mother was the full sister[3] of Lucas Watzenrode of Toruń, bishop of Varmia. Lucas was distinguished for his services to Poland in its struggle against the Teutonic Knights. He resisted them in particular with such great strength that at the Congress of Poznań they attacked him together with others in a famous lampoon, where among other things the following lines may be read:
>
> > Iris, Pira, Lucas, Hard Horns,
> > Perform miracles, subvert all laws.
>
> For, according to the Teutonic Knights, the defense of what is just and fair was the same thing as subverting all laws.
>
> At the University of Cracow, together with Jacob Cobilinius, the author of *Astrolabii declaratio* [Explanation of the Astrolabe], Copernicus learned the mathematical sciences under Albert of Brudzewo. Then Copernicus devoted himself entirely to traveling. In Bologna he became friendly with Domenico Maria, a mathematician of distinction. Copernicus was not so much Domenico's pupil as his assistant and witness of his observations, as George Joachim Rheticus remarks in his *First Report*, addressed to Schöner. Later, in the year 1500 in Rome, Copernicus explained astronomy to a multitude of auditors.

After his return he was enrolled in the Chapter of the Canons of Varmia by his uncle, Bishop Lucas. Nevertheless Copernicus experienced difficulties in the Chapter at the hands of envious persons. This is evident from various letters written by Copernicus with his own hand to his uncle Lucas and to others (these letters are in the possession of that highly renowned man Jan Brożek, Ph. D., M. D., full professor of astronomy at the University of Cracow).

Copernicus had the greatest talent not only for mathematics but also for physics and all the other sciences. In these outstanding intellectual accomplishments he was helped by his perfect command of the Latin and Greek languages. In medicine he was honored like a second Aesculapius, even though with his thoroughly philosophical outlook he never craved a display of adulation on the part of the common people. For, as Tiedemann Giese, bishop of Chełmno, writes about him elsewhere, he was inattentive to everything which was nonscientific, a characteristic he shared with few persons.

After the death of Fabian von Lossainen, bishop of Varmia, Copernicus was the administrator of the diocese until the confirmation of Maurice Ferber, according to folio 81 of the *Histories of the Bishops of Varmia*,[4] which is preserved in Lidzbark. While Copernicus held this office, as also in all the rest of his life, and even after his death, he had many enemies. During his lifetime he incurred the enmity of the Grand Master of the Teutonic Knights, because on order of the king he recovered and restored to the church the estates of that diocese which had been unlawfully seized by the Grand Master. Copernicus' other foes were some courtiers and a certain schoolmaster in Elblag, who with melodramatic malice in the theatre derided Copernicus' views about the motion of the earth, as may be gathered from Tiedemann's letters. After his death, Copernicus found little justice at the hands of Julius Scaliger, Jean Bodin, and Leovitius, whom Rheticus answered in letters written to Camerarius and Wolf. Nobody thus far has dared to attack Scaliger, on account of the learning for which he is famous.

Most eminent among Copernicus' disciples was George

Joachim Rheticus. Upon hearing of Copernicus' fame, Rheticus resigned his professorship at the University of Wittenberg, visited Copernicus, and supervised the publication of Copernicus' *Revolutions*. For further information about this matter, see Nicholas Müller's preface to the *Revolutions*. For I need not outdo myself in glorifying the man who is made illustrious by the world itself, which has been enlightened by him through his celebrated belief in the uninterrupted motion of the earth, and by that new reckoning of the heavenly bodies that was unknown to the ancients. For in fact, just as Hercules held up the heavens when Atlas became tired, so when his fellow-countryman Johannes Regiomontanus passed away, Copernicus revived the science of the heavenly motions for his disciples, and helped all mathematicians very much by his work.

He died, as Tiedemann writes to Rheticus, of a hemorrhage and subsequent paralysis of the right side on 24 May, his memory and mental alertness having been lost many days before. He did not see his work on the *Revolutions* in print until the day of his death, for it was then that it was first brought from Germany.

When his life was undisturbed, he loved privacy. He was friendly only with learned men, among whom he had good friends in Tiedemann, bishop of Chełmno; Johannes Dantiscus, bishop of Varmia; Wapowski, the cantor of Cracow, to whom he wrote the *Letter on the Motion of the Eighth Sphere;* Nicholas of Szadek and Martin of Olkusz, mathematicians of Cracow, formerly his fellow-students, with whom he conferred about eclipses and eclipse observations, as is clear from letters written in his own hand in the possession of Jan Brożek of the University of Cracow, author of *Arithmetica integrorum*, and whose *Arithmetica partium, Arithmetica fractorum* and *Geometria* we expect any day now.

Copernicus was buried in Frombork Cathedral. Thirty-eight years after his death, Martin Kromer, the local bishop, admiring his unusual genius, erected a marble plaque with the following epitaph:

ALMIGHTY AND MOST EXCELLENT GOD

TO THE REVEREND NICHOLAS COPERNICUS OF TORUN,
DOCTOR OF ARTS AND MEDICINE,[5] CANON OF VARMIA,
EMINENT ASTRONOMER AND RESTORER OF THAT SCIENCE,
AS A TOKEN OF RESPECT AND TO PRESERVE HIS MEMORY
FOR POSTERITY, MARTIN KROMER, BISHOP OF VARMIA,
ERECTED THIS PLAQUE IN 1581. COPERNICUS DIED ON
24 MAY 1543.[6]

Now that we have before us the 1627 version of Starowolski's biography of Copernicus, we are in a position to compare it with the earlier 1625 version, and note the changes.

*

In the earlier 1625 version Starowolski says that Copernicus "visited various German universities." Copernicus' name, however, has not been found in the matriculation records of any German university. Starowolski himself obviously realized that this statement was unfounded, for he omitted it from the 1627 biography. There he merely states that Copernicus, after his Cracow studies, "devoted himself entirely to traveling."

In his Dedication-Preface to Pope Paul III Copernicus mentions some friends who persuaded him to publish his major work, the *Revolutions*, which he almost completely abandoned on account of the "novelty and unconventionality" of its opinions. Among those friends was Tiedemann Giese, bishop

of Chełmno, whom Copernicus characterizes as "a close student of sacred letters as well as of all good literature," and "a man who loves me dearly."[7] Starowolski's 1627 biography correctly identifies the bishop of Chełmno as "Tiedemann Giese"; in the 1625 biography, the bishop's first name is given as "Johannes," while his true first name, Tiedemann, is transformed into "Tidelman" and made into a last name.[8] In addition, this "Bishop Johannes Tidelman" enrolled Copernicus "in the Chapter of the Canons of Varmia." This misstatement is corrected in the 1627 biography, where Starowolski says that it was Copernicus' uncle, Bishop Lucas, who secured the lucrative position for his nephew.[9] Thus it is obvious that at the time of writing the 1625 biography of Copernicus, Starowolski knew nothing about Bishop Lucas Watzenrode. In 1627, however, while correcting this error concerning the bishop's name, Starowolski made a chronological mistake worse by saying that Copernicus was enrolled in the Chapter after returning from abroad.

Copernicus returned from his studies in Italy twice, once in 1501,[10] and again in 1503.[11] On 27 July 1501 he was present at the meeting of the Varmian Chapter, and the minutes of that meeting refer to "Canon Nicholas ... Copernicus."[12] Copernicus was not made a canon at that meeting, for he had acquired that position previously at a time that is not known precisely.[13] On 10 October 1497 in Bologna the notary public Girolamo Belvisi Sr. wrote: "Ni-

cholas, son of the late Nicholas Copernig, the former being a canon of Varmia and a student of canon law in Bologna,"[14] appeared in order to empower two Varmian canons to take over in his name all the properties and income to which he was entitled as a canon of Varmia.[15] It is therefore clear that Copernicus was "enrolled in the Chapter" while he was studying abroad and not "after his return," as Starowolski mistakenly declared in 1627.

It has recently been stated that "early in 1501 he [Copernicus] returned home in order to enter formally upon his office" as Varmian canon.[16] Belvisi's notarial document of 10 October 1497 shows, however, that Copernicus took formal possession of his canonical properties by proxy long before 1501.

It has likewise been recently stated that after the Chapter meeting in 1501 Copernicus "took leave again immediately so as to finish his studies of canon law in Padua."[17] Actually, at that meeting in 1501 the Chapter granted Copernicus leave, not to finish his studies of canon law, but to study medicine.

After studying medicine for two years at the University of Padua, Copernicus was awarded a doctorate in canon law by the University of Ferrara. On 31 May 1503 the University of Ferrara conferred upon the reverend and most learned man Nicolaus "Copernich," canon of Varmia and scholaster of the Church of the Holy Cross in Wrocław, who studied in Bologna and Padua,[18] the degree of doctor in canon law.[19]

In 1503, after 31 May, Copernicus went home, for on 1 January 1504, Nicolaus "Coppernick," doctor and canon of Varmia, arrives at Malbork to attend the assembly of the Royal Prussian Estates.[20] Hence it is not true that after "his promotion to the dignity of a Doctor of Canon Law ... in 1503," Copernicus went "for another year to Padua to study medicine."[21]

*

The discovery of the "reckoning of the heavenly bodies that was new and unknown to the ancients" is dated by Starowolski's 1625 biography "about the year 1540." That statement is not repeated in the next edition. By that time Starowolski was better informed and knew that in his Dedication-Preface to the *Revolutions* Copernicus said that he had debated with himself for a long time whether to publish the volume he wrote to prove the earth's motion. But while he "hesitated for a long time and even resisted," his friends encouraged him and urgently requested him "to publish this volume and finally permit it to appear after being buried among [his] papers and lying concealed not merely until the ninth year but by [then] the fourth period of nine years."[22] A copy of the first edition of the *Revolutions* was given by the printer in September 1543[23] to a

friend of Rheticus',[24] who noted that Copernicus' Dedication-Preface was "composed in Frombork, Prussia, in the month of June 1542" ("Datum Varmiae in Borussia mense Junio 1542").[25] This date in conjunction with the expression "the fourth period of nine years," implies that Copernicus began to write his major work about 1515.[26]

Some further confirmation of the fact that the *Revolutions* was conceived about three decades before its publication is given by Copernicus in two of his earlier astronomical treatises. In his preliminary exposition of the heliocentric theory, the exposition that came to be known as the *Commentariolus*,[27] Copernicus says that for the sake of brevity he is going to omit from it the mathematical demonstrations, reserving these for his larger work.[28] It is not known when Copernicus actually wrote this little treatise, but it must have been completed before 1 May 1514. On that date, Matthew of Miechów (Miechowita, 1457-1523), a professor at the Jagiellonian University, made the following entry in the inventory of his private library: "a manuscript of six leaves expounding the theory of an author who asserts that the earth moves while the sun stands still"[29] ("Item sexternus theorice asserentis terram moveri, Solem vero quiescere").[30] All Copernican scholars agree that Miechowita's entry refers to Copernicus' *Commentariolus*, despite the absence of the author's name.[31] Thus it follows that the "larger work" (*ma-*

ius volumen) mentioned by Copernicus is his *De revolutionibus*, the only larger work containing mathematical demonstrations he ever wrote.

The second allusion to the *Revolutions* occurs at the end of the letter written by Copernicus to his friend Bernard Wapowski (ca. 1470-1535).[32] In that letter, dated 3 June 1524, while referring to his opinion concerning the motion of the sphere of the fixed stars, the astronomer remarks: "since I intend to set forth my views elsewhere, I have thought it unnecessary and improper to extend this communication further."[33] Copernicus set forth these views in Book III of his *Revolutions*, a section which internal evidence shows he wrote long before 1540.[34] It is not known exactly when Copernicus finished the *Revolutions*, but according to Nicholas Schönberg, cardinal of Capua (1472-1537), Copernicus' new system of cosmology existed in written form as early as 1536. Copernicus preserved, and released for publication in the 1543 Nuremberg edition of his work, the letter that Schönberg wrote to him from Rome on 1 November 1536. In this letter the cardinal told Copernicus:

> I have ... learned that you have written an exposition of this whole system of astronomy, and have computed the planetary motions and set them down in tables, to the greatest admiration of all.[35]

In addition, Rheticus,[36] who arrived in Frombork at the end of May-early June 1539, stated that at that time he already had access to his master's treatise. In his let-

ter to the Nuremberg astronomer Johannes Schöner (1477-1547),[37] dated Frombork 23 September 1539 and published in 1540 under the title *Narratio prima* (First Report),[38] Rheticus says that Copernicus

> has written a work of six books in which ... he has embraced the whole of astronomy.... I have mastered the first three books, grasped the general idea of the fourth, and begun to conceive the hypotheses of the rest.[39]

Starowolski may have derived his erroneous date for the discovery of Copernicus' "reckoning of the heavenly bodies" from the title page of the third edition of the *Revolutions*, edited in 1617 by Nicholas Müller (Mulerius in Latin), professor of medicine and mathematics at the University of Groningen.[40] On that page Müller says that the book is finally restored to its proper condition, 75 years after the death of its author.[41] By a simple subtraction (1617 - 75), Starowolski obtained the date 1542. Then, by making some allowance for the writing of the *Revolutions*, he concluded that the discovery of the new "reckoning" occurred "about the year 1540." Thus we see that Copernicus in actuality was finishing the *Revolutions* at about the time when Starowolski says he made his discovery (*adinvenit*). That discovery, according to Copernicus' own testimony, must have occurred about a quarter-century before 1540.

*

"Among his [Copernicus'] disciples," we read in the 1625 *Vita*, he had that genius, Tycho." In the 1627 edition, however, the name of Tycho (Brahe, the famous Danish astronomer, 1546-1601) does not appear. In order to be a disciple in the strict sense of the term, there must be personal contact between disciple and master. In this sense, Tycho could not have been a disciple of Copernicus, since he was born three years after Copernicus died. In this strict sense Copernicus had only one disciple, namely, Rheticus. But even if "disciple" is taken in the wider sense of a follower, Tycho was not really a follower of Copernicus.

As we saw above, Starowolski was only vaguely familiar with Müller's biography of Copernicus,[42] which was appended to the third edition of the *Revolutions*. Müller's biography is recommended by Starowolski to his readers who wanted to acquire some additional information about the great astronomer.[43] In the first sentence of his life of Copernicus, Müller says that Tycho described Copernicus as an "incomparable man" (*vir incomparabilis*).[44] This description must have led Starowolski to surmise that Tycho was a follower of Copernicus. In actuality, however, nothing can be further from the truth. Tycho was indeed full of admiration for the

Polish astronomer's "intellectual acumen," which he praised on many occasions. Thus on 23 September 1574 he delivered a lecture, in which he declared that

> in our time Nicholas Copernicus may not undeservedly be called a second Ptolemy. Through observations made by himself he discovered certain gaps in Ptolemy, and he concluded that the hypotheses established by Ptolemy admit something unsuitable in violation of the axioms of mathematics. Moreover, he found the Alfonsine computations in disagreement with the motions of the heavens. Therefore, with wonderful intellectual acumen he established different hypotheses. He restored the science of the heavenly motions in such a way that nobody before him had a more accurate knowledge of the movements of the heavenly bodies.[45]

Over the course of the years Tycho's attitude toward Copernicus did not change. Thus, in 1587, in a letter to Christopher Rothmann,[46] Tycho called Copernicus "a remarkable and incomparable master" ("Nicolaus Copernicus ingens & incomparabilis ... Athleta").[47] Yet while heaping praises on his predecessor's professional ability, Tycho severely criticized his cosmology. For example, in another letter to Rothmann, who supported some of Copernicus' hypotheses, Tycho mocked the latter's belief in the triple motion of the earth. In Tycho's opinion, the earth, a simple body, was not well suited for motion. "Since you have mixed the element air with the heavens and the revolutions of the stars," exclaimed the Danish astronomer,"why not do the same to the earth and the seas?" He went on to say that such a belief was tantamount to "throwing things lower and higher into disarray," and an "inversion of the whole order of nature."[48]

Geokineticism, the key feature in the Copernican cosmology, was rejected by Tycho not only on scientific grounds but also because he found it difficult to reconcile geokineticism with the Scriptures. That rejection may have been precipitated by the narrow-minded intolerance rampant at the time in Denmark.[49] The king was of a more liberal disposition, but he

> did not wish to be considered unorthodox, and had yielded to the importunity of his brother-in-law, the Elector of Saxony, by dismissing the distinguished theologian Niels Hemmingsen from his professorship at the University, as suspected of leaning to Calvinism. It would certainly not have been prudent for [Brahe,] the highly-salaried and highly-envied pensioner of the king, to declare himself an open adherent of a system of the world which was supposed not to be orthodox.[50]

Tycho proceeded to devise a cosmological system free from the features he rejected in Copernicus' *Revolutions*. In Copernicus' system, the earth, as one of the planets, revolved around the stationary sun. In Tycho's system, all the planets revolved around the stationary earth. Thus we see that Tycho's attitude toward Copernicus was far more complex than Starowolski realized. The late C. Doris Hellman depicted that attitude as follows:

> Tycho prized parts of the Copernican doctrine or at least acknowledged the abilities of its originator, but could not bring himself to accept a sun-centered universe. His reluctance to do so can be ascribed partly to his respect for Scripture and partly to his feeling of common sense, but largely to his inability to conceive of a universe so immense that an observer as ac-

> curate as he knew himself to be could not detect any stellar parallax, the necessary consequence of the earth's motion around the sun.[51]

In like manner, Tycho has been characterized "as a respectful critic of Copernicanism, who developed his own compromise cosmology."[52] But Tycho seems to have respect for Copernicus, the brilliant astronomer, yet is far from being respectful in his attitude toward "Copernicanism."

The defects found in Copernicus by Tycho were recently enumerated as follows:

> Certainly, among other things, Tycho often deplores that Copernicus used such imperfect instruments, and that he did not consider the effect of refraction, but as a rule you may, behind Tycho's words, feel an attitude of lenience; he obviously thought that Copernicus made the best he could of the means at his disposal. However, another charge of Tycho's against Copernicus is found with the context of undisguised condemnation namely the charge that Copernicus relied far too uncritically upon the records of the ancient astronomers.[53]

Had these criticisms of Copernicus by Tycho been known to Starowolski, he might have hesitated to describe Brahe as a disciple of Copernicus.

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Both versions of Starowolski's biography of Copernicus referred to Copernicus' "fellow-countryman Johannes Regio-

montanus." A marginal note in the 1625 edition further identified Regiomontanus as a Prussian (*Borussus*). But the famous fifteenth-century astronomer Johannes Müller (1436-1476), better known under his Latin name Regiomontanus,[54] was born in or near Königsberg in Franconia (Germany) and not in Königsberg (now Kaliningrad) in Prussia. Hence, he was not a Prussian nor a fellow-countryman of Copernicus.

NOTES TO CHAPTER II

1. The second edition of Starowolski's *Hekatontas*, revised and enlarged, was published in Venice in 1627; see Ch. I, fn. 1, p. 6, above.

2. Translated from p. 39 of the Polish version of the *Hekatontas*; see Ch. I, fn. 6, p. 6, above.

3. Starowolski wrote "germana soror," undoubtedly in order to stress the fact that Bishop Lucas Watzenrode and Copernicus' mother Barbara had the same set of parents. Bishop Lucas Watzenrode and Barbara Copernicus were two of the three children born to Lucas Watzenrode Sr. and his wife Catherine. She had other children by a previous husband, and those children were not full brothers and sisters of Bishop Lucas and Barbara. For the bishop's genealogy see Karol Górski, *Łukasz Watzenrode: życie i działalność polityczna (1447-1512)* [Lucas Watzenrode: Life and Political Activity], series *Studia Copernicana X* (Wrocław, 1973), p. 7; hereafter Górski.

4. Latin text in the Archives of the Diocese of Varmia in Olsztyn, A. 86, 4^{v}; German text in *Scriptores rerum warmiensium*, ed. Carl Peter Woelky (Braunsberg, 1889), II, 422.

5. Kromer was mistaken in ascribing to Copernicus a doctoral degree in arts and medicine. Actually he was awarded a doctoral degree in canon law; see Ch. II, 14, above.

6. For the Latin text of Starowolski's 1627 biography of Copernicus see Appendix II.

7. *Nicholas Copernicus Complete Works*, II, translation and commentary by Edward Rosen (Warsaw/London: Polish Scientific Publishers and Macmillan of London, 1977), 3; hereafter *NCCW*, II.

8. Starowolski's carelessness as a writer is exemplified by his reference to the biography of Copernicus by Nicholas Müller (1564-1630). In his 1625 biography of Copernicus, Starowolski cited Müller, who had given Giese's name correctly. Yet in 1625 Starowolski was responsible for the jumble "Io. Tidelman." By 1627, however, Starowolski reproduced Giese's name correctly. It would appear, therefore, that in 1625 Starowolski knew of Müller's biography but did not actually consult it at the time of writing his biography of Copernicus. Two years later, however, the story was entirely different. For the Latin text of Müller's biography of Copernicus see Appendix III; see also Ch. II, 18, above.

As an example of Starowolski's errors, Barycz, "Dzieło," cites the "enrollment of Copernicus in the Chapter of Varmia by the Bishop of Chełm-

no Tiedemann Giese." "It is sufficient to say," Barycz continues, "that Giese became the bishop of Varmia six years after Copernicus' death!" (p. 80, fn. 24). In his eagerness to correct Starowolski's error, Barycz himself commits a blunder. For, according to Starowolski in 1625, Copernicus was enrolled in the Varmian Chapter, not by Tiedemann Giese, but by "Johannes Tidelman." Moreover, Giese's elevation to the bishopric of Varmia in 1549 has no bearing on the statement by Starowolski, who correctly named Dantiscus as the bishop of Varmia in Copernicus' closing years.

9. The canonry assured Copernicus of a substantial income, both in money and in kind, mainly from the farmlands in the Chapter's possession, while providing him with sufficient leisure to pursue his scholarly interests. For a detailed study of the Chapter of Varmia during the lifetime of Copernicus see Henryk Zins, "Kapituła fromborska w czasach Mikołaja Kopernika" [The Frombork Chapter at the Time of Nicholas Copernicus], *Komunikaty Mazursko-Warmińskie* (1959), *66*:399-434; also *id.*, *W kręgu Mikołaja Kopernika* [Around Nicholas Copernicus], (Lublin, 1966), pp. 204-205.

10. See fn. 12, below.

11. See Ch. II, 14, above.

12. "28 VII," according to Jerzy Sikorski, *Mikołaj Kopernik na Warmii: chronologia życia i działalności* [Nicholas Copernicus in Varmia: the Chronology of His Life and Activities], (Olsztyn, 1968), p. 17; hereafter Sikorski. Sikorski says that "the act of the protocol of the meeting of the Varmian Chapter is dated 'In die Panthaleonis martyris,' hitherto erroneously equated in the literature with 27 July." Marian Biskup accepts Sikorski's date (*Regesta Copernicana*, series *Studia Copernicana: VII*, Polish version and *VIII*, English version [Wrocław, 1973], no. 38; hereafter *Regesta*). Neither Sikorski nor Biskup says what the error is. Yet Adriano Cappelli, *Cronologia, Cronografia e Calendario Perpetuo* (Milan, 1969), pp. 35-105, invariably gives 27 as the day of the martyr St. Pantaleon.

13. The question when Copernicus became a canon is discussed in Appendix XVI.

14. "Dominus Nicolaus olim Nicolai Copernig, canonicus Vuermiensis, scholaris Bononie studens in jure canonico ...." [Copernig was how Belvisi heard this surname].

15. *Regesta*, no. 30. A photocopy and transcription of this document appear in Hans Schmauch, "Um Nikolaus Coppernicus," *Studien zur Geschichte des Preussenlandes* (Marburg, 1963), pp. 417-431. Schmauch misdates the document as 20 October 1497. But the document actually reads: "die vigesimo decimo mensis octobris ~~septembris~~," with "septembris" crossed out and "octobris" added in the margin; "decimo," likewise a later addition, is squeezed between "vigesimo" and "mensis," while "vigesimo" is not deleted. Initially, the notary dated the document 20 September. Later he intended to change this date to 10 October. In so doing, he

struck out *septembris* but he forgot to delete *vigesimo*. The reason for this change will become apparent later (Appendix XVI). For a xerox copy of this document see Plate 1.

16. Willy Hartner, "Copernicus, the Man, the Work, and Its History," *Proceedings of the American Philosophical Society* (1973), *117*:418.

17. *Ibid.*

18. "Venerabilis ac doctissimus uir dominus Nicolaus Copernich de Prussia Canonicus Varmiensis et Scholasticus ecclesie S. crucis Vratislauiensis: qui studuit Bononie et Padue ...." [Copernich was how this surname was heard in Ferrara].

19. Prowe, I^1, 310-315; *Regesta*, no. 44. Facsimile in Schmauch, "Nikolaus Kopernikus - ein Deutscher," *Kopernikus-Forschungen* (1943), Table V.

20. *Regesta*, no. 45.

21. Hartner, *loc. cit.*

22. *NCCW*, II, 3. Copernicus alludes to Horace's *Art of Poetry*, lines 388-389, where that Roman writer advises authors to keep their works unpublished until the ninth year after they were composed.

23. Now in the Vatican Library, Palat. III, 103.

24. For a recent biography of that friend of Rheticus, see Karl Heinz Burmeister, *Achilles Pirmin Gasser, 1505-1577*, 2 vols. (Wiesbaden, 1970).

25. A photocopy of the title page with the note of Johannes Petreius (1497-1550), the printer, is reproduced in Zofia Wardęska, *Teoria heliocentryczna w interpretacji teologów XVI wieku* [The Heliocentric Theory as Interpreted by the Sixteenth-Century Theologians], series *Studia Copernicana XII* (Wrocław, 1975), no. 48a.

26. Edward Rosen, "When Did Copernicus Write the *Revolutions?*" *Sudhoffs Archiv* (1977), *61*:144-155.

27. Full Latin title (in the MSS) is: *Nicolai Copernici de hypothesibus motuum caelestium a se constitutis commentariolus.* Latin text in Prowe, II, 184-202; English translation in: (1) Edward Rosen, *Three Copernican Treatises*, 3rd ed. (New York, 1971), pp. 57-90; hereafter *3CT;* (2) Noel M. Swerdlow, "The Derivation and First Draft of Copernicus's Planetary Theory, A Translation of the *Commentariolus* with Commentary," *Proceedings of the American Philosophical Society* (1973), *117*:423-512. Critical evaluation of some aspects of Swerdlow in: (1) Edward Rosen, "Copernicus' Spheres and Epicycles," *Archives internationales d'histoire des sciences* (1975), *25*:82-92; (2) *id.*, "Copernicus' Hispalensis," *Organon* (1975), *11*:138-149; (3) *id.*, "Copernicus' Axioms," *Centaurus* (1976), *20*:44-49; (4) *id.*, as in fn. 26, above.

28. *3CT*, p. 59. Swerdlow, *op. cit.*, maintains that "there is no

reason to believe it [i, e. the larger work] was to be anything like *De revolutionibus*." He goes on to say: "I believe that the sort of book Copernicus was contemplating when he wrote the *Commentariolus* would have consisted of geometrical demonstrations of the equivalence of Ptolemy's and his own models for both the first and second anomalies showing how, given the same parameters, they will produce the same apparent motions." In "The Holograph of *De revolutionibus* and the Chronology of Its Composition," *Journal for the History of Astronomy*, V (1974), 188, while elaborating on the same topic, Swerdlow concludes: "what kind of larger book Copernicus had in mind when he wrote this [i, e. the reference to the "larger work" in the *Commentariolus*] is by no means clear ...." In denying the equation: larger work = *Revolutions*, Swerdlow is resurrecting the opinion of Ludwik Antoni Birkenmajer, who in 1900 argued that "it is clear that the *maius volumen* mentioned here in the *Commentariolus* could not have been identical with the ... autograph of the *Revolutions*" (L. A. Birkenmajer, Mikołaj Kopernik [Cracow, 1900], p. 74; hereafter *MK*). Swerdlow, however, must have reached his conclusion independently, for in "Derivation," p. 433, he states that

> the writings of L. Birkenmajer ... are historically valuable, and I regret that my ignorance of Polish leaves me able to do no more than mine his work for quotations from documents and primary sources.

For a convincing refutation of Swerdlow's arguments see Rosen, *op. cit.* in fn. 26, above.

29. *3CT*, p. 343.

30. Leszek Hajdukiewicz, *Biblioteka Macieja z Miechowa* [The Library of Matthew of Miechów], (Wrocław, 1960), pp. 205, 218; Ludwik Antoni Birkenmajer, *Stromata Copernicana* (Cracow, 1924), pp. 201-202; hereafter *Stromata*.

31. For example, *Stromata*, p. 202; *3CT*, p. 343.

32. English translation entitled *Letter against Werner* in *3CT*, pp. 93-106; Latin text in Prowe, II, 145-153, 172-183.

33. *3CT*, p. 106.

34. Aleksander Birkenmajer, "Analiza bibliologiczna traktatu *De revolutionibus*" [Bibliological Analysis of the Treatise *De revolutionibus*], *Studia Źródłoznawcze*, XV (Warsaw/Poznań, 1971), 3-71.

35. Latin text in *Nicolai Copernici opera omnia*, II (Warsaw/Cracow, 1975), 349; hereafter *NCOO*, II. English translation in *NCCW*, II, p. XVII. There can be no doubt that the cardinal refers here to Copernicus' *Revolutions*, for this is the only work of his which contains tables of the planetary motions (*MK*, p. 544).

36. For a short biography of Rheticus see the *Dictionary of Scien-*

tific Biography, XI (New York: Charles Scribner's Sons, 1975), 395-398; hereafter *DSB*; see also Karl Heinz Burmeister, *Georg Joachim Rhetikus, 1514-1574*, 3 vols. (Wiesbaden, 1967-1968).

37. For a short biography of Schöner see *DSB*, XII, 199-200.

38. English translation in *3CT*, pp. 109-196; Latin text in Prowe, II, 295-377; facsimile of the first edition (Gdańsk, 1540) in *Milliaria*, VI (Osnabrück: Otto Zeller, 1965).

39. *3CT*, pp. 109-110.

40. The third edition of the *Revolutions* was published in 1617 in Amsterdam under the modified title *Nicolai Copernici Torinensis astronomia instaurata*. The title was modified in order to honor Copernicus by labeling his work a Restoration of Astronomy.

41. Photocopy of the title page of *Astronomia instaurata* in Henryk Baranowski, *Bibliografia Kopernikowska 1509-1955* (Warsaw, 1958), opposite p. 160.

42. See Ch. II, fn. 8, p. 24, above.

43. According to Prowe, I^1, 99, Starowolski directs his readers, desiring more information about Copernicus, to the sketch of Müller, where, however, they also find nothing: "Der Verf. Starowolski verweist zum Schlusse seine Leser, wenn sie Genaueres wissen wollen, auf die ... Skizze von Nic. Mulerius -- in der sie gleichfalls nichts finden!" Prowe's pronouncement regarding Müller is unjustified. For example, Müller (Appendix III) gives the date of Copernicus' birth, which Starowolski failed to include. Another respect in which Müller's biography of Copernicus is fuller than Starowolski's is the astronomer's activities in Italy. Prowe may have been influenced by the eminent Copernican scholar Franz Hipler. In his article "Nikolaus Kopernikus und Martin Luther," *Zeitschrift für die Geschichte und Altertumskunde Ermlands* [hereafter *ZGAE*], IV (1868), 537, fn. 2, Hipler described Müller's biography as short and totally inadequate, providing scarcely more than the dates of Copernicus' birth and death ("eine kurze durchaus ungenügende Biographie, die fast nur das Geburts= und Todesjahr mittheilt").

44. *Astronomia instaurata*, p. $(**)4^r$. Pierre Gassendi (1592-1655), the French philosopher and astronomer who wrote an elaborate life of Tycho Brahe, later also composed biographies of three other astronomers, including Copernicus. In this *Nicolai Copernici Warmiensis canonici astronomi illustris vita*, Gassendi published the poems composed in 1584 by Tycho, full of enthusiasm and admiration for his great predecessor Copernicus, upon the receipt of the latter's portrait and parallactic instrument. These were sent to him as a gift by Johannes Hanow, a canon of Frombork. Gassendi likewise cites the epithets "extraordinary, remarkable, incomparable" (*eximius, ingens, incomparabilis*) applied by Tycho to Copernicus (Petrus Gassendi, *Opera omnia*, V [Stuttgart-Bad Cannstadt: Friedrich Fromann Verlag, facsimile of the 1658 Lyons edition], 513).

45. This lecture was first published posthumously in Copenhagen in 1610 as *Tychonis Brahei de disciplinis mathematicis oratio publice recitata in Academia Haffnensi anno 1574*. The passage quoted is translated by Edward Rosen in "Was Copernicus a Pythagorean?", *Isis* (1962), *53*:506-507. See also J. L. E. Dreyer, *Tycho Brahe* (Edinburgh, 1890), p. 74, and Kristian Peder Moesgaard, "Copernican Influence on Tycho Brahe," *Studia Copernicana V* (Wrocław, 1972), 32.

46. For a short biography of Rothmann see *DSB*, XI, 561-562.

47. Letter to Rothmann, dated 20 January 1587, in *Tychonis Brahe dani opera omnia*, VI (Copenhagen, 1919), 102; first published in *Tychonis Brahe dani epistolarum astronomicarum liber* (Uraniborg, 1596).

48. Letter to Rothmann, dated 21 February 1589 (*ibid.*, pp. 176-177):

> at si illae [i. e. Ptolemaic hypotheses] tibi adeo displicent, vt malis cum Copernico Terram & maria in Caelo annuatim vna cum contermina Luna conuoluere, adeoque triplici motu, cum sit corpus vnum & simplex, vltra Stellarum sortem, qua tamen longe inferior & ad mouendum ineptior est, extollere, per me etiam id tibi integrum erit: Neque iam difficilis via est, ex quo Aërem Elementarem Caelo & Astrorum reuolutionibus miscuisti; Cur non etiam Terras & maria? Anne hoc est inferos superis confundere, omnemque naturae rerum ordinem inuertere?

For Brahe's other criticisms of the Copernican system see *Astronomiae instauratae progymnasmata* in Brahe's *Opera omnia*, II (Copenhagen, 1915), 29.

49. Dreyer, *Tycho Brahe*, p. 178.

50. *Ibid.*

51. *DSB*, II, 409-410.

52. Jerome R. Ravetz, "The Humanistic Significance of Our Copernican Heritage," *Vistas in Astronomy*, XVII (1975), 150.

53. Kristian P. Moesgaard, "From Copernicus to Tycho Brahe," XXXI^{e} Semaine de Synthese; 1-7 juin 1973, *Avant, avec, après Copernic* (Paris: Blanchard, 1975), p. 188.

54. For a short biography of Regiomontanus see *DSB*, XI, 348-352; a full-length biography is provided by Ernst Zinner, *Leben und Wirken des Joh. Müller von Königsberg, gennant Regiomontanus*, 2nd enlarged edition (Osnabrück, 1968).

III

STAROWOLSKI AND BROŻEK

It was Jan Brożek who helped Starowolski modify his 1625 biography of Copernicus in the direction it took in 1627. Brożek (Broscius in Latin) looms large among the seventeenth-century admirers and defenders of Copernicus.[1] Born in 1585, the son of a small farmer, Brożek was not ashamed of his non-aristocratic background. "I do not descend ... from the noble blood of Teucer.... I am a son of a farmer ... and a grandson of a miller from a village [Kurzelów] in the archdiocese of Gniezno," he admitted unabashedly in one of his publications.[2] For according to Brożek, true nobility consisted of superior intelligence and not exalted birth. He loved his alma mater, the Jagiellonian University, because there, as he puts it, "priority is given to ability and not to descent."[3] According to the matriculation records of the Jagiellonian University, he entered that institution in the winter of 1604,[4] at a time when its illustrious alumnus, Copernicus, was deeply revered. There were still some professors who might have

known personally Copernicus' only disciple, George Joachim Rheticus, since he lived in Cracow for about 16 years (ca. 1554-ca. 1570).[5] This statement is applicable to Brożek's two most beloved professors, Valentine Fontanus[6] (1545-1618) and Stanislaus Jacobeius[7] (1540-1612 of Kurzelów, Brożek's birthplace).

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In the preservation and diffusion of the work of Copernicus and Rheticus, Fontanus is a figure of the highest importance in Cracow. He entered the Jagiellonian University in the summer of 1566, when he was twenty-one years old.[8] At the time he called himself "Valentinus Thomae Trachembergensis" (Valentine, son of Thomas, of Trachenberg).[9] Trachenberg (Polish Żmigród) is the nearest large town in the vicinity of Korzeńsko. This is the small village which he gave as his place of origin when he received the MA degree in 1575. By that time he had adopted "Fontanus" as his surname.[10] The reason for this choice has not yet been made clear. He was not an Italian, and "it is not correct to render his surname as Fontana or Fontani."[11] During three consecutive semesters in 1578-1580, Fontanus lectured on Copernicus' *Revolutions*.[12] By these three courses Fontanus "won for Cracow priority in introducing the heliocentric

system into the university curriculum,"[13]

That priority should not, however, be exaggerated. Thus, the statement has been made that Fontanus "was the first and only man to expound the *Revolutions* centuries before [this was done at] other universities."[14] Yet as early as 1561 there was an interest in Copernicus at the University of Salamanca. The 1561 *Constituciones* of that university (published in Salamanca in 1584) permitted students to read Copernicus, if they so desired:

> Title XVIII. Concerning the Chair of Astrology ... in the second year,... the *Almagest* by Ptolemy, or his *Epitome* by Regiomontanus, or Geber or Copernicus, by the vote of the auditors on the substitution of the *Sphere*.[15]

But there is a divergence between the 1584 printed version of the *Constituciones* of the University of Salamanca and the manuscript version, signed by the king in Madrid, on 15 October 1561. In the version bearing the king's signature, the phrase concerning the expounding of Copernicus' work if the students so desired is omitted.[16]

A decade later than Fontanus in Cracow,

> In the year 1588 and in the following year,... Duncan Liddel, the Scot, taught mathematics at the University of Rostock. Among other things he expounded also the second motion [that is, the motion of the planets] according to the threefold hypothesis, first, the Alfonsine; second, the Copernican; and third, another new one ... He used to defend the Copernican hypothesis tenaciously.[17]

At about the same time, when Johannes Kepler (1571-1630) at-

tended the University of Tübingen, he heard the superiority of the Copernican system explained in the classroom.[18] Thus, it is evidently a gross exaggeration to say that Fontanus' lectures on Copernicus at Cracow preceded those at other universities by centuries. The priority is to be reckoned as a decade or so, rather than as centuries.

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Jacobeius, the other favorite teacher of Brożek at the Jagiellonian University, received his undergraduate degree in 1563.[19] In the same year he observed the celebrated conjunction of Jupiter and Saturn, which confirmed the superiority of the Copernican tables over those of King Alfonso X.[20] When Jacobeius became professor of astrology, he acquired a copy of a book previously belonging to his older cousin, Jan Muscenius of Kurzelów (d. 1602), his predecessor in that chair at the Jagiellonian University.[21] Muscenius had received this copy from Rheticus while the latter was living in Cracow, for a note on the title page reads: "M. Joanni Muzcaenio a Rheticus donatus."[22] Rheticus' gift was bequeathed by Muscenius to the holder of the astrology professorship. Presumably it therefore passed to Jacobeius and afterwards to Brożek on 11 March 1614, as is indicated by his note at the bottom of the title page of this copy:

> Anno 1614. 11 Martii. M. Joannes Broscius Curzelouiensis a DD. Executoribus accepit librum hunc, quo etiam die Astrologiae ordinariam professionem sumpsit.

Brożek must have been well prepared for his university studies, since he entered in 1604 and received his BA degree in March 1605.[23] In the following year he acquired a copy of the second edition (Basel, 1566)[24] of Copernicus' *Revolutions*. The care with which he studied this work may be seen in the numerous notes he made throughout his copy.[25] His appraisal of his fellow-countryman was exemplified by the note he made at the bottom of the title page, where he wrote: "Copernicus, the author of this book, a man most worthy of immortality" ("Copernicus, author istius libri, immortalitate dignissimus").[26]

Because Brożek was a teacher outside of Cracow and also a private tutor, it took him five years to receive the MA degree.[27] Customarily a bachelor attended classes for two additional years in order to qualify for an advanced degree.

In 1614, on 11 March, he became professor of astrology at the Jagiellonian University. Four years later he decided to take a leave of absence and go to Varmia. His aim was to gather all the extant Copernican relics: manuscripts, letters, and books.

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What prompted Brożek to undertake this trip? Almost from the beginning of his university career he was clearly under the spell of Copernican ideas. Yet while he openly professed his admiration for the sage of Frombork, he did not straightforwardly declare his adherence to Copernicus' cosmological system, for he was well aware of its revolutionary nature. His indecisiveness is exemplified by a remark he made in the pages of the Memoranda which he attached to his copy of the 1617 Amsterdam edition of the *Revolutions*,[28] acquired right after its publication. In the Memoranda Brożek says:

> Ptolemy's hypothesis states that the earth is at rest. Copernicus' hypothesis states that the earth moves. Is then neither of them true? However, of contradictory [statements] one or the other must be true. If the earth is at rest, it does not move; if it moves, it is not at rest .... But someone may ask: how is it possible to recognize which hypothesis is truer, Ptolemy's or Copernicus'? To decide this question definitively I desire somebody who has the whole of astronomy, Ptolemaic and Copernican, at his fingertips.[29]

Brożek clearly did not regard himself as qualified to make that definitive judgment. But in his opinion the qualified experts included his teachers Fontanus and Jacobeius as well as his contemporaries, the great astronomers Johannes Kepler and Galileo Galilei (1564-1642), whose writings were owned and studied by Brożek.[30] The growing interest in the Copernican doctrine,[31] stimulated by the discoveries of Galileo[32] in conjunction with the mounting opposition of the Church, heightened Brożek's curiosity about the person of Copernicus.

Therefore, when his colleague Jan Augustine Rybkowicz (ca. 1580-1636) showed him letters written by Tiedemann Giese to Copernicus and others,[33] Brożek decided to go to Varmia in search of material which would shed light on the obscure sides of Copernicus' life. Meanwhile, from among the letters shown him by Rybkowicz, in 1618 Brożek chose two for publication, together with the dedication to an astrological prognostication for 1543, which emphasized the role that the Jagiellonian University played in the intellectual development of Copernicus.[34] In his preface to this 1618 publication Brożek wrote:

> Because he loves me and the mathematical sciences, Jan Rybkowicz, full professor at the University of Cracow, let me read the letters of Tiedemann Giese, bishop of Varmia. Most of these letters were written to Copernicus, a most excellent astronomer. I read them eagerly, and found one that was full of complaints about the bad faith in the publication of the first edition of the *Revolutions*. Here it is now, reader, and I shall publish others after I return from Frombork, if God spares my life.[35] Farewell.[36]

The two letters published by Brożek in 1618 provided a wealth of previously unknown information about Copernicus' last illness and death as well as the "bad faith" of some persons responsible for the publication of the first edition of the *Revolutions*. These two letters were evidently used in the revised (1627) version of Starowolski's biography of Copernicus.

The earlier letter, dated 8 December 1542, was written by Tiedemann Giese from his residence in Lubawa to the From-

bork Canon George Donner (d. ca. 1544), a close friend of Copernicus. "I was disturbed by what you wrote about the failing health of the venerable old man, our Copernicus," began the bishop, who continued:

> when he was healthy he loved privacy. Now that he is sick, he has, I believe, only a few friends who are concerned about his condition. Yet all of us are indebted to him on account of his integrity and outstanding doctrines. I know, however, that he always felt that you are among those most loyal to him. I beseech you, therefore, to watch over him and take care of the man whom we both always loved, if his condition demands it. Let him not be left without brotherly help in his state of need, and let us not be deemed ungrateful toward this deserving man. Farewell.[37]

The second letter was written on 26 July 1543 in Lubawa, and was addressed to Rheticus:

> On my return from the royal wedding in Cracow, in Lubawa I found the two copies which you had sent, of the recently printed treatise of our Copernicus. I had not heard about his death before I reached Prussia. I could have balanced out my grief at the loss of that very great man, our brother, by reading his book, which seemed to bring him back to life for me. However, at the very threshold I perceived the bad faith and, as you correctly label it, the wickedness of Petreius,[38] which produced in me an indignation more intense than my previous sorrow. For who will not be anguished by so disgraceful an act, committed under the cover of good faith?
>
> Nevertheless, I am not sure whether [this misconduct] should be attributed to this printer, who depends on the labor of others, rather than to some jealous person. Grieving that he would have to abandon the previous beliefs if this book achieved fame, perhaps he took advantage of that [printer's] ingenuousness to diminish faith in the treatise. However, lest the man should escape scot-free who permitted himself to be misled

by someone else's deception, I have written to the City Council of Nuremberg indicating what I thought had to be done in order to restore faith in the author. I am sending you the letter together with a copy of it, to enable you to decide how the affair should be managed on the basis of what has been started. For I see nobody better equipped or more eager than you to take this matter up with that City Council.[39] It was you who played the leading part in the enactment of the drama, so that now the author's interest seems to be no greater than yours in the restoration of that which has been distorted. Provided that this interests you at all, I ardently implore you to pursue this matter with the utmost earnestness. If the first sheets are going to be printed again, it seems that you should add a brief introduction, which would cleanse the stain of chicanery also from those copies which have already been distributed.

Indeed I should like in the front matter also the biography of the author tastefully written by you, which I once read.[40] I believe that your narrative lacks nothing but his death. This was caused by a hemorrhage and subsequent paralysis of the right side on 24 May, his memory and mental alertness having been lost many days before. He saw his treatise only at his last breath on his dying day.

The fact that the published treatise was distributed before his death will not be an obstacle, since the year agrees, and the day when the printing was finished was not indicated by the publisher. I should like also the addition of your little tract, in which you entirely correctly defended the earth's motion from being in conflict with the Holy Scriptures.[41] In this way you will fill the volume out to a proper size and you will also repair the injury that your teacher failed to mention you in his Preface to the treatise. I explain this oversight not by his disrespect for you, but by a certain apathy and indifference (he was inattentive to everything which was nonscientific) especially when he began to grow weak. I am not unaware how much he used to value your activity and eagerness in helping him.

> With regard to the copies of the treatise which you sent to me, I am deeply grateful to the donor. These copies will serve me as a permanent reminder to preserve the memory not only of the author, whom I always cherished, but also of you. Just as you proved yourself to be a Theseus to him in his labors, so now you have helped us with your effort and care lest we be deprived of the enjoyment of the finished work. It is no secret how much we all owe you for this zeal.
>
> I want you to let me know whether the book has been sent to the pope; for if this was not done, I would like to carry out this obligation for the deceased. Farewell.[42]

The details of Brożek's journey to Varmia are known from a letter he wrote to Basil Golinius,[43] and from various notes he made in his Memoranda. He traced the route he followed on Caspar Henneberger's map of Prussia (*Prussiae vera descriptio*, 1603), which he received in 1618 as a gift from Peter Krüger in Gdańsk.[44]

Exactly when and where Brożek wrote his letter to Golinius[45] are not known. After the customary greetings, Brożek continues:

> At last I report about the success of my journey. I sailed on the Vistula all the way to Gdańsk, where I stayed one week. Finally I went by way of Elbląg to Frombork, where I was very warmly received by the members of the Chapter, especially by the Reverend Fabian Konopacki and Reverend Andrew Zagórny.[46] I inspected the library and discovered many Greek and Latin books used by Copernicus. But I did not find the autograph [of the *Revolutions*].[47] While I was staying here in a frustrated state of mind, it occurred to me to see whether the printed copies [of the *Revolutions*] had any notes written by Copernicus' friends. During my search I came upon a copy corrected by the hand of Tiedemann himself. From it I transcribed all the notes

> together with the corrections into my copy [of the *Revolutions*].
>
> Since very many people said that the autograph had been transferred by Kromer to the library in the Lidzbark castle where the bishop was living at that time, I went there too together with Reverend Zagórny. We stopped at the [Jesuit] Seminary in Braniewo [Braunsberg]. In the library there we found a copy of the first edition [of the *Revolutions*] which had been sent long ago by Rheticus to George Donner.[48] I noticed some critical marks in that copy.
>
> When we arrived in Lidzbark, I greeted the bishop, and gave him your letter. He received me most kindly and permitted me to look around the library. Here too I did not find the autograph. But I did find a second copy [of the *Revolutions*] sent by Rheticus to Tiedemann, with many deletions of those passages which Copernicus did not write.[49] I also found some letters of Rheticus to Tiedemann. I learned from them many things about the autograph and other matters concerning the correction of the work.

Even though Brożek did not find the autograph of the *Revolutions*, which, as can be seen from his letter to Golinius, he expected to recover, he nevertheless regarded his trip as a great success. For he found three copies of the 1543 edition of the *Revolutions:* in Frombork, one of the copies sent by Rheticus to Giese; in Lidzbark, the other copy sent by Rheticus to Giese; and in Braniewo, the copy sent by Rheticus to Donner. From the Frombork copy, Brożek transcribed all of Giese's notes and emendations. In addition, in Frombork Brożek discovered many books that Copernicus had used, and in Lidzbark Brożek came across letters written by Rheticus to Giese dealing with the correction of the *Revolutions*. Andrew

Zagórny, who accompanied Brożek in his search of the Varmian libraries, while looking through the poems of Johannes Dantiscus (1485-1548), found a letter written by Copernicus in his own hand, dated 11 January 1539 and addressed to Dantiscus, then bishop of Varmia.[50] Moreover, Brożek came across an extensive Giese-Copernicus correspondence, as he indicated in the margin of his 1566 copy of the *Revolutions:* "I have more than twenty letters of Giese to Copernicus concerning this topic."[51]

Had Brożek published these and the other letters he discovered in Varmia,[52] together with the rest of the letters in Rybkowicz's possession which he promised to publish after his return from Varmia,[53] he would have made a substantial contribution to our knowledge of the astronomer's life. But, for a reason which is not yet well understood, he created several myths about Copernicus,[54] yet published little of importance. A valuable result of his trip was the information he imparted to Starowolski, which resulted in the improved biography of Copernicus published in the 1627 *Hekatontas*.[55]

A reason for Brożek's unwillingness to publish the authentic Copernicana he discovered in Varmia may be indicated in his letter to Galileo.[56] There he asks a rhetorical question: "Does public opinion present impediments to the truth?", and then adds: "That is what we all are afraid of." At the time the letter was written (28 May 1621), Brożek still entertained the idea of publishing his Varmian dis-

coveries, for he ended the letter to Galileo with the statement: "When I was in Prussia, I found many things in various libraries. In due time, after I finish my medical studies, I will publish them and send them to you."[57]

This promise, like the one Brożek made in the preface to the letters he published in 1618 before his trip to Varmia, was not kept. Brożek failed to publish the "many things" he mentioned in his letter to Galileo. The only thing he did bring out was a group of poems entitled *Septem sidera*. Brożek claimed, and initially everybody believed, that *Septem sidera* was written by Copernicus.[58]

Brożek's misattribution of *Septem sidera* to Copernicus can only be regarded as a dreadful detriment to Copernican scholarship. On the other side of the ledger, Brożek's positive contributions to Copernican scholarship consist of his publication of Giese's letters to Donner and Rheticus; his republication of Caprinus' Preface; and his improvement of Starowolski's biography of Copernicus.

*

In 1625, in a marginal note Starowolski stated that at the University of Cracow Copernicus had as his fellow-student Jacob Cobilinius, the author of *Astrolabii declaratio*. Then in 1627 this statement was moved from the margin into the text with the addition that both students "learned the math-

ematical sciences under Albert (Polish Wojciech) of Brudzewo."

In the Jagiellonian University's official records of students who were admitted (*Album studiosorum*) and who received degrees (*Statuta nec non liber promotionum*), there is no Jacob of Cobilinius (of Kobylin).[59] *Astrolabii declaratio*, on the other hand, was written by Jacob Köbel (ca. 1460-1533, Koebelius or Kobelius in Latin) around 1530.[60] Nine editions are recorded, from 1532 to 1594.[61]

Köbel was a very prominent person in German publishing. In addition to being a publisher, that "esteemed German, born in Heidelberg, who died a town clerk in Oppenheim,"[62] was also a writer on mathematical, astronomical, and various other subjects, poet, printer, draughtsman, and engraver. He entered the University of Heidelberg on 20 January 1480 so well prepared for his studies that he was granted a bachelor of arts degree as early as July 1481. He completed his education at the same institution ten years later by receiving a baccalaureate degree in both laws.[63] The few known facts about his life, hopelessly intertwined in the later writers with the fiction created by Starowolski, are discussed in Appendix XIX.

Why was Jacob Köbel mistakenly associated with the University of Cracow by Starowolski? In 1618, together with the two letters of Giese,[64] Brożek reprinted the Preface of a 1543 astrological prognostication written by a recent graduate of the Jagiellonian University, Albert

(Wojciech) Caprinus of Buk,[65] In that dedicatory Preface[66] Albert of Buk mentioned

> out of respect Nicholas Copernicus, the canon of Varmia, who once enjoyed the hospitality of this city, and who first drew from our [Jagiellonian] university, as from a spring, the admirable things in mathematics which he has written and also those more extensive things which he has resolved to publish.[67]

When Brożek came across Caprinus' prognostication, he may have learned also about Caprinus' quarrel with Andrew of Kobylin (1500-1572?),[68] professor of astrology at the Jagiellonian University, a man well known in academic circles.[69]

One of the duties connected with the occupancy of a chair of astrology at the Jagiellonian University[70] was the yearly publication of an official astrological prognostication (*iudicium astrologicum*).[71] These prognostications must have contributed significantly to the meager income of the astrology professors, whose competitive activities resulted in numerous lawsuits.[72] Such a lawsuit followed the publication of Albert of Buk's "Iudicium" for 1543, which appeared at the end of September 1542. Andrew of Kobylin, as professor of astrology, was both required and privileged to compose the much-coveted yearly prognostication. On this occasion Andrew of Kobylin summoned both Albert and the printers of this and other illegal forecasts to the court of the rector.[73] At first the rector imposed a heavy fine on Albert, payable within a week.[74] Since, however, Albert did not pay the fine as scheduled, he was excommunicated.[75] Yet Andrew did not emerge totally victorious from the rector's court.

For, the municipal authorities exonerated the printers by deciding that the rector had no jurisdiction over Cracow citizens since they were not guilty of heresy.[76] This decision obviously influenced the rector sitting in judgment on Albert of Buk. Thus, when Albert made his next scheduled court appearance, the rector acquitted him on the condition that in the future he would abstain from composing or publishing any "Iudicia astrologica" unless he obtained special permission from the rector.[77]

At the time of his lawsuit against Albert of Buk, Andrew of Kobylin was a full professor of astrology. Not long after the lawsuit, his name disappears from the official records of the university lectures.[78] This absence may have given rise, decades later, to the impression that he died or retired in old age. In other words, had he been about 70 years old in 1542, he might have been a fellow-student of Copernicus at the University of Cracow. Cobilinius, the Latin form of his name, is very similar to Cobelius, the name of the author of *Astrolabii declaratio*. This similarity may have induced Starowolski to declare that Jacob "Cobilinius," author of *Astrolabii declaratio*, was a fellow-student of Copernicus. The author of *Astrolabii declaratio*, however, was named Cobelius, not Cobilinius, and he studied at the University of Heidelberg, not at the University of Cracow.

NOTES TO CHAPTER III

1. The short biography of Brożek in *DSB*, II, 526-527, by Bronisław Knaster is hardly more than a slightly compressed version of the article by Aleksander Birkenmajer in *Polski słownik biograficzny*, III (Cracow, 1937), 1-3; hereafter *PSB*. Knaster, however, introduces errors not found in Birkenmajer. For example, Mikołaj Brożek was not a "nephew or grandson" of Jan Brożek's sister, but her son or grandson; Jan Brożek held the canonry of the church of St. Florian, not "Florent"; his anti-Jesuit satirical dialogue *Gratis* was published in 1625, not "1626." Knaster's statement that Brozek unfortunately did not publish any "letters by and about Copernicus" is incorrect: Brożek published Giese's letters to Donner and Rheticus about Copernicus (see Ch. III, 37-39, above). In addition, Knaster states that "Brożek published many Copernican documents" without specifying what they were. Actually Brożek published only one Copernican document apart from Giese's letters, namely, Caprinus' dedicatory Preface (see Appendix VIII and Plates 2c and 2d).

Knaster's bibliography, like Birkenmajer's, ends in 1937. Since then four important works appeared:

(a) Barycz, Henryk, "Dzieło literackie Jana Brożka," *Pamiętnik literacki*, XLV (1954), 61-90.

(b) _____, "Jan Brożek na tle walki elementów postępowych z tradycyjnymi w Uniwersytecie Jagiellońskim" (Jan Brożek and the Struggle between the Progressive and Traditional Elements at the Jagiellonian University), *Krakowskie Odrodzenie* (Cracow's Renaissance), Cracow, 1954.

(c) Brożek, Jan, *Wybór pism* (Selected Writings). 2 vols. Warsaw, 1956 (vol. I ed. by Henryk Barycz, vol. II by Jadwiga Dianni).

(d) Dianni, Jadwiga, *Jan Brożek (Joannes Broscius) akademik krakowski* (Jan Brożek, Cracow Academician). Warsaw, 1949.

2. Brożek, *Dissertatio de cometa Astrophili* (Cracow, 1619), fol. Ea 2, quoted by Barycz in Brożek, *Wybór pism*, I, 11 and 545, fn. 2; also *ibid.*, II, 107-108.

3. Brożek, *Wybór pism*, II, 108.

4. *Album*, III, ed. Adam Chmiel (Cracow, 1904), 245: "Joannes Jacobi Brozek Curelouiensis dioc. Gneznensis gr. 9."

5. In 1554 Rheticus wrote four letters from Cracow. His departure

from that city was misdated in 1574 by Burmeister, *Rhetikus*, I, 134. Burmeister states that "in 1574 Rheticus' last journey led him to Košice [at that time Hungary, now Czechoslovakia] where he then died" ("1574 führte ihn eine letzte Reise nach Kaschau, wo er dann starb"). A letter dated from Cracow on 25 March 1573, however, shows that Rheticus had left that city long before 1574: "Rheticus iam tertium annum abest in Scepusio" (quoted in Barycz, *Historja Uniwersytetu Jagiellońskiego w epoce humanizmu* [Cracow, 1935], p. 399, fn 7; MS Rhedigeriana 244, from which Barycz quotes, was lost during World War II, according to a letter of 2 September 1977 from the University Library in Wrocław). About three weeks later the same correspondent stated that "Rheticus is still in Hungary" ("Rheticus adhuc in Vngaria abest ...", MS Rhedigeriana 247, no. 42, as quoted in *MK*, p. 615; see also Dianni, "Pobyt J. J. Retyka w Krakowie" [G. J. Rheticus' Stay in Cracow], *Studia i materiały z dziejów nauki polskiej 1953*, 1:73).

6. Aleksander Birkenmajer, "Walenty Fontanus," *PSB*, VII (Cracow, 1948), 62-63; French translation in Aleksander Birkenmajer, *Etudes d'histoire des sciences en Pologne* (series *Studia Copernicana IV*, Wrocław, 1972), 779-781; hereafter *Etudes*, IV.

7. Barycz, "Stanisław Jakobejus," *PSB*, X (Cracow, 1962-1964), 333-335.

8. *Album*, III, 59. Birkenmajer, *Etudes*, IV, 779, corrects the date of Fontanus' birth. An erroneous date, 1536, had been used previously by Birkenmajer himself (e. g. in an earlier work, reprinted in *Etudes*, IV, 12) and by other scholars (e. g. Ernst Zinner, *Entstehung und Ausbreitung der coppernicanischen Lehre* [Erlangen, 1943], p. 287). The error arose, as Birkenmajer reports, because Starowolski misread the age of Fontanus on his tombstone as LXXXII instead of LXXIII. According to the eulogy of Fontanus ("Dialogus"), he was born on 21 March 1545.

9. Although the name of this town was written Trachenberg (*Album*, III, 59; in German, Snake Mountain), the Polish equivalent, Żmigród, shows that this place-name would have been recorded more accurately as Trachenburg (or, in modern German, Drachenburg), Snake Stronghold.

10. *Statuta*, p. 214: "Valent. Fontanus Thomae Korzensko." The little village Korzeńsko is located near the river Orla (not Odra, as in *Etudes*, IV, 779).

11. *Etudes*, IV, 779. The Italian-sounding surnames were used by Zinner, *Entstehung*, p. 287, and by Barycz, *Historja*, p. 556.

12. According to the unpublished MS of *Liber diligentiarum et negligentiarum universitatis cracoviensis* in the Jagiellonian Library, Cim. 220; reproduced on Plates 3a, 3b, and 3c.

13. Aleksander Birkenmajer, *Etudes*, IV, 779-780.

14. Barycz, *Historja*, p. 556.

15. Juan Vernet [Gines], "Copernicus in Spain," *Colloquia Copernicana I* (series *Studia Copernicana V*, Wrocław, 1972), 275.

16. Juan Vernet Gines, "Copernic en Espagne," *Colloquia Copernicana IV* (series *Studia Copernicana XIV*, Wrocław, 1975), 102. For a possible subsequent teaching of the Copernican system at the University of Salamanca see *ibid.*, pp. 101-103.

17. Excerpt from a letter written by a student who audited the lectures of Duncan Liddel (1561-1613). The excerpt is quoted in Rosen, "Copernicus' Hispalensis," p. 143. Liddel's Copernican lectures are, in addition, confirmed by other sources (Rosen, *ibid.*, pp. 139, 145).

18. Johannes Kepler, *Cosmographic Mystery* in *Gesammelte Werke*, I, ed. Max Caspar (Munich, 1937), 9:14, 20-21.

19. *Statuta*, p. 203: "Stanislaus Jacobeius Curzelouiensis"; according to *Album*, III, 30, Jacobeius ("Stanislaus Alberti Curzelowiensis") entered the Jagiellonian University in the summer of 1558.

20. Barycz, *Historja*, p. 396.

21. According to *Album*, II, ed. A. Chmiel (Cracow, 1892), 342, "Johannes Andree a Curzelow" entered the Jagiellonian University in the winter of 1550. The date of his graduation is unknown, for the *Statuta* are incomplete for the years 1542-1560. However, in 1563 he held the position of dean for the second time (*Statuta*, p. 203).

22. The book in question is Jacob Micyllus' *Arithmeticae logisticae libri duo* (Basel, 1555); now in Jagiellonian Library, Mathesis 1271; see *Stromata*, pp. 368-370.

23. *Statuta*, p. 263.

24. Brożek's copy of the 1566 *Revolutions* is at present at the Astronomical Observatory (Obserwatorium Astronomiczne) in Cracow.

25. These notes were apparently made over a long period of time. Hence they will not be discussed as a group, but individually in the appropriate context.

26. *MK*, p. 656.

27. In 1610; *Statuta*, p. 269.

28. At present at the Jagiellonian Library in Cracow, Matem. 419 (*MK*, p. 652; according to Ryszard Gansiniec, "Tytuł dzieła astronomicznego Mikołaja Kopernika" [The Title of Nicholas Copernicus' Astronomical Work], *Kwartalnik Historii Nauki i Techniki*, III [1958], Fig. 3, after p. 208, the shelf no. now is 311 204 St. Dr.).

29, *MK*, p, 654;

> Ptolemaei hypothesis est Terram quiescere, Copernici hypothesis est terram moueri, Neutra igitur uera est? Atqui eorum quae contradicentia sunt, necesse est alteram partem ueram esse, Si terra quiescit, non mouetur, Si mouetur, non quiescit .... Sed quaeret quispiam; quomodo cognosci possit, vtra hypothesis uerior sit, Ptolemaei ne an Copernici? De hac quaestione illum demum iudicem exopto, qui totam Astronomiam, Ptolemaicam et Copernicam ad vnguem teneat,

Bruce Wrightsman, "Andreas Osiander's Contribution to the Copernican Achievement," *The Copernican Achievement*, ed, Robert Westman (Berkeley, California, 1975), p, 239, translates part of this passage incorrectly, as was pointed out by Edward Rosen in a review article in *The Polish Review*, XXI (1976), 226-227,

30, For Brożek's interest in Kepler and Galileo, see Appendix VI.

31, Besides the discovery of the four largest satellites of Jupiter, of importance to the Copernican theory was Galileo's discovery of the varying crescent of Venus,

32, In his article "Alle Origini della Polemica Anti-copernicana," *Studia Copernicana VI* (Wrocław, 1973), 32-42, Eugenio Garin published, for the first time, the fourth appendix of Giovanni Maria Tolosani's *On the Truth of Holy Scripture*, Tolosani states that the Master of the Sacred and Apostolic Palace (Bartolomeo Spina, d, 1546) intended to condemn Copernicus' book, but he could not accomplish that on account of his illness and subsequent death ("Cogitaverit magister sacri et apostolici palatii eius improbare librum, sed prius infirmitate, deinde morte praeventus, hoc implere non potuit," *ibid*,, p, 42). See also Edward Rosen, "Was Copernicus' *Revolutions* Approved by the Pope?" *Journal of the History of Ideas*, XXXVI (1975), 531-542,

The condemnation of the *Revolutions*, planned shortly after it first appeared in print, took place in 1616, On 5 March of that year, the Roman Catholic Sacred Congregation of the Index condemned the *Revolutions*. The Sacred Congregation announced that it has come to its attention that

> the Pythagorean doctrine of the earth's mobility and the sun's immobility, a doctrine which is false and completely contrary to divine Scripture and which Nicholas Copernicus teaches in his *De revolutionibus orbium caelestium* ... is already widely known and is accepted by many persons .... Therefore, lest an opinion of this sort spread any farther to the detriment of Catholic truth, the Congregation has resolved that the said Nicholas Copernicus' *De revolutionibus orbium* ...

> shall be suspended until corrected (as translated in *NCCW*, II, 342, fn. to p. 5:1).

33. It is not known how Rybkowicz came into possession of these letters.

34. For a discussion of that prognostication and its author see Ch. III, 43-45, above.

35. Brożek failed to keep this promise.

36. Ioannes Broscius Cvrzeloviensis, Academiae Cracovien. Ordinarius Astrologus. Lectori S.

> Reuerendus Dominus Ioannes Rybkowicz, Collega Maior in Academia Cracouiensi, pro suo in me artesque Mathematicas amore, dedit mihi perlegendas Reuerendissimi D. Tidemani Gisii Episcopi Varmien. epistolas, quarum plurimae ad Copernicum absolutae subtilitatis Mathematicum sunt exaratae. Legi auidè, unamque reperi plenam querimoniae, propter opus Reuolutionum, prima editione mala fide publicatum. Eam nunc Lector accipe: alias Frueburgo reversus, si Deus vitam concesserit, dabo. Vale (see Plate 2a).

In his Memoranda Brożek stated exactly when Giese was bishop of Chełmno and then later was elevated to the bishopric of Varmia.

37. For the Latin text see Appendix IV. See also Plate 2a.

38. Giese is referring here to the unauthorized Foreword to the *Revolutions* written by the Lutheran reformer and preacher Andreas Osiander (1498-1552). This fictionalist Foreword entitled "To the Reader, Concerning the Hypotheses of This Work" ("Ad Lectorem de hypothesibus huius operis") stood at complete variance with Copernicus' views in regard to his hypotheses. Copernicus believed his hypotheses to be true; Osiander stated that

> hypotheses need not be true nor even probable; if they provide a calculus consistent with the observations, that alone is sufficient (*NCCW*, II, p. XVI).

39. In reference to this passage in Giese's letter, Brożek remarked:

> What the Nurembergers replied to Tiedemann Giese's letter is not known. I searched very carefully in the Lidzbark library among the letters preserved there and written by various persons to Tiedemann, but I could not find anything (Quid responderint Noribergenses ad epistolam Tidemanni Gisii, incertum est: quaesiui diligentissime in Bibliotheca Heilsbergensi inter epistolas, quae a uariis ad Tidemannum

> scriptae ibidem asseruantur, nihil tamen inuenire potui; in Brożek's Memoranda, excerpts published in *MK*, p. 654).

What Brożek could not find in Varmia in 1618 was found nearly three centuries later by L. A. Birkenmajer in the archives of the City Council of Nuremberg. There he discovered the following decision of the Council on 29 August 1543:

> Send to Tiedemann, bishop of Chełmno in Prussia, the answer written by Johannes Petreius to the bishop's letter (the answer's sharpness should be omitted and softened). Add to it: no case can be made against Petreius in this matter on the basis of his answer (Mitwoch, 29 Augustj. Hern Tidemano bischoff zu Collmen in Breussen, dess Johan: petreij vffe sein schreybn gegebne schrifflliche antwurt (in welcher die scherpff herausgelassen vnd gemiltert werden soll) zusenden, daneben schreyben: man koenn dem petreyo derhalb nach gestallt seiner antwurt nichtz vfflegen; *MK*, p. 403; see also *NCCW*, II, 340, fn. to p. 3:38).

The content of Petreius' "sharp" answer to Giese's communication is not known; likewise unknown is its "softened" version prepared for the City Council of Nuremberg. But *NCCW*, *loc. cit.*, reconstructs the content of Petreius' response on the basis of a note written by Kepler's Tübingen professor Michael Mästlin (1550-1631) on his copy of the 1543 Nuremberg edition of the *Revolutions*. In this note Mästlin says that he "found the following words written somewhere among the books of Philip Apian" (1531-1589, professor of mathematics):

> On account of this Foreword [to Copernicus' *Revolutions*, by Andreas Osiander] George Joachim Rheticus, the Leipzig professor and disciple of Copernicus, became embroiled in a very bitter wrangle with the printer [Petreius]. The latter asserted that the Foreword had been turned over to him with the rest of the treatise. Rheticus, however, suspected that Osiander had put it in the front matter of the work. If Rheticus knew this to be a fact, he declared, he would so maul the fellow that he would mind his own business and not dare to mutilate astronomers any more in the future (Georgius Joachimus Rheticus, Ordinarius Lipsiensis, discipulus Copernici, ob hanc epistolam rixatus est cum Typographo, affirmante, eam sibi cum reliquo opere traditam fuisse. Suspicatus tamen est, Osiandrum eam praefixisse operi, quod si certo sciret, affirmabat, se ita tractaturum hominem, vt suae vocationi attentus, in futurum Astronomos lacerare non amplius praesumeret; Zinner, *Entstehung*, p. 453).

40. This earliest biography of Copernicus is believed to be lost. See Appendix XIV.

41. For a discussion of this "little tract" of Rheticus see Appendix XV.

42. English translation in *NCCW*, II, 339-340; Latin text in Appendix V.

43. Golinius (d. 1625) provided Brożek with a letter of introduction to Bishop Simon Rudnicki of Varmia, which greatly facilitated the search for the Varmian Copernicana.

44. This map is glued between fol. 94 and 95 of Brożek's copy of Mercator's *Atlas* (Amsterdam, 1613). Brożek says: "Hanc tabulam mihi donavit Clarissimus Dominus Petrus Crugerus Mathematicus Dantiscanus cum essem Dantisci 1618" (Edward Stamm, "Z historii matematyki XVII w. w Polsce" [From the History of Mathematics in Seventeenth-Century Poland], *Wiadomości Matematyczne*, XL [1936], 150).

45. Latin text in Appendix VII.

46. Andrew Zagórny (1572-1634), canon of Varmia, attended the Jagiellonian University at the same time as Starowolski, for he received the BA degree in 1618 (*Statuta*, p. 281).

47. For the history of the autograph of *De revolutionibus orbium coelestium* see *Nicholas Copernicus Complete Works*, I (London/Warsaw/Cracow: Macmillan and Polish Scientific Publishers, 1972), 20-21, 23. In 1618, the autograph was owned by Johannes Amos Comenius, often also called Nivanus after his birthplace Nivnice (Czechoslovakia).

48. Brożek wrote in his Memoranda:

> In the library of the Jesuit Seminary in Braniewo I found a copy of the Nuremberg edition of Copernicus that had been sent long ago to George Donner, canon of Varmia, by Rheticus with this inscription: "Given to my friend, George Donder, canon of Varmia, by Joachim Rheticus." Rheticus calls "Donder" in German while Tiedemann uses the Latin form Donner. In this copy the whole foreword to the reader concerning the hypotheses of the work is crossed out. I found that the foreword had been similarly crossed out in the copy in the Lidzbark library of the bishop of Varmia. This copy was sent by Rheticus to Tiedemann (In Collegii Braunsbergensis societatis Jesu Bibliotheca, reperi exemplar Copernici Noribergensis editionis, transmissum olim Georgio Donnero Canonico Varmiensi a Rhetico cum subscriptione tali: "Reuerendo Domino Georgio Donder Canonico Varmiensi, amico suo, Joachimus Rheticus d. d." Donderum nominat Germanico idiomate eum, quem latina forma Tidemannus Donnerum uocat. In eo exemplari tota praefatio ad Lectorem de Hypothesibus operis cancellata est. Similiter can-

> cellatum reperi in exemplari Heilspergensi Bibliothecae Reuerendissimi D. Varmiensis. Atque hoc exemplar fuit a Rhetico missum Rmo. Tidemanno; *MK*, pp. 652-653; see also Plate 4).

49. On the title page of his copy of the first edition of the *Revolutions* (now Jagiellonian Library, Cim. 8288; photocopy in Gansiniec, "Tytuł," cited in fn. 28, above), Brożek wrote: "The words *orbium coelestium* are deleted in the Frombork library copy, corrected by Bishop Tiedemann" ("TO orbium coelestium cancellatum est in exemplari Varmiensis bibliothecae emendato per Tidemannum episcopum"). This statement by Brożek was not known when Edward Rosen said (incorrectly) that Brożek "made no mention of any alteration of the title" of Copernicus' *Revolutions* ("The Authentic Title of Copernicus' Major Work," *Journal of the History of Ideas*, IV [1943], 465). In his Memoranda Brożek reported that in Lidzbark he found one of the two copies of the *Revolutions* sent by Rheticus to Giese: "In exemplari Heilspergensi inscriptio talis; 'Reverendissimo in Christo patri Tidemanno Gisio, episcopo Culmensi, Domino suo clementissimo, Joachimus Rheticus d. d'" (*MK*, p. 652). Unfortunately, this Lidzbark copy and also the Frombork copy, sent by Rheticus to Giese, have not been found.

50. Brożek wrote in his Memoranda:

> Andrew Zagórny, canon of Varmia, while going through the poems of Johannes Dantiscus, Eustachy Knobelsdorf, and Andrew Krzycki, which are preserved in Lidzbark, found a letter written in Copernicus' own hand" ("Reverendus Dominus Andreas Zagorny, Canonicus Varmiensis, cum euoluerat poemata Joannis Dantisci, Eusthatii a Knobelsdorff et Andreae Cricii, quae habentur Heilspergae, reperit epistolam manu ipsius Copernici scriptam"; *MK*, p. 653; see also Plate 4).

51. Jerzy Drewnowski, "The Lost Letters of Copernicus," series *Studia Copernicana* (Wrocław), in press, attempts to reconstruct this correspondence, which presumably dealt with the reasons for Copernicus' long hesitation to publish his major work. Drewnowski's springboard is Brożek's marginal note (1566 Basel edition of the *Revolutions*): "Habeo plures quam XX epistolas Tidemanni Gisii ad Copernicum huius argumenti" (*MK*, p. 656).

52. Most of these letters are now lost. However, Brożek's copy of Copernicus' letter to Dantiscus of 11 January 1539 was recovered in his Memoranda and printed in the 1854 Warsaw edition of the *Revolutions*. See Plate 4.

53. See Ch. III, 36.

54. The two most widely accepted legends concocted by Brożek about Copernicus are: (1) authorship of *Septem sidera*, and (2) construction of the aqueduct bringing water from the little river Bauda to the ca-

thedral hill of Frombork. For a discussion of Brożek's mythopoeic activity see Jeremi Wasiutyński, *Kopernik, twórca nowego nieba* [Copernicus, Creator of a New Heaven], (Warsaw, 1938), pp. 517-527; hereafter Wasiutyński.

55. See Appendix XVII.

56. See Appendix VI.

57. *Ibid.*

58. It is now known that Copernicus was not the author of *Septem sidera*, a question discussed in Appendix XVIII.

59. Kobylin is a town in Great Poland (Wielkopolska in Polish). The name Kobylin is derived from Polish "kobyła" (mare), cognate with Latin *caballa*. According to Grimm, *Deutsches Wörterbuch*, V, col. 1540, the etymology of the German word Köbel (or Kobel) may be similarly traced (Kobel = *equa*). In this meaning of the word, "Kobel" has almost completely dropped out of modern German.

60. Josef Benzing, *Jakob Köbel zu Oppenheim, 1494-1533* (Wiesbaden, 1962), p. 12.

61. *Ibid.* Köbel's writings nos. 124-134.

62. Prowe, I^1, 150: "ein ehrsamer Deutscher, aus Heidelberg gebürtig und zu Oppenheim als Stadtschreiber verstorben." See also Benzing, *Jakob Köbel*, pp. 7-12.

63. Josef Benzing, *Die Buchdrucker des 16. und 17. Jahrhunderts im deutschen Sprachgebiet* (Wiesbaden, 1963), in *Beiträge zum Buch- und Bibliothekwesen*, vol. 12, pp. 351-352; see also Gustav Toepke and Paul Hintzelmann eds., *Die Matrikel der Universität Heidelberg*, I (Heidelberg, 1884), 362, and II (1886), 519.

64. See Ch. III, 37-39, above; see also Plates 2a, 2b, 2c.

65. "Albertus Petri Bukouianus, dioc. Posnaniensis" entered the Jagiellonian University in the spring of 1540 (*Album*, II, 300). In 1542 he received the BA degree (*Statuta*, p. 199). All the contemporary sources (i. e. *Album*, *Statuta*, *Acta rectoralia*) refer to him as Albert de Buk or Bukouianus. However, he called himself Caprinus (of the goat?) when he published his 1543 prognostication. Aleksander Birkenmajer suggests that "Caprinus" may have been a Latinized form of a family name "Koziołek" ("Uniwersytet krakowski jako międzynarodowy ośrodek studiów astronomicznych na przełomie XV and XVI stulecia" [University of Cracow as an International Center for Astronomical Studies at the Turn of the Fifteenth - Early Sixteenth Century], *Odrodzenie w Polsce* (Renaissance in Poland), II^2 (Warsaw, 1956), 368; see also *Etudes*, IV, 489.

66. Dedicated to Samuel Maciejowski, bishop of Płock, who became

bishop of Cracow in 1546 (Conrad Eubel, *Hierarchia Catholica Medii Aevi*, III [Münster, 1910], 196; reprinted Padua, 1960).

67. Complete Latin text in Appendix VIII. See also Plates 2c and 2d. Albert wrote the dedication at the end of September 1542, and therefore it is likely that by then he had heard about Copernicus' *De lateribus et angulis triangulorum, tum planorum rectilineorum, tum sphaericorum* (On the Sides and Angles of Plane Rectilinear and Spherical Triangles), which was published in Wittenberg earlier that year. Albert may have also seen a letter or letters written by Copernicus to a friend or friends in Cracow, concerning the forthcoming publication of the *Revolutions*. Such letters were once in Brożek's hands (according to Starowolski's 1627 biography of Copernicus), but have since disappeared.

According to Bieńkowska, Albert writes "as if he knew Copernicus personally and was in contact with him" (Barbara Bieńkowska, *Kopernik i heliocentryzm w polskiej kulturze umysłowej do końca XVIII wieku* [Copernicus and Heliocentrism in Polish Intellectual Life until the End of the Eighteenth Century], series *Studia Copernicana III*, Wrocław, 1971, p. 94). There is no evidence that the young astrologer and Copernicus ever met or were in contact with each other. Albert's dedication shows clearly his admiration for Copernicus, the illustrious alumnus of the Jagiellonian University. Had Albert known Copernicus personally, he undoubtedly would have said so instead of merely stating that he mentions him "out of respect" (*honoris causa*).

68. "Andreas Pauli de Cobilino, dioc. Gnesnensis" was admitted to the Jagiellonian University on 10 July 1518 (*Album*, II, 186). The rector at the time was Matthew of Miechów. Andrew received the BA degree in 1520, and the MA degree in 1531 (*Statuta*, pp. 170, 184). Because Andrew of Kobylin was also known as Glaber, Barycz conjectured that his family name was Łysy or Łysek (i. e. bald; *PSB*, VIII, 28). Wiktor Wąsik, *Andrzej Glaber z Kobylina, problematysta polski* (Warsaw, 1916), p. 15, not realizing that *glaber* is a Latin word for "bald," and does not exist in the German language, assumed that Andrew was of German extraction on account of his "German surname Glaber."

69. Andrew of Kobylin, a well-known author in his own right, in 1535 translated into Polish the very popular treatise by Matthew of Miechów entitled *Tractatus de duabus Sarmatiis, Asiana et Europiana* (first edition, Cracow, 1517; Polish title: *Polskie wypisanie dwojej krainy świata*).

70. At that time there were two such chairs in existence at the Jagiellonian University. For their history see *Etudes*, IV, 456, 470-471.

71. Many of the *Iudicia* published by the Cracow astronomers enjoyed great popularity all over Europe, particularly in Germany (*Etudes*, IV, 476). Presumably Andrew had his eye on the German-reading market, for his 1542 prognostication was written in German (*PSB*, VIII, 29). Its title is: "Newe Pronostica auf diss MDxxxxij Jar durch Magistrum Andream von Cobylin inn der namhafften Vniuersität zu Cracaw, mit son-

derlichem fleiss gepracticiert vnd zugericht ..." (Estreicher, *Bibliografia polska*, XVII [1888], 156).

72. Barycz, *Historja*, pp. 269-270; *Monumenta Poloniae typographica XV et XVI saeculorum*, Jan Ptaśnik ed., I (Lwów, 1922), nos. 489-495.

73. *Monumenta, loc. cit.*

74. *Ibid.*, no. 489. The fine corresponded to the royalty paid to the author of a *Iudicium*.

75. *Ibid.*, no. 490. Stanisław Estreicher, "Sądownictwo rektora krakowskiego w wiekach średnich" [Judicature of the Cracow Rector in the Middle Ages], *Rocznik Krakowski*, Stanisław Krzyżanowski ed., IV (Cracow, 1900), 255:

> In 1491 ... in the supplement to the rights and privileges of the Jagiellonian University, Cardinal Frederick gave the Rector Matthew of Kobylin permission to excommunicate disobedient members of the academic community (*rebelles et inobedientes*) or impose other ecclesiastical censures on them .... In 1512 Bishop Jan Konarski went even further ... for he permitted the rectors to summon to their court ... outsiders not ... under their jurisdiction. The rectorial court could not try the case, however, without summoning the outsiders.

76. According to this judgment of 7 January 1543, the rector

> nullam in cives Cracovienses iurisdictionem competentem habet nec etiam in praesenti casu imprimendorum Iudiciorum astrologicorum, maxime, cum illa minime sapiant aliquam haeresim (*Consularia Cracoviensia*, p. 156, reprinted in *Monumenta*, p. 494).

77. *Ibid.*, no. 495.

78. Wąsik, *Andrzej Glaber*, p. 10.

IV

STAROWOLSKI'S BIOGRAPHIES OF COPERNICUS: THE UNRESOLVED ISSUES

The 1627 version of Starowolski's biography of Copernicus contains some statements, the truth or falsity of which is still being discussed. For example, was Copernicus a pupil of Albert of Brudzewo?[1] This question has not yet been definitively answered. Nevertheless, an affirmative response has often appeared in the literature. For instance, recently it was said that "Copernicus first learned humanistic astronomy from Albert Brudzewski."[2]

This statement goes back to Starowolski's 1627 biography of Copernicus. Since it was not in the 1625 biography, it may have been taken by Starowolski from Brożek, who asserted in various notes made about the year 1618 that Albert of Brudzewo was a teacher (*praeceptor*) of Copernicus.[3] Brożek did not cite any documentary evidence to support his assertion that Albert was Copernicus' teacher. Although Albert did not teach astronomy while Copernicus was a student at the University of Cracow,

> the question may be asked whether a master fond of astronomy would not take under his wings a young student showing a special in-

> terest in that subject. As was the case with Conrad Celtes, Albert may have tutored Copernicus in astronomy privately.[4]

The institution of the guidance counselor existed at the University of Cracow:

> One month before a student was officially enrolled in the university and his name was entered on the roster, he had to choose one of the masters, under whose care he was to study and whom he was to consult.[5]

Hence, an entering student interested in astronomy may have approached a famous teacher of that subject, even though that teacher no longer gave any public lectures in that field. While Copernicus was a student in Cracow, Albert taught only Aristotle.[6] Did Copernicus attend his classes? Did Copernicus receive private instruction in mathematics from Albert?[7]

The lecturers at the Jagiellonian University while Copernicus was a student there are recorded in *Liber diligentiarum*. Thus, we know the names of all the professors in his time, and the titles of their courses. But we do not know with certainty what courses he took with which professors.

On the other hand, Copernicus was unquestionably affected by one of the professors, Jan of Głogów (ca. 1445-1507).[8] During the years 1491-1495 Jan of Głogów taught grammar, logic, and Aristotle's *De anima*.[9] His manuscript "Disputationes in Metaphysicam Aristotelis magistri Joannis Glogoviensis,"[10] composed toward the end of the fifteenth century, was clearly intended for students' use at the Saturday dis-

cussions (*Actus sabbativi*).[11] On fol. 2[r] of this manuscript, Jan of Głogów refers to "ille Hermes antiquus Trimegistus."[12] The word "Trimegistus" is clearly misspelled, for the name of that mythical figure is Hermes Trismegistus (Hermes Thrice Greatest, in Greek). Copernicus also used this incorrect form in his *Revolutions*, Book I, Chapter 10.[13] At the time of writing the *Revolutions* Copernicus knew Greek[14] and therefore we would expect him to use the correct prefix "tris." But, in all likelihood Copernicus repeated this mistake after Jan of Głogów. The latter made this error in a discussion of Aristotle's *Metaphysics*, a treatise which Copernicus knew well and from which he quoted.[15]

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Another unresolved question raised by Starowolski's biographies of Copernicus concerns the lampoon quoted at the beginning of the 1627 *Vita*. Who wrote this lampoon? What do the words "Iris, Pira, Lucas, Cornua dura" mean? "Lucas" unquestionably refers to Lucas Watzenrode, Copernicus' uncle. The other expressions, in like manner, designate three other persons.[16] "Iris," the Latin word for a rainbow, stands for Zbigniew Tęczyński, the subprefect (*starosta*) of Malbork. Tęczyński's surname is derived from "tęcza," the Polish word for a rainbow. He was hated

by the Teutonic Knights just as much as Lucas Watzenrode was. Similarly, "Pira" (pears) points to Jan Gruszczyński (1405-1473).[17] The name Gruszczyński is related to the Polish word "grusza," meaning a pear tree. The singular form *pirum* (Latin for a pear) was not used by the lampoonist, who chose the plural form *pira* in order to rhyme with *mira* in the second line of the lampoon, just as *dura* rhymes with *jura*. "Cornua dura," that is "hard horns," applied to Stanisław Ostroróg, whose name, in Polish, means sharp or hard horn. Both Gruszczyński and Ostroróg played an important part in negotiating the Peace of Toruń (1466), and like Tęczyński and Watzenrode, were regarded as enemies of the Teutonic Order.[18]

The lampoon should be viewed against the background of the Assembly of Poznań.[19] This met at the end of June 1510[20] in order to settle the dispute between the Polish King Sigismund I and the Grand Master of the Teutonic Order Frederick of Saxony over the latter's disregard of the conditions imposed by the Treaty of Toruń (1466).[21] Tęczyński, Gruszczyński, and Ostroróg had had a hand in negotiating the 1466 Treaty of Toruń, which the Teutonic Order deeply resented and tried to amend in 1510 during the Assembly of Poznań. Watzenrode was one of the most intransigent opponents of any amendment to that treaty and fought vigorously against the restoration of the rule of the Order over Royal Prussia.[22] Hence, it was only natural for the author of the lampoon to link him with the older enemies of the Order. In fact, Bishop

Watzenrode was regarded by the Knights as so fiercely Polish and so antagonistic toward them that the "Historia brevis magistrorum Ordinis Theutonici" remarked: "If the devil would cut him [Watzenrode] into the tiniest particles as if he were to be stuffed into a sausage, the Polish blood could still not be drained out of him."[23] The same document reports that the Knights pray to God each day that this devil incarnate [Watzenrode] should be removed from their midst, and if he lives any longer, should not devise any more evil.[24]

Only the two lines quoted from the lampoon by Starowolski have survived. The rest of it has vanished. An anti-Watzenrode lampoon was written by Wilhelm von Isenburg (1470-?), marshal of the Teutonic Order.[25] Unfortunately, only a part of that venomous writing is extant,[26] so that a positive identification with the lampoon cited by Starowolski is impossible. Yet in its theme Isenburg's lampoon seems to be almost certainly identical with the one cited by Starowolski, that is, it deals with Watzenrode's disregard for law and order. Isenburg says that the bishop

> does not like law or peace and does everything only for the sake of being able to say in case of damage caused by a robbery or murder: "you see, we have to suffer this calamity because of the Order. We will never have any peace as long as it [the Order] is in the country." He would not care if the suburbs of Gdańsk and Elbląg together with all the domiciles of his canons went up in flames, if only to stir up warfare.[27]

Isenburg's widely distributed lampoon was sent to Watzenrode by towns sympathetic to him, including Gdańsk. To the

City Council of Gdańsk, on 13 October 1511, Watzenrode wrote a letter of thanks, stating that he had already complained to the king about the pamphlet, and also intended to press his complaint elsewhere.[28]

Wilhelm von Isenburg believed in the might of the pen. He wrote to Erasmus: "If I could not rout my enemies with the pen, I would pursue the matter with the sword."[29] Against Watzenrode, the marshal used his pen, but by the time he drew his sword Watzenrode had already died. An account of his death was written by Paul Deusterwald (ca. 1470-ca. 1518-1520),[30] Watzenrode's chancellor from 1496 to 1512. According to Deusterwald,

> the Teutonic Knights regarded the bishop as a mortal enemy of their Order and lived in constant dissension with him. Moreover, Wilhelm von Isenburg [Eysenberg], marshal of the Order, published shortly before the bishop's death an infamous and most impudent lampoon about him.[31]

This lampoon may have contained the couplet quoted by Starowolski in his 1627 biography of Copernicus.

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In his *Narratio prima*, Rheticus places Copernicus in Rome, about the year 1500, as "professor mathematum, in magna scholasticorum frequentia, & corona magnorum virorum et

artificum in hoc doctrinae genere,"[32] Rheticus' use of the term "professor" was understood by Müller who, in his biography of Copernicus, reported that the latter "Mathesin publice docuit" (taught mathematics publicly). Starowolski, too, understood the term correctly, for he wrote that in Rome Copernicus "explained (*explicavit*) astronomy to a multitude of auditors." A generation later, however, Pierre Gassendi misinterpreted Rheticus' *professor* in an institutional sense by mistakenly declaring that Copernicus was made a professor of mathematics (*factus Mathematum Professor*).[33] Gassendi's blunder was made worse by Jan Śniadecki (1756-1830), who asserted that Copernicus received the chair of astronomy at the University of Rome,[34] an assertion repeated about 60 years later by Adryan Krzyżanowski.[35] Krzyżanowski adds that this statement (Copernicus was a professor of astronomy at the University of Rome) is taken from the writings of Rheticus, and that it is repeated by the eminent Italian scholar Girolamo Tiraboschi (1731-1794).[36] Even worse is Gansiniec's pronouncement that while in Rome, Copernicus became acquainted with Roman astronomers, and this accounted for his ability "to continue his astronomical studies and observations in their presence."[37] Gansiniec imagined that the observation of the lunar eclipse by Copernicus in Rome on 6 November 1500 was made in the company of the learned "Roman astronomers and astrologers."[38] Soon after Gansiniec published this interpretation of Rheticus' statement, his interpreta-

tion was enthusiastically hailed as a "regeneration of the data."[39] Bieńkowska and Biskup recently repeated Gansiniec's erroneous conjecture. According to Bieńkowska, Rheticus was read carelessly and thus the reference to "Copernicus' sojourn among the Roman scholars with whom he conducted astronomical observations" was erroneously interpreted to mean that he "lectured in Rome on astronomy."[40] Similarly, Biskup stated that "Nicholas Copernicus as Professor of Astronomy (*mathematum*) conducts observations among a group of students and experts."[41] This vivid description of Copernicus' public observations is even more imaginative than Rheticus' verbal account of Copernicus lecturing in Rome as visualized in the famous painting by Wojciech Gerson (1831-1891).[42] It is sad, however, that Biskup's assertion is based on a misunderstanding of Rheticus' statement, which was understood correctly by Starowolski.

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In his 1627 biography, but not in the 1625 version, Starowolski referred to a "certain schoolmaster in Elbląg, who with melodramatic malice in the theatre derided Copernicus' views about the motion of the earth." This schoolmaster, not named by Starowolski, was identified afterwards as Wilhelm Gnapheus (Willem van de Voldersgraft, 1493-1568),[43]

a Protestant who fled persecution and arrived in Elbląg in August 1531.[44] Four years later, Gnapheus became the first rector of the newly founded Gymnasium of Elbląg.[45] In this capacity he produced several school plays, and also a dialogue entitled *Morosophus*, in which he ridiculed astrologers. Later on he remade the dialogue into a comedy bearing the same title.[46] L. A. Birkenmajer[47] and Wasiutyński[48] quote excerpts from that comedy in an attempt to show that it makes fun -- however slight -- of Copernicus and the heliocentric theory. However, Gnapheus' characterization of the garrulous "astrologaster" only very remotely resembles Copernicus. Hence, it has been suggested that the earlier version of the *Morosophus*, now lost, contained a sharp attack on Copernicus, but that this attack was softened in the later version, when Gnapheus' attitude toward Copernicus underwent a radical change, possibly under the influence of Rheticus;

> Gnapheus, in the printed version of *Morosophus*, tended to minimize considerably the attack against Copernicus, possibly due to [sic!] the influence of George Joachim Rheticus, residing in Frombork in the years 1539-1541 ...[49]

The above is an attempt to explain why Gnapheus, who made fun of Copernicus' theory, gave Copernicus' disciple Rheticus a copy of the 1541 edition of the *Morosophus* with the inscription "to his true friend" (*amico suo syncero*).[50]

Some researchers explore the possibility that Brożek, who on occasion proved himself to be an unreliable informant,

incorrectly transmitted the content of Giese's letters[51] and transformed a quasi-theatrical performance into a regular stage play. For during the February 1531 carnival, the citizens of Elbląg were entertained by a *Fastnachtspiel* which made fun of the Bishop of Varmia Maurice Ferber and his canons.[52] Bishop Ferber was so upset about this extraordinarily malicious masquerade that he complained not only to the Council of Elbląg but also to the Bishop of Cracow Piotr Tomicki and to the Royal Prussian Diet in Malbork.[53] Carstenn, the historian of Elbląg, sees Copernicus as a person mocked by the masqueraders.[54] This explanation has the effect of completely exonerating Gnapheus, who arrived in Elbląg in August 1531[55] and therefore could not have been responsible for a performance which took place several months before his arrival. But if Giese's statement was correctly reproduced by Brożek and transmitted to Starowolski without any alteration, then Gnapheus staged an anti-Copernicus play but later became friendly with Rheticus, a friendship which he himself recorded when he gave a copy of his *Morosophus* to Rheticus.[56]

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When Starowolski wrote the biography of Copernicus as published in 1625, he said nothing about any opposition to

the great astronomer. But after receiving some information from Brożek, in the next edition he mentioned Julius Caesar Scaliger, Jean Bodin, and Cyprian Leovitius as anti-Copernicans.[57]

Julius Caesar Scaliger (1484-1558),[58] a renowned author, in a widely circulated book demanded that certain "writings should be expunged or their authors whipped."[59] In the margin Scaliger put Copernicus' name in italics.

Why did Starowolski include Cyprian Leovitius among the foes of Copernicus? This question was raised for the first time by Rosen, who observed that Leovitius' name did not appear "in the long list of anti-Copernicus writers compiled by the immensely erudite Jesuit astronomer Giovanni Battista Riccioli."[60] In addition, Rosen also found that Leovitius, in his study of eclipses, "five times called Copernicus a most famous mathematician."[61] Rosen therefore exhorted scholars to search for anti-Copernicus expressions in Leovitius. His call was answered by Aleksander Birkenmajer, who showed that although Leovitius politely called Copernicus a most famous mathematician, nevertheless he expressed doubts about the correctness of his tables.[62]

Starowolski's third opponent of Copernicus was Jean Bodin (1529 or 1530-1596). Whereas Leovitius expressed dissatisfaction with Copernicus' tables, Bodin praised them. In mentioning "errors of Alphonsus," Bodin clearly meant the Alfonsine Tables, since he referred to "the table of Alphonsus (the euident error of whom *Copernicus* hath declared."[63]

On the other hand, Bodin vehemently opposed Copernicus' basic astronomical ideas. Thus Bodin contended that if Copernicus is right about the earth's motion,

> all the foundations of physics must crumble .... No one who is in his right mind or who has had the slightest training in the physical sciences will ever believe that the dense and solid earth with its heaviness and weight simultaneously moves up and down, about its own center, and around the sun, while performing a libration.[64]

Nevertheless Bodin did not know Copernicus' *Revolutions* well, for he confused it with Rheticus' *Narratio prima*. Thus he says:

> Now as for that which *Copernicus* (the great Astrologer of his time) saith, the changes and ruines of kingdomes and Commonweales, to depend of the Eccentrique motion of the earth ...[65]

The foregoing statement, misattributed to Copernicus by Bodin, was actually made by Rheticus. In his *Narratio prima* Rheticus included a chapter entitled "The Kingdoms of the World Change with the Motions of the Eccentric" ("Ad motum eccentrici monarchias mundi mutari").[66] Bodin's misattribution of Rheticus' astrological statement to Copernicus suggests that Bodin did not know either of these two writers well. There are no astrological statements in Copernicus, whereas Rheticus' writings are full of them.

*

Among the learned men who were Copernicus' friends, Starowolski enumerated Tiedemann Giese, Johannes Dantiscus, Bernard Wapowski, Nicholas of Szadek, and Martin of Olkusz.

It is undisputably true that both Giese and Wapowski were Copernicus' friends throughout their lives. On the other hand, Dantiscus not only did not remain Copernicus' friend to the very end, but, in a most startling about-face, he became his fierce enemy. From Copernicus himself we learn that his friendly relations with Dantiscus went back to their youth. In a letter of 8 June 1536 to Dantiscus, at that time bishop of Chełmno, Copernicus declined an invitation to the wedding of a female relative of Dantiscus. Copernicus excused himself by explaining that he could not leave Frombork, where he was occupied with a matter entrusted to his care by his superior, the bishop of Varmia. "I received from Your Most Reverend Lordship," wrote Copernicus,

> a most kind and gracious letter, reminding me of that familiarity and friendship which I formed with Your Reverence while I was still young. I perceive that this cordiality still endures in a flourishing condition, as far as Your Reverence is concerned.[67]

Copernicus asked the bishop to continue to have the same attitude toward him as before, despite his inability to accept the invitation. He added that a "meeting of the minds is usually more important than a physical meeting."[68]

But the "meeting of the minds" between Copernicus and Dantiscus was gone in 1538. In that year Dantiscus, who

in the meantime had become bishop of Varmia,[69] embittered Copernicus' old age by forcing him to dismiss his housekeeper, Anna Schilling.[70] Canon Andrew Zagórny, while accompanying Brożek in the latter's search for Copernicana still preserved in the Varmian libraries, found in the Lidzbark library a letter, dated Frombork 11 January 1539, and sent by Copernicus to Dantiscus.[71] In the first sentence of that letter Copernicus informed the bishop: "I have already done what I should not or could not neglect to do with any justification" ("Feci iam, quod nullo iure omittere debui vel potui").[72] The letter maintained a friendly tone throughout, and gave Brożek no indication of any tension between the bishop and his canon. Brożek apparently did not know that those few seemingly innocuous words referred with deliberate vagueness to Copernicus' compliance with Dantiscus' order that Anna Schilling must be dismissed. Moreover, Brożek probably did not see the letter which Felix Reich, canon of Varmia, dispatched to Dantiscus on that very same day (11 January 1539).[73] It is quite clear from Reich's letter that he was unaware of the fact that Anna had already left Copernicus' residence.[74] Hence Reich, as an ally of the bishop, was preparing an administrative proceeding against Copernicus (and two other canons) in order, as he says, "to remove the scandal present in the Church" of Varmia ("de amovendo apud ecclesiam scandalo").[75] Reich's letter reached the bishop's

castle on 15 January.[76] Then on 23 January Reich wrote to Dantiscus again.[77] This letter shows that the bishop, with the help of his canon, intended to bring Copernicus and Anna into court. Neither Brożek in his Memoranda nor Starowolski in his 1627 biography of Copernicus hides the enmity encountered by Copernicus in various circles.[78] Hence Brożek may not have understood the concealed reference in Copernicus' 11 January 1539 letter ("feci iam ... potui") to Dantiscus. Moreover, Brożek may never have seen Reich's letters of 11 and 23 January 1539 to Dantiscus nor any other correspondence dealing with Copernicus and Anna.[79] If so, Brożek could very well believe that Copernicus and Dantiscus remained friends to the very end.

As we have already seen, in his 1627 biography of Copernicus Starowolski names five friends of the astronomer. Three of them (Giese, Wapowski, Dantiscus) were not professional astronomers.[80] But the other two, Nicholas of Szadek and Martin (Biem) of Olkusz, were the "Cracow astronomers with whom Copernicus conferred about eclipses and eclipse observations."

In Book IV, Chapter 7, of his *Revolutions* Copernicus says that

> Frombork, where I generally made my observations, is located at the mouths of the Vistula River and lies on the meridian of Cracow, as I learn from lunar and solar eclipses observed simultaneously in both places.[81]

Copernicus' allusion to observations made simultaneously in

both places proves beyond any doubt that Copernicus was in touch with an astronomer (or astronomers) in Cracow. Whether Szadek and Biem were the persons in Cracow who performed those prearranged observations and provided Copernicus with the necessary data, we do not know. But Szadek and Biem were at the time the leading astronomers in Cracow, and there are some indications which support Starowolski's assertion that these two men were Copernicus' correspondents, although neither of them would have been his fellow-student. Chronology was not Starowolski's strong point.

Nicholas of Szadek (1489-1564), also known as "Prokopiades,"[82] enrolled at the Jagiellonian University in the winter of 1504,[83] that is, about a decade after Copernicus left that institution. Szadek received his BA degree in 1507 and his MA degree in 1512.[84] This eliminates the possibility of his having been Copernicus' fellow-student.

Similarly eliminated may be the same claim made on behalf of Martin Biem of Olkusz (1470-1540).[85] Biem entered the Jagiellonian University during the winter semester 1486-1487,[86] became BA in December 1488, and MA in 1491.[87] At the time when Copernicus became a student at the Jagiellonian University (winter semester 1491-1492), Biem was already embarked on his teaching career.[88] On the other hand, Wapowski, whom Starowolski lists only as Copernicus' friend, was actually his fellow-student. For, "Bernhardus Stanislai de Radochonycze dioc. Cracoviensis" entered the University of Cracow during the summer semester of 1493,[89] that

is, three semesters later than Copernicus, and while the latter was still in Cracow.

L. A. Birkenmajer believed that during his studies at the Jagiellonian University Copernicus attended at least one course offered by Biem, namely, the course listed in the *Liber diligentiarum* as "Kalendarium mgri Ioannis de Monte regio,"[90] Birkenmajer insisted that

> it is a conclusion bordering on impossibility that our scholar [Copernicus], during his few years of Cracow studies would not attend the lectures on "Kalendarium mgri Joannis de Monte regio et Ephemerides XV annorum," that is, the *only* work of the already famous Regiomontanus ... which was expounded at the University of Cracow at the turn of the century.[91]

But even if we assume that Copernicus did not attend any of the courses taught by Biem, or that he and the young magister had no occasion to meet during the years 1491-1494 in Cracow, there still remains the possibility that before the two astronomers corresponded with each other, they were brought together through the good offices of their common acquaintance, Bernard Wapowski. The contacts between Copernicus and Wapowski after 1494 are firmly established by means of extant letters. That they corresponded with each other is known from Copernicus' letter of 3 June 1524 to Wapowski.[92] In the opening sentence of that letter Copernicus says:

> Some time ago, my dear Bernard, you sent me a little treatise on *The Motion of the Eighth Sphere* written by John Werner of Nuremberg. Your Reverence stated that

> that work was widely praised and asked me to give you my opinion of it.[93]

Moreover, Copernicus and Wapowski saw each other at least once after leaving the University of Cracow. In 1535 Wapowski sent to a Viennese diplomat a copy of an almanac computed by Copernicus on the basis of his new tables. In a covering letter, dated Cracow, 15 October 1535, Wapowski asked the diplomat to print that almanac in Vienna, or to make copies of it and send them to European astronomers. Wapowski added that Copernicus was unable to finish the computations on account of his [Wapowski's] imminent departure from Frombork.[94] Although Copernicus' almanac was never printed, Wapowski's effort to have it published shows how close their friendship was.

The contacts between Wapowski and Biem are established by two sources. First, Biem's notes made on the pages of Stoeffler's *Almanach nova* for the years 1499-1531[95] show conclusively that Biem was familiar with Wapowski's astronomical observations. For example, under the date of 20 October 1506, after remarking that when King Alexander died, his brother Sigismundus, the fifth son of the late King of Poland Casimir [Jagiellończyk], became the Grand Duke of Lithuania,[96] Biem added:

> Ascendente 12. gradu Sagittarij et in medio celi 16. Libre secundum annotacionem Domini Bernhardi Vapovssky. Qui sublimacionem illam annotauit fuisse hora 18 uel circa, alias hora 22 minuto 40 post meridiem.[97]

Secondly, from the notes made by Nicholas Sokolnicki, a Cracow professor and physician, we learn about a personal contact between Biem and Wapowski. Sokolnicki kept a diary in Stoeffler's *Ephemerides* for the years 1507-1531.[98] In one of his entries, dated 27 January 1530, Sokolnicki stated that on that day he, Biem, and Wapowski conferred with the king about the choice of a propitious date for the coronation of the Crown Prince Sigismundus Augustus [that coronation took place on 20 February 1530].[99] This note proves that Biem and Wapowski knew each other personally.

In the margin opposite the date of 2 June 1509, where the *Almanach nova* shows the moon in opposition, Biem noted: "Eclipsationis principium 2^h31^m, Medium 3^h57^m, finis 5^h23^m."[100] This is the same lunar eclipse that was observed by Copernicus, according to the statement he makes in Book IV, Chapter 13, of his *Revolutions*.[101] L. A. Birkenmajer believed that Biem did not actually observe, but only computed, this eclipse.[102] However, Biem's note concerning the lunar eclipse which occurred on 5 September 1522 seems to indicate that he performed the observation;[103] Copernicus reports having made this observation in Book IV, Chapter 5, of the *Revolutions*.[104] Since Szadek in his *Judicium astronomicum* for the year 1523[105] says that on 5 September 1522 he too observed the eclipse of the moon,[106] it may very well be that the lunar eclipse of 5 September 1522 was one of those observed and discussed by the three astronomers, Copernicus, Szadek, and Biem.

NOTES TO CHAPTER IV

1. According to *Album*, I, 194, "Albertus Stephani de Brudzewo" entered the Jagiellonian University during the winter semester of 1468-1469. In the *Statuta*, p. 94, however, his name appears as "Albertus blăr de Brudzewo." No satisfactory explanation of "blăr" has been advanced as yet. But it has been interpreted as a surname (Blar, Blarer, Brudler). For example, Prowe, I[1], 137, refers to "Albertus Blar de Brudzewo (abgekürzt gewöhnlich Brudzewski genannt)," while Zinner, *Entstehung*, p. 99, prefers "Albert Blarer von Brudzewo."

2. Raymond J. Seeger, "Introductory Remarks," *Vistas in Astronomy*, XVII (1975), 139. See also John D. North, "The Medieval Background to Copernicus," *ibid.*, p. 14, fn. 36: "Copernicus was ... [a] pupil of a leading humanist, Albert Brudzewski."

3. *Stromata*, p. 84, fn. 1, citing Brożek's note on MS BJ 560: "Erat is [Albert of Brudzewo] praeceptor multorum praestantissimorum mathematicorum Nicolai Copernici, Bernardi Vapouii, Conradi Celtis ..."

4. Mieczysław Markowski, *Burydanizm w Polsce w okresie przedkopernikańskim* [Buridanism in Poland in the Pre-Copernican Times] (series *Studia Copernicana II*, Wrocław, 1971), p. 239.

5. Wiszniewski, IV, 296.

6. *Etudes*, IV, 488-489.

7. According to L. A. Birkenmajer (*Stromata*, p. 84), it would be strange if the future outstanding astronomer did not desire to become acquainted with the leading exponent of that science in Poland while there was an opportunity to do so. In addition, Albert of Brudzewo enjoyed the reputation of being a superb teacher. The testimony of the illustrious Cracow humanist, the Italian-born Filippo Buonaccorsi (1437-1496), better known as Callimachus, gives us a glimpse of Albert of Brudzewo as a teacher. Callimachus described Albert as a

> man who has studied mathematics for so many years that nothing established by the clear thinking of Euclid or Ptolemy escapes him. What escapes our eyes is publicly expounded by him to his pupils in such a way that they understand [the subject matter] as though they were seeing it under a very strong light; Callimachus' letter to Johannes of

> Arezzo, quoted by Jan Sommerfeld (Aesticampianus), *Modus epistolandi* (Vienna, 1515), p. C 2^b; homo mathematicae adeo a multis annis studiosum, ut nihil eum fugiat, quod vel Euclides vel Ptolemaeus claro quisque suo ingenio perlustravit; quaeque oculum nostrum fugiant, ita discentibus suis demonstrationibus in medium affert, ut luce clarius tanquam visa intelligant.

8. Jan of Głogów entered the University of Cracow in the spring of 1462, received the BA degree in 1465, and the MA degree in 1468. He came from Głogów, Silesia, and his surname was Schelynk (Schelling).

9. The list of lectures is available in the *Liber diligentiarum*, pp. 1830, and in Franciszek Karliński, *Żywot Kopernika* [The Life of Copernicus], (Cracow, 1873), Appendix III.

10. MS BJ 2453, Cracow.

11. *Stromata*, p. 121.

12. Photocopy of that folio reproduced on Plate 6.

13. *NCCW*, I, fol. 10^r, line 6.

14. Copernicus made two translations from Greek into Latin. In 1509, he published in Cracow, in the printing shop of Johannes Haller, his Latin translation of the Greek *Letters* written by the Byzantine historian Theophylactus Simocatta. As Edward Rosen points out, Copernicus' "Latin version of Theophylactus' *Letters* was the first independent translation of a Greek author to be printed in Poland, and thus constituted his modest contribution to the spread of humanism in his native land" (*3CT*, p. 337). In the manuscript of the *Revolutions*, fols. 11^v-12^v, we find Copernicus' translation into Latin of a Greek letter ascribed to a Pythagorean Lysis (for a full discussion of that letter see *NCCW*, II, 361-363; translation of that letter into English, *ibid.*, pp. 25-26).

15. In a private conversation with Professor Paul Oskar Kristeller I learned that the name of Hermes Trismegistus is spelled "Trimegistus" in some medieval manuscripts he inspected. Whether Copernicus ever saw such manuscripts is not known. On the other hand, Jan of Głogów's manuscript was in Cracow.

16. This interpretation of the lampoon was first advanced by Ignacy Polkowski, *Kopernikijana*, III (Gniezno, 1875), Dodatek II, 316. Polkowski's interpretation was disregarded by Bieńkowska, who translates "Iris, Pira Lucas, Hard horns" (*Iris, Pira Łukasz, Rogi twarde*; p. 205), and by Starnawski, who translates "Iris, Pira, Lucas-hard horns" (*Iris, Pira, Łukas-twarde rogi; Setnik*, p. 171).

17. For Jan Gruszczyński, see *PSB*, IX, 55-57.

18. For the relations between Tęczyński and the Teutonic Knights,

see Górski, pp. 48, 50.

19. Beilage IV, "Verhandlungen der Tagfahrt zu Posen 1510," in *Scriptores rerum prussicarum*, V, eds. Theodor Hirsch, Max Töppen, and Ernst Strehlke (Leipzig, 1874), 270-288.

20. It is probable that Copernicus accompanied his uncle, Bishop Watzenrode, to the Assembly of Poznań in 1510. See, for example, *Regesta*, nos. 61, 62, and Górski, p. 65.

21. *Akta Stanów Prus Królewskich* [Proceedings of the Estates of Royal Prussia], V^3, ed. Marian Biskup (Warsaw, 1975), nos. 231, 232; *Regesta*, no. 63.

22. Prowe, I^1, 368-369. For a debate over that issue see *Scriptores rerum prussicarum*, V, 271-272.

23. *Scriptores rerum prussicarum*, IV (Leipzig, 1870), 272: "si eum diabolus in partiunculas minutissimas secaret ita, ut farcimine claudetur, Polonorum sanguis ab eo velli non posset."

24. *Ibid.*, "vellet Deus, ut his carneus diabolus, quod in diem a Deo postulamus, a medio sublatus esset, nec si diutius viveret, plura mala adinveniret."

25. Short biography of Wilhelm von Isenburg in *Allgemeine deutsche Biographie*, XIV (reprint of 1882 ed., Berlin: Duncker & Humblot, 1969), 622-625. Isenburg's name was variously spelled as Eisenburg, Eisenberg, Ysenburg, etc.

26. Prowe, I^1, 369; Wasiutyński, pp. 217-218.

27. Prowe, I^1, 369, fn. *. Prowe (p. 371, fn. *) did not know how Gassendi found out about the lampoon. But Prowe himself listed among Gassendi's sources Starowolski's 1627 biography of Copernicus, which mentions the lampoon (p. 99, fn. **).

28. *Akta Stanów Prus Królewskich*, V^3, no. 319:

> Wir bedancken uns kegen E. E. von wegen ewr brive und obirschickten copyen, wiewoll wir vorhin dergleich schrifften aws unsern stetin von unsern lieben getrawen obirkomen hatten ... Wir haben uns bey Ko. Ma. der Schweren, unvorschemten und unworhafftigen schrifft groslich erclaget und wollen uns ouch ferner, wo es stath haben wirth, erclagen und getrawen zu gote,mit unser unscholt und gerechtikeyt weyter zu komen, wen unser fiende und yr anhang mit yrer getichter unworheit, domit sye sich bey Gote und der werlt werden mussen schemen und yres ungegrunten handels entsehen.

29. *Opus epistolarum Des. Erasmi Roterodami*, X, ed. Percy Stafford Allen (revised edition, Oxford, 1941), 38: " Si minus possem calamo profligare hostes meos, ferro rem gererem." See also *Briefe und Documente aus der Zeit der Reformation im 16. Jahrhundert*, ed. Karl and Wilhelm Krafft (Elberfeld, 1876), p. 207.

30. For a short biography of Deusterwald see *Altpreussische Biographie*, I (Königsberg, 1941), 129; see also Jan Oko, "Pawel Deusterwalt nieznany humanista XV wieku" [Paul Deusterwald, an Unknown Fifteenth-Century Humanist], *Ateneum Wileńskie*, VII (1930), 786-798.

31. Paul Deusterwald, "Memoriale domini Lucae," *Scriptores rerum warmiensium*, II, 170-171:

> Cruciferi eciam capitalem esse inimicum ordini suo episcopum rati in dissentione semper cum eo vivebant. Wilhelmus preterea de Eysenberg ordinis Marscalcus impudentissimum famosum libellum paulo ante mortem episcopi de eo edidit.

32. Facsimile of the 1540 Gdańsk edition of Rheticus' *Narratio prima* in *Milliaria VI* (Osnabrück, 1965), A 2^{V}. *3CT*, p. 111: " Copernicus lectured on mathematics before a large audience of students and a throng of great men and experts in this branch of knowledge." Numerous variations of this phrase appear in *Statuta* as descriptions of the audiences at university promotions. See for example p. 272, "in magna clarissimorum virorum corona," or p. 282, "in frequenti clarissimorum virorum corona."

The French translation of the *Narratio prima* renders the term "professor mathematum" as "il fut professeur de mathématiques," which leaves Rheticus' initial ambiguity intact; *Introductions à l'astronomie de Copernic*, introduction, French translation, and commentary by H. Hugonnard-Roche, E. Rosen, and J.-P. Verdet (Paris, 1975), p. 101.

33. Petrus Gassendi, *Opera omnia*, V (reprinted, Stuttgart-Bad Cannstatt, 1964), 499-500. According to Gassendi, Copernicus' fame in Rome equalled that of Regiomontanus, and as a consequence he was made a professor of mathematics.

34. Jan Śniadecki, speech delivered at the Jagiellonian University in 1782: "Pochwała Mikołaja Kopernika" [Praise of Nicholas Copernicus], reprinted in Jan Śniadecki, *Pisma filozoficzne* [Philosophical Writings], (Cracow, 1958), I, 152. Śniadecki further asserts that Copernicus resigned from the chair of astronomy in Rome because he wanted to divulge his ideas only from the "bosom of his native land" (p. 153).

35. Adryan Krzyżanowski, *Kopernik w Walhalli* (Warsaw, 1843), p. 6; reprinted in Polkowski, *Kopernikijana*, II (Gniezno, 1873), 111-119.

36. Girolamo Tiraboschi, *Storia della letteratura italiana*, VII (Milan, 1823), 589.

37. Ryszard Gansiniec, "Rzymska profesura Kopernika" [Roman Professorship of Copernicus], *Kwartalnik* (1957), 3:480.

38. *Ibid.*

39. Allan Kosko, "Erreurs et légendes," *Etudes copernicíennes*, I, ed. Stanisław Wędkiewicz (1955-1957), *13-16*:285. Kosko was obviously unaware that even a "philologue de profession" like Gansiniec can be guilty of misinterpreting an ambiguous Latin expression.

40. Bieńkowska, p. 207.

41. *Regesta*, no. 36.

42. See Plate 11.

43. This identification goes back to the nineteenth-century Polish historian Józef Szujski's 1880 Cracow lectures, published as *Odrodzenie i reformacja w Polsce* [Renaissance and Reformation in Poland], (Cracow, 1881), pp. 51, 160-161.

44. *Regesta*, no. 316, fn. 1.

45. Edward Carstenn, *Geschichte der Hansestadt Elbing*, 2nd ed. (Elbląg, 1937), p. 312. Burmeister misdated the beginning of Gnapheus' teaching in 1530 (*Rhetikus*, I, 63).

46. Gnapheus mentions the dialogue *Morosophus* when he transmits the 1541 revised version of that piece to Albrecht, duke of Prussia: "Lusimus ante annos aliquot Dialogum quendam ludicrum Morosophi titulo inscriptum" (*Stromata*, p. 235).

47. *Stromata*, pp. 236-237.

48. Wasiutyński, pp. 449-453.

49. *Regesta*, no. 445, fn. 1.

50. L. A. Birkenmajer sees in Rheticus a hypocrite pretending to be Copernicus' friend. In an emotional outburst Birkenmajer exclaims that "the stain of deception cannot be washed out from the garment that Rheticus wrapped about himself" (*Stromata*, pp. 239-240). From Polkowski, Birkenmajer borrowed the epithet "son of darkness" (*Kopernikijana*, II, 266). This was applied by Polkowski to the writer of the comedy, whom he was unable to identify. Birkenmajer, on the other hand, pinned this label on Gnapheus. Birkenmajer's judgments of Rheticus and Gnapheus were rejected by Burmeister: "Birkenmajer, ein sonst ernsthafter Forscher, hat sich hier von seinem Hass gegen das deutsche Luthertum hinreisen lassen, dieses unhaltbare Urteil über Gnapheus und Rhetikus zu sprechen;" *op. cit.*, I, 64. The title page of Gnapheus' *Morosophus*, showing this inscription (*amico suo syncero*) is reproduced in Wasiutyński, facing p. 448.

51. Starowolski clearly states that the information about the "ludimagister" and the play in which he derided Copernicus' geokinetic theory is taken from Giese's letters and not from the play itself.

52. Carstenn, *op. cit.*, pp. 311-312.

53. *Regesta*, nos. 309, 311-314. Biskup (no. 314) gives the name "Schissenteufel" to the man who denied having acted the role of the pope. According to Carstenn, his name was "Schiffenteuber."

54. Carstenn, *op. cit.*, p. 311. J. Lassota in "Wilhelm Gnapheus (1493-1568), twórca elbląskiego gimnazjum, dramaturg i reformator" [Wilhelm Gnapheus ..., the Founder of the Gymnasium in Elbląg, Playwright, and Reformer], *Rocznik Elbląski* (1963), pp. 56-60, maintains that Gnapheus did not attack Copernicus in any of his works. According to Lassota, Starowolski's statement about Copernicus being derided on the stage in Elbląg is only partly correct in that he was a subject of mockery, but not on a stage: that incident occurred during the Shrovetide carnival. Very likely Lassota relied on the old confusion between the word "ludus" (play), often used by Bishop Ferber in his complaints (see Ch. IV, 66, above), and "ludimagister" (schoolmaster).

55. *Regesta*, no. 316.

56. See Ch. IV, 65, above.

57. In *3CT*, p. 301, Rosen says that "in the first edition (Frankfurt, 1625) of his *Hekatontas*, Starowolski was so full of admiration for Copernicus that he gave no indication that there had ever been any opposition to the great astronomer." In 1625 Starowolski may not have known about the opposition, or he may have preferred to keep silent about it.

58. For a short biography of Julius Caesar Scaliger see *DSB*, XII, 134-136.

59. *Exotericarum exercitationum liber quintus decimus* (Paris, 1557): Exercitatio XCIX, part 2, fol. 142^{v}: "vel ipsa scripta spongiis, vel ipsi autores scuticis sunt castigandi." In the copy of the Frankfurt 1610 edition of Scaliger's work (now in the Jagiellonian Library, Philos. 730), p. 342, Brożek wrote in the margin: "Scaliger does not treat the matter in a philosophical manner" ("non philosophice a Scaligero tractatur;" *Etudes*, IV, 769-770).

60. *3CT*, p. 302. Rosen's article appeared originally in Polish translation by Aleksander Birkenmajer, *Kwartalnik* (1959), *4*:16-18. The list of anti-Copernican writers appears in Riccioli's *Almagestum novum* (Bologna, 1651), II, 291.

61. *3CT*, p. 302.

62. Aleksander Birkenmajer, "Czy Leovitius był przeciwnikiem Kopernika?" [Was Leovitius an Opponent of Copernicus], *Kwartalnik* (1959), *4*:19-34, especially pp. 29-31; French translation in *Etudes*, IV,767-778.

63. Jean Bodin, *The Six Bookes of a Commonweale*, facsimile of the 1606 English translation, ed. Kenneth Douglas McRae (Cambridge, 1962), pp. 439, 445.

64. Jean Bodin, *Universae naturae theatrum* (Lyon, 1596), pp. 580-582, quoted in Edward Rosen, "Galileo's Misstatements about Copernicus," *Isis* (1958), *49*:326.

65. Bodin, *Commonweale*, p. 454.

66. *3CT*, p. 121; Latin text in Prowe, II, 305.

67. Latin text in Appendix IX. See also Plates 7a and 7b.

68. *Ibid.*

69. Dantiscus was elected bishop of Varmia on 20 September 1537. *Regesta*, no. 373.

70. A letter of Felix Reich to Dantiscus, dated Frombork 11 January 1539, shows that Anna Schilling had a "lawful husband" ("legitimum virum habentem"). Biskup believes that Schilling was the surname of Anna's husband, not her father (Marian Biskup, "Sprawa Mikołaja Kopernika i Anny Schilling w świetle listów Feliksa Reicha do Biskupa Dantyszka z 1539 roku" [The Matter of Nicholas Copernicus and Anna Schilling in the Light of Felix Reich's Letters to Bishop Dantiscus in the Year 1539], *Komunikaty Mazursko-Warmińskie* [1972], *2-3*:373).

71. Latin text in Appendix X. For the copy of the letter made by Brożek see Plate 4.

72. *Ibid.*

73. The Latin text of this letter, mentioned in fn. 70, above, is reproduced in Appendix XI.

74. It is, however, possible that Felix Reich did not know about Anna's dismissal because she was still in Frombork, although perhaps not in Copernicus' residence. Canon Paweł Płotowski, another informer of Dantiscus, wrote to him on 23 March 1539 that "Doctor Nicholas' [housekeeper] sent her things ahead to Gdańsk, while she without them remains in Frombork" ("Doctoris Nicolai premisit res suas Gdanum, sola tamen aduc Warmie manet;" *MK*, p. 394).

75. Appendix XI.

76. According to Biskup, the date "XV Ianuarii," entered by another hand below the address of the 11 January letter, refers to the day on which the letter was received by Dantiscus.

77. Latin text in Appendix XII.

78. However, the possibility remains that Brożek, full of admiration for Copernicus, tried to suppress the fact that the great astronomer narrowly escaped prosecution on the ground of immoral conduct.

79. For example, see *Regesta*, nos. 403 and 404.

80. Wapowski, although not a professional astronomer, seems to have dabbled in that science as a hobby.

81. *NCCW*, II, 191. Latin text in *Nicolai Copernici opera omnia*, II (Warsaw/Cracow, 1975), 194:

> Omnia haec ad meridianum Cracoviensem, quoniam (Gynaetia), quae vulgo Frueburgum dicitur, vbi plerumque nostras habuimus observationes ad ostia Istolae fluuij posita, huic subest meridiano, vt nos Lunae Solisque defectus vtrobique simul obseruati docent.

82. Son of Prokop. For a short biography of Szadek see Barycz's article in *PSB*, XXI (Cracow, 1976), 138-140.

83. The entry in the *Album*, II, 92, reads: "Nicolaus Procopy de Schadek 4 gr." A later hand added: "Astrologus tandem teologus, decanus S. Floriani et canonicus Cracoviensis."

84. *Statuta*, pp. 147, 153.

85. Nevertheless, Starowolski's statement about Martin of Olkusz found many adherents. For example, Śniadecki in his aforementioned "Praise of Nicholas Copernicus " (Ch. IV, p. 63, and fn. 34, p. 79, above), while speaking about Albert of Brudzewo, said that the latter "had most famous students: Jacob of Kobylin, Nicholas Szadek, and Martin of Olkusz, who later became famous professors of mathematics and fellow-students of Copernicus" (Śniadecki, *Pisma filozoficzne*, I, 148). For a short biography of Martin Biem of Olkusz by Aleksander Birkenmajer see *PSB*, II (Cracow, 1936), 68-69; French translation in *Etudes*, IV, 717-720. See also Mieczysław Markowski, "Marcin Biem z Olkusza," *Krakowski krąg Mikołaja Kopernika* [The Cracow Circle of Nicholas Copernicus], *Copernicana Cracoviensia*, III (Warsaw/Cracow, 1973), 6-23.

86. *Album*, I, 277.

87. *Statuta*, pp. 102, 108. Next to "Mart. de Ilkusz" (p. 108), a later hand added: "collegiatus in maiori, s. theol. professor (factus a. 1517), prepositus S. Nicolai et vicecancellarius vniuersitatis."

88. *Liber diligentiarum*, p. 19.

89. *Album*, II, 24. For a short biography of Wapowski see Bożena Modelska Strzelecka, "Bernard Wapowski," *Krakowski krąg* (as above, fn. 85), pp. 25-66. Older, but still valuable, is the biography of Wapowski by Józef Szujski, "Kroniki Bernarda Wapowskiego z Radochoniec, kantora katedr. krakowskiego" [Chronicles of Bernard Wapowski of Radochońce, Cantor of the Chapter of Cracow], *Scriptores rerum polonicarum*, II (Cracow, 1874), pp. V-XXX.

90. *Liber diligentiarum*, p. 26.

91. *Stromata*, pp. 76-77.

92. Latin text in Prowe, II, 145-153, and 172-183. English translation in *3CT*, pp. 93-106.

93. *3CT*, p. 93. Prowe, II, 172:

> Cum pridem ad me mitteres, optime Bernharde, Johannis Werneri Nurembergensis, editum de "motu octavae sphaerae" opusculum, quod a multis laudari dicebas; petiit ex me Venerabilitas tua, ut ei nostram quoque sententiam de illo significaremus.

94. Photocopy of Wapowski's 15 October 1535 letter in *Regesta*, illustrations nos. 16 and 17.

95. Now in the Jagiellonian Library, Mathesis 1861.

96. *MK*, p. 458: "Sigismundus quintogenitus Kasimiri olim regis Polonie: post mortem fratris sui Alexandri: in Magnum Ducem Lithuanie sublimatus est ...."

97. *Ibid.*

98. Now in the Jagiellonian Library, Mathesis 1863.

99. *MK*, p. 459:

> Hic ad serenissimum regem Sigismundum Colloquium cum Martino doctore Ylkus et cum domino Wapowsky de hora formacionis regis Augusti habuimus.

By crowning his son while he himself was still alive, King Sigismund I facilitated the crown prince's future ascendancy to the throne of Poland.

100. *Ibid.*, p. 465.

101. *NCCW*, II, 199.

102. *MK*, p. 465.

103. *Ibid.*, p. 472.

104. *NCCW*, II, 188.

105. *Judicium astronomicum Mgri Nicolai de Shadek in studio Cracovien. Ad a. domini 1523 editum* may be found in the Jagiellonian Library, Mathem. 348 (*MK*, p. 474).

106. *MK*, *loc. cit.*: "Vidimus lunam defecisse in lumine quinta septembris anni transacti (1522) in 22 gra. piscium ...."

V

STAROWOLSKI'S BIOGRAPHIES EVALUATED

It is to Starowolski's credit that at a time when the Copernican system was under heavy attack from both theologians and astronomers, he dared to say that Copernicus is praised by the "world itself,... enlightened by him through his celebrated belief in the uninterrupted motion of the earth." And we may agree with Willy Hartner that "it is a cheap mode of entertainment to belittle Copernicus's merits because we know better today."[1] If looked at with the eyes of his contemporaries, his work presents itself as the most daring achievement that can be thought of. It demonstrated the possibility of finding new ways, other than the trodden ones and served as an incitement to later generations."[2]

NOTES TO CHAPTER V

1. Such belittlers include Arthur Koestler, author of the best-seller *The Sleepwalkers* (New York and London, 1959, reprinted 1964, 1968).

2. Hartner, "Copernicus, the Man," p. 422.

APPENDIX I

Simonis Starowolsci *Scriptorum polonicorum ἙΚΑΤΟΝΤΑΣ; seu centum illustrium Poloniae scriptorum elogia et vitae.* Frankfurt: Jacob de Zetter, 1625.

LXVII NICOLAVS COPERNICVS.

Condiscipulus vero suus Iacobus Cobilinius scripsit Astrolabij declarationem.

Non est quod in celebrando Nicolao Copernico desudem, quem ipse terrarum orbis, insigni illa, de motu terrae assiduo, sua opinione ab illo illustratus praedicat. Is Torunii in Prussia natus, sumptis in alma Vniuersitate Crac. Mathematicarum disciplinarum principiis, diuersas Germanorum Academias inuisit, tum & aliorum, vbi tum haec studia florebant. Carus in primis ob singularem eruditionem excellentibus in Borussia, viris, summaque dignitate praeditis; in his Joan. Dantisco Episcopo Varmiensi, & Io. Tidelmano Episcopo Culmensi, a quo postea Collegio Canonicorum Varmiensium adscriptus fuit. Vtque ad posteros etiam manaret suae scientiae

vtilitas, ad scribendum, quae recte cogitasset, obseruassetque, animum appulit, & adinuenit nouam, veteribusque incognitam astrorum supputationem, circiter annum 1540. Cuius, cum plurimos alios sectatores inuenit, tum e discipulis acutum illum suum Tychonem. Reuera enim vt Hercules Athlante laborante coelum sustinuit, ita ille Ioanne Regiomontano populari suo deficiente, motuum coeli doctrinam discipulis suis restaurauit, atque omnes sua industria Mathematicos plurimum iuuit. Tu plura de illo, vide apud Nicolaum Mulierium in Praefatione super *Revolutiones ipsius*. Reliqua manuscripta ipsius asseruantur in Bibliotheca Episcoporum Varmiensium, quae nuper reuidit clarissimus vir, D. Ioannes Broscius Ordinarius in Acad. Crac. Matheseos Professor cuius nunc prodiit *Arithmetica integrorum*, aliaque in dies expectamus, vti promiserat sub finem libelli illius.

Io. Regiomontanus Borussus insignis Mathematicus.

NICOLAI ZORAVII.

Iuppiter vt vidit quod mente Copernicus orbem
Contra naturae iura creasset homo.
Vt vidit coelum firma statione teneri
Currente & terra sidera stare bene.
Anxius atque memor quid possent bella Gygantum
Aut aliquem in terris fors superesse Deum
E cunctis quaerit Diuorum matribus an sit?
Quae tantum dicat se genuisse virum.
Non sumus illius Diuae dixere Tonanti
Sed Iagellonis docta palaestra parens.

IO. SCROBCOVICII.

Cur metam Lachesi non ponis dia Mathesis,
Omnia ad exactos quae reuocas numeros?
Conditor ecce tuus moritur. Qui tempora mensus
Debuit heu ipsis cedere temporibus.

APPENDIX II

Simonis Starowolsci *Scriptorum polonicorum* ἙΚΑΤΟΝΤΑΣ; *seu centum illustrium Poloniae scriptorum elogia et vitae.* Venice: heirs of Damian Zenarius, 1627.

LXVII NICOLAVS COPERNICVS.

Nicolaus Copernicus Torunii in Prussia natus; patre Nicolao Copernico: matre vero, quae erat germana soror Lucae a Watzelrod Toruniensis, Episcopi Varmiensis, praeclare de Repub. Polonorum meriti in causa Cruciferorum, quibus utique magna vi obsistebat, adeo, ut in Comitiis Posnaniensibus a Cruciferis famoso libello fuerit una cum aliis impetitus, in quo he quoque inter caetera leguntur versus:

Iris, Pira, Lucas, Cornua dura
Hi faciunt mira, pervertunt omnia jura.

Justum enim et aequum defendere, idem erat apud Cruciferos, quod omnia jura pervertere. Copernicus igitur cum in Academia Cracoviensi sub Alberto Brudzevio, una cum Jacobo Cobilinio, qui *Astrolabii declarationem* scripsit, Mathematicas artes didicisset, peregrinationibus deinde totum se dedit. Bononiae familiarem habuit Dominicum Mariam Mathematicum insignem, cujus non tam discipulus,

quam adjutor ac testis observationum fuit, ut notat Georgius Joachimus Rheticus, in narratione prima ad Schonerum. Romae postea anno 1500 in magna corona auditorum Astronomiam explicavit. Inde reversus ab Episcopo Luca avunculo suo adscriptus est Collegio Canonicorum Varmiensium, in quo tamen ab invidis impedimenta persensit, ut manifestum est ex litteris variis (quas habet Clarissimus vir Jo. Broscius, Philosophiae et Medicinae Doctor, Ordinariusque in Alma Universitate Crac. Astrologiae Professor) manu ipsius Copernici ad Lucum avunculum, aliosque exaratis. Summo erat ingenio, non in rebus tantum Mathematicis, verum in Physicis, aliisque omnibus, ad quae ingenii ornamenta praeclara sibi paraverat subsidia ex Linguarum Latinae et Graecae perfecta cognitione. In Medicina velut alter Aesculapius celebrabatur, etsi animo prorsus Philosophico ostentationem apud vulgum nunquam affectaret. Nam ut alibi de illo scribit Tidemanus Gisius Episcopus Culmensis, erat ad omnia, quae non essent Philosophica minus attentus, quod cum paucis commune habuit. Post mortem Fabiani de Lusianis Episcopi Varmiensis, erat administrator Episcopae usque ad approbationem Mauritii, ut dicit folium 81. Historiae Episcoporum Varmiensium, quae habetur Heilsbergae, in quo quidem officio, ut et in reliqua tota vita multos expertus est inimicos, quinimo etiam et post mortem. Et vivens quidem Theutonicorum Cruciferorum Magistrum inimicum sensit, quod bona Episcopatus illius ab eo injuste possessa mandato regio reciperet,

restitueretque Ecclesiae; tum Aulicos quosdam atque ludimagistrum quendam Elbingensem, qui opinionem illius de terrae motu, in Theatro scenica maledicentia derisit, ut intelligi potest ex Tidemani Epistolis. Mortuus vero parum aequos habuit Julium Scaligerum, Jo. Bodinum, et Leovitium, cui respondit per epistolas Rheticus scribens ad Camerarium et Wolfium. Scaligerum nemo adhuc adgredi ausus est, ob eam eruditionem, qua celebratur. Inter discipulos praestantissimum habuit Georgium Joachimum Rheticum, qui audita fama Copernici, renuntiata Professione in Academia Wittebergensi vehit ad Copernicum, et interfuit editioni libri ejus *De Revolutionibus*, de quo vide plura apud Nicolaum Mulierium in Praefatione super illas Revolutiones, non est enim opus ut in celebrando illo desudem, quem ipse terrarum orbis, insigni illa, de motu terrae assiduo, sua opinione ab illo illustratus praedicat, tum nova illa veteribusque incognita supputatio Astrorum. Revera enim ut Hercules Atlante laborante coelum sustinuit, ita ille Joanne Regiomontano populari suo deficiente, motuum coeli doctrinam discipulis suis restauravit, atque omnes sua industria Mathematicos plurimum juvit. Mortuus est, ut scribit Tidemanus ad Rheticum, ex sanguinis profluvio, et subsecuta dextri lateris paralysi, nono Kal. Junii, multis ante diebus memoria et vigore mentis destitutus. Nec opus illud Revolutionum suarum typis excusum vidit, nisi eo jam die quo decessit, nam tum primum ex Germania erat allatum. Vita incolumi solitudinem amavit, nec jungebatur amicitia

nisi viris doctis, inter quos familiares habuit Tidemanum Culmensem, Jo. Dantiscum Varmiensem Episcopos, Vapovium Cantorem Cracoviensem ad quem scripsit *Epistolam de motu Octavae spherae*, Nicolaum de Schadek, Martinum de Ilkus, Mathematicos Crac. olim condiscipulos suos, cum quibus conferebat de ecclipsibus et earum observationibus, ut patet ex Epistolis manu illius ipsius scriptis, quas habet in Acad. Crac. Jo. Broscius, author *Arithmeticae Integrorum* et cujus in dies *Arithmeticam partium*, *Arithmeticam fractorum*, atque *Geometriam* expectamus. Sepultus est itaque Copernicus in Ecclesia Cathedrali Varmiensi, cui deinde post obitum annis 38. Martinus Cromerus loci Episcopus, ingenii ipsius praestantiam admiratus, marmoream posuit tabulam, cum tali Epitaphio

D. O. M.

R. D. Nicolao Copernico Torunensi, Artium et Medicinae Doctori, Canonico Varmiensi, Praestanti Astrologo, et ejus disciplinae instauratori Martinus Cromerus Episcopus Varmiensis, Honoris et ad Posteritatem Memoriae Causa Posuit MDLXXXI.

Obiit Anno 1543 die XXiiij Maij.

APPENDIX III

Nicolai Copernici Torinensis Astronomia instaurata, ed. Nicholas Müller (Mulerius). Amsterdam, 1617.

Nicolai Copernici viri incomparabilis (hoc enim elogio a nobili Tychone ornatur) vitam uberiore stilo descriptam hactenus mihi non contigit videre. Idcirco paucula tantum partim ex authoris scriptis, partim ex Ioachimi Rhetici narratione (qui se totum in Copernici contubernium disciplinae ergo abdiderat) collecta recitabimus.

Natum esse constat Torunij Borussiae opido haud ignobili, Polonorum limitibus proximo. De anno dieque natali scriptores dissentire video. Iunctinus enim Astronomus Italus natum scribit anno Christi 1472, die Ianuarij 19. Germani vero Chronologi (quibus major apud me fides) natum testantur anno millesimo quadringentesimo septuagesimo tertio, die Februarij decimo nono. Quadriennio post acerba morte sublatus est magnus ille Ioan. Regiomontanus, qui moriens Astronomiae instaurandae lampada a Purbachio acceptam huic nostro Copernico etiamnum puerulo tradidisse videri potest. Studiorum gratia Italiam invisit. Bononiae enim non tam discipulus (uti ait Rheticus) quam adiutor & testis observationum doctissimi viri Dominici Mariae,

vixit. Lunamque a se Bononiae observatam testatur anno Christi 1497. Romam inde petijt circiter annum Christi 1500 cum annum ageret aetatis vigesimum septimum, ubi teste Rhetico, in magna juvenum frequentia & virorum magnorum corona Mathesin publice docuit. Lunae eclipsim a se Romae observatam notat anno Christi 1500, mense Novembri. Finitis deinde peregrinationibus in patriam reversus sedem fixit Fruenburgi, quod opidulum est Borussiae ad Istolae fluvij ostia, sub meridiano Cracoviense, & latitudine grad. 54 min. 19 sec. situm uti ipse Copernicus testatur. Huic opido ecclesia cathedralis arcis instar munita imminet, domicilium Canonicorum Varmiensum, in quorum consortio vixit Copernicus. Integram vitae aetatem sideribus observandis, novisque hypothesibus constituendis impendit, Ptolemaei & Regiomontani emulus. In quo studij genere adeo excelluit, tantumque praestitit, ut post Ptolemaei tempora ad istud aevum nullus inventus sit, a quo Astrorum scientiae major facta sit accessio quam ab ipso. Recte scilicet studiis suis consulunt, & de re literaria bene merentur, qui totum Musarum chorum observantes ac venerantes, unam prae reliquis sibi unice colendam deligunt, cujus se cultui jugique sacerdotio consecrent. Tandem vero anno vitae septuagesimo, amicorum efflagitationibus ac conviciis victus, ut ipse ait, hoc eximium opus ceu foetum quater novenos annos gestatum e sinu pectoris in lucem edidit. Sed in ipso (ut medicorum more loquar) partitudinis

nisu, animam proh dolor! efflavit, magno foetus sui in lucem jam jam proditurі detrimento. Idem enim libris fere accidere solet quod liberis, ut si in aetate tenellula parentibus orbentur, nec a fido tutore defendantur, ab injuria liberi esse non possint. Inter amicos suos primae notae nominatim ipse recenset Nicolaum Schonbergium Cardinalem Capuanum, & Tidemannum Gisium episcopum Culmensem, quibus insignis eruditionis laudem tribuit. Nec dubium est quin uterque Mecoenatis vicem apud ipsum expleverit, quemadmodum paulo ante Regiomontanum foverat Cardinalis Bessarion. Porro quod nullum scribendi cacoethes passus sit, vel hinc potest esse manifestum, quia nihil ab eo scriptum memoratur, ante hujus divini operis editionem. Sed a gloriolae aucupio plane alienus, soliusque veritatis indagandae studio flagrans, dum vixit, latuit, quo tanto vegetior ejus post cineres splenderet ac perennaret gloria.

APPENDIX IV

Letter of Tiedemann Giese to George Donner, in Leopold Prowe, *Nicolaus Coppernicus*, II, 418-419.

Lubaviae die 8. Decembris Anno 1542.

Georgio Donnero.

Conturbavit me, quod de afflicta valetudine Venerabilis senis, nostri Copernici, scripsisti. Huic, ut vita incolumi solitudinem amavit, ita nunc aegroto paucos exstare familiares arbitror, qui casibus ipsius afficiantur, cum omnes simus illi propter integritatem et excellentem doctrinam debitores. Scio autem eum semper in fidissimis habuisse te. Oro igitur, si ita fert natura illius, velis tutoris ei esse loco et curam viri, quem mecum semper amavisti, suscipere, ne in hac necessitate destituatur fraterna ope, et nos ingrati erga hunc merentem habeamur. Vale.

APPENDIX V

Letter of Tiedemann Giese to George Joachim Rheticus in Leopold Prowe, *Nicolaus Coppernicus*, II (reprint of the 1883-1884 edition. Osnabruck: Otto Zeller, 1967), pp. 419-421.

(Lubaviae die XXVI Julii 1543)

Joachimo Rhetico.

Ex nuptiis Regiis Cracovia rediens reperi Lubaviae geminum a te missum exemplum recens excusi operis nostri Copernici, quem e vivis excessisse non ante acceperam, quam Prussiam attigissem. Erepti fratris, viri summi, dolorem lectione libri, qui illum redhibere mihi vivum videbatur, pensare potuissem, verum in primo limine sensi malam fidem, ac ut ut vere appellas, impietatem Petreji, quae indignationem mihi priore moestitia atrociorem refudit. Quis enim non discrucietur ad tantum sub bonae fidei securitate admissum flagitium? Quod tamen haud scio, an non tam huic excusori ex aliorum industria pendenti sit tribuendum quam invido cuipiam, qui dolens descendendum sibi esse a pristina professione, si hic liber famam sit consecutus, illius simplicitate in deroganda operi fide forsitan est abusus,

Ne tamen impune ferret, qui se concessit alienae fraudi corrumpendum, scripsi ad senatum Noribergensem docens, quid ad integrandam auctori fidem necessarium mihi videretur. Epistolam ad te mitto cum ipsius exemplo, ut pro re nata diiudicare queas, quem in modum sit instituendum negotium; nam hoc qui apud senatum illum agat, te neminem video accomodiorem aut etiam volentiorem, qui choragum egisti peractae fabulae, ut iam non magis auctoris interesse videatur quam tua restitui, quae a recto dilapsa sunt. Si quid tamen refert te, ut id quam diligentissime efficias, vehementer rogo. Si recudendae venient priores chartae, affigenda videtur a te praefatiuncula, qua etiam ea, quae iam emissa sunt exemplaria, a calumniae vitio repurgentur. Quin optem etiam praemitti vitam auctoris, quam a te eleganter scriptam olim legi, nec deesse historiae aliud puto, nisi exitum vitae, quem ex sanguinis profluvio et subsecuta dextri lateris paralysi nono Kalendas Junii accepit multis ante diebus memoria et vigore mentis destitutus, nec opus suum integrum nisi in extremo spiritu vidit, eo quo decessit die. Id ante mortem excusum exiisse nihil obstabit, nam annus consentit, et diem finiti operis non adscripsit excusor. Vellem adnecti quoque opusculum tuum, quo a Sacrarum scripturarum dissidentia aptissime vindicasti telluris motum. Ita explebis iusti voluminis magnitudinem et compensabis id quoque incommodi, quo in praefatione operis praeceptor tuus tui mentionem omisit. Quod ergo non tui neglectu, sed lentitudine et incuria quadam (ut erat ad omnia, quae philoso-

phica non essent, minus attentus), praesertim iam langues-
centi evenisse interpretor, non ignarus, quanti facere so-
litus fuerit tuam in se adiuvando operam et facilitatem.
Quod ad me misisti operis exemplaria, magnam habeo dona-
tori gratiam; erunt haec mihi monumenti perpetui loco ad
tuendam memoriam, non solum auctoris, quem ego charum sem-
per habui, sed etiam tui, qui ut te illi laboranti Theseum
strenue praestiteras, ita nunc nobis, ne confecti operis
fructu careremus, cura et solicitudine tua contulisti.
Pro quo studio tuo quantum tibi debeamus omnes, non est ob-
scurum. Cupio me facias certiorem, sitne Summo Pontifici
liber missus; nam si factum non est, vellem ego id officium
praestare defuncto. Vale.

APPENDIX VI

BROŻEK'S INTEREST IN KEPLER AND GALILEO

Many marginal notes on Kepler's works, once owned by Brożek, show that he read them very carefully. Likewise, in his copies of three editions of the *Revolutions* Brożek made remarks showing his familiarity with Kepler's writings.[1]

Brożek was constantly on the lookout for Kepler's books, as can be seen from the letter written to him by a former student of Kepler, Peter Krüger (1580-1639), a professor in the Gymnasium of Gdańsk. In that letter, dated 5 August 1618, Krüger tells Brożek that he found an unbound copy of Kepler's *New Astronomy*[2] and wonders whether he should acquire it for him, especially since the price is reasonable.[3]

Brożek's admiration for Galileo is apparent from the letter he wrote to him on 28 May 1621, while Brożek was was studying medicine in Padua. In that letter Brożek says in part:

> Although I have never seen you, Galileo, I know you on account of the greatness of your talent. Fourteen years have elapsed since your student Martin [Dersław] Zborowski showed me for the first time your compass and its very easy ap-

> plication to geometry. This marks the beginning of [our] acquaintance.[4] After you discovered the Medicean planets,[4] it is incredible how much my admiration grew on account of these new phenomena, which totally destroyed the belief of the ancients in the solidity of the spheres. I often presented this very strong argument to my associates in the Jagiellonian University, whenever there was a dispute, as usually happens in schools.
>
> I hear that you have something else in print, about the sunspots,[5] but I have not yet had a chance to see it nor your *Floating Bodies*.[6] I implore you to inform me about these works.
>
> Moreover, when will you reveal your system to the learned world? Does the public opinion present impediments to the truth? This is what we all are afraid of. But you go ahead. The judgments of philosophers always differ from the beliefs of the common people ....[7]

It is interesting to note that Brożek, who knew of Tycho's observations of the comet of 1577, still regards Galileo's discovery of the satellites of Jupiter as a "very strong argument" in the demolition of the Aristotelian solid spheres.

Barycz's Polish translation of Brożek's letter to Galileo renders "the solidity of the spheres" (*orbium soliditas*) incorrectly as: "immutability of the heavens."[8] Biliński repeats Barycz's mistranslation, saying that "Brożek ... sees the consequences ... which destroy the ... conception of the immutability of the heavenly bodies" ("Broscius ... vede le conseguenze ... che distruggono la concezione ... dell'immutabilità dei corpi celesti").[9]

NOTES TO APPENDIX VI

1. E. g. see *MK*, pp. 654-655, fn. 3, and p. 657.

2. *Astronomia nova* (Heidelberg, 1609).

3. Brożek, *Wybór pism*, I, 436; *ibid.*, p. 437, reproduces the title page of the *Astronomia nova* with an inscription showing that Brożek bought the copy found by Krüger.

4. The satellites of Jupiter, reported in *Sidereus nuncius* (Venice, 1610).

5. *Lettere sulle macchie solari* (Rome, 1613).

6. *Discorso ... intorno alle cose che stanno in su l'acqua* (Florence, 1612).

7. Latin text on the following page; facsimile in Bronisław Biliński, *Galileo Galilei e il mondo polacco* (Wrocław, 1969), p. 79.

8. Brozek, *Wybór pism*, I, 443.

9. Biliński, *op. cit.*, p. 78.

Letter of Jan Brożek to Galileo Galilei (28 May 1621). Reprinted in *Le Opere di Galileo Galilei*, ed. naz., XIII (Florence, 1903), 64-65.

Clarissime Domine S. P. -- Ex ingenii tui praestantia te novi, Galilaee, etsi nunquam viderim. Anni sunt XIIIJ, cum circinum tuum, in eoque praxim geometriae facilimam, monstrante Illustri Domino Martino Sborowski, tuo discipulo, primum conspexi. Haec prima notitiae rudimenta. Postquam vero Medicaeos Planetas detexisti, incredibile est quantum accesserit admirationis ob res novas et quibus omnis orbium soliditas, antiquis credita, tolleretur. Hoc firmissimum argumentum nostris in Academia saepe opposui, cum res veniret, ut fieri solet in scholis, ad controversiam. Audio extare alia de maculis solaribus: verum illa nondum licuit videre, ut et de iis quae per aquas vehuntur. Rogo te, fac me participem. Quando autem tuum Systema reipublicae literariae dabis? An opinio rerum veritati impedimenta obiicit? Hoc est quod veremur omnes. Tu tamen perge. Philosophorum sententiae ab opinione multitudinis semper aliae sunt. Ego cum essem in Prussia multa in variis bibliothecis reperi, quae suo tempore, post quam medicinae studia confecero, in lucem prodibunt et te salutabunt. Vale.
Datum Patavii, XXVIIJ Maii 1621.

Clarissime tuae Dominationi

Addictissimus

M. Ioannes Broscius, Curzeloviensis,

Academiae Cracoviensis Ordinarius Mathematicus, m. p.

(On the envelope); Clarissimo Domino Galilaeo Galilaeo Florentino, Magni Ducis Mathematico, Domino et Amico Observandissimo, Florentiae.

APPENDIX VII

Letter of Jan Brożek to Basil Golinius, rector of the Jagiellonian University (1618). Latin in Edward Stamm, "Z historii matematyki XVII w. w Polsce," *Wiadomości matematyczne*, XL (1936), 151.

Basilio Golinio S. -- De successu profectionis meae tandem scribo. Secundo Vistula nauigaui Dantiscum usque. Hic commoratus sum una septimana. Tandem per Elbingam perueni Frauenburgum, ubi exceptus sum humanissime a Dominis Capitularibus praecipue vero Reverendo Domino Fabiano Konopacki, et Reverendo Domino Andrea Zagorny. Bibliothecam euolui, inveni multos libros, quibus Copernicus est usus Graecos et Latinos: exemplar tamen autographum non reperi. Hic dum anxius haereo, venit mihi in mentem quaerere, an non aliquae notae in exemplaribus excusis haberentur, manu familiarium Copernici scriptae. Dum quaero incidit in manus exemplar manu ipsius Tidemanni correctum, ex quo notas omnes cum emendationibus descripsi in meum exemplar. Quia vero permulti narrabant, autographum translatum fuisse a Cromero ad Bibliothecam Heilsbergensis arcis, in qua tum Reuerendis-

simus commorabatur, eo etiam profectus sum cum Reuerendo Domino Zagorny. Diuertimus ad Collegium Braunsbergense, in cuius bibliotheca inuenimus exemplar primae editionis Georgio Donnero olim a Rhetico transmissum. Obseruaui nonnullos obelos in isto exemplari. Cum Heilspergam peruenissemus Illustrissimum Dominum Episcopum salutaui epistolamque Magnificentiae Tuae ei obtuli, excepit me humanissime et Bibliothecae euoluendae facultatem concessit. Neque hic autographum repertum. Inueni tamen aliud exemplar Tidemanno a Rhetico transmissum, cum multis cancellationibus eorum quae Copernici non sunt. Praeterea aliquot epistolas Rhetici ad Tidemannum, e quibus multa de autographo aliisque ad operis emendationem intellexi.

APPENDIX VIII

Epistola Dedicatoria ex Iudicio Astrologico Alberti Caprini Buccouiensis desumpta (Plate 2c and 2d).

Reuerendissimo in Christo Patri & Domino, Domino Samveli Macieiowski, Dei Gratia Episcopo Plocen. ac Procancellario Regni Poloniae, Domino & Mecoenati studiosorum Benignissimo.

Albertus Caprinus Buccouiensis, humiliter sese commendat.

Tvam illam summam Reuerendissime Antistes in rebus perspiciendis prudentiam, & moderandis aequitatem & agendis industriam, cum maximis omnis generis ornamentis coniunctam, nunc publice tanto impensius extollo atque veneror, quanto ad merita illa tuae amplitudinis maior indies authoritatis accessio increscit augeturque. Rex enim Serenissimus atque inuictissimus Princeps pro sua praeclara prudentia, & absolutissima rerum experientia iudicioque, non contentus ad id muneris Reipublicae Reuerendam Paternitatem tuam magna cum laude honoreque ipsius euehere in quo rerum summa & totius Regni cardo vertitur: nouis subinde, ijsque maximis Celsitudinem tuam ornat honoribus, quo magis omnibus spectatam reddat, excellentem tuam virtutem & in Rempublicam fidem.

Itaque nemo est amplissime Praesul, qui nesciat honores istos virtutis tuae esse praemia dignissima. Nemo item est qui non istas virtutes, merito amet suspiciat atque veneretur, praesertim cum intelligamus omnes ad communem Reipub. vtilitatem dignitates istas in tuam collatas amplitudinem ex aequo pertinere. Quare cum & ego, haec nostra in quibus versamur studia: aliquantulam Reipub. esse partem censeam: & meipsum quoque Celsitudini tuae & insinuatum & deditum ostendere vellem: Quod vnum per fortunae modulum potui, leuidense hoc munusculum, impar quidem magnitudini tuae, sed non ingratum vt arbitror, studiorum meorum primitias, Prognosticon nempe seu iudicium ex stellarum decretis appellare libet, tibi nuncupandum duxi Praesul Ornatissime quo animi mei promptitudinem & alacritatem erga tuam prudentiam interim testater. Vtinam autem facultate id possem, quam voluntate facio certe promptissima. Quare tua prudentia me & hoc genus artium fauore & patrocinio tueri dignetur oro. Quo Cracovia nullum habet ornamentum praestantius: haec enim vrbs fouit viros summis ingenijs praeditos qui has disciplinas tum propagarunt, tum illustrarunt, quorum multi hisce temporibus fatis iniquis decesserunt. Ex hoc enim Gymnasio multi Mathemata hauserunt qui in Germania magna cum laude & emolumento studiosorum eadem profitentur, quorum honoris gratia, nomino Nicolaum Copernicum Canonicum Varmiensem qui huius vrbis olim hospitio vsus est, & haec quae scripsit in rebus Mathematicis admiranda, plura etiam edenda instituit, ex hac

nostra Vniuersitate ceu ex fonte primum accepit. Id quod ipse non solum non diffitetur (benignum esse & plenum ingenui pudoris Iudicio Pliniano existimans, profiteri per quos profeceris) verum hoc quicquid est totum nostrae fert acceptum Academiae. Dominus igitur Iesus diu te nobis seruet incolumem. Cracouiae 27. Septemb. Anno Christi 1542.

APPENDIX IX

Letter of Nicholas Copernicus to Joannes Dantiscus, bishop of Chełmno, dated 8 June 1536 (Plate 7a and 7b).

Reuerendissime in Christo pater et domine, Domine Clementissime. Accepi litteras Reuerendissimae dominationis vestrae humanitatis plenas et gratiae. Quibus me admonet illius familiaritatis et gratiae, quam adhuc in iuuentute cum Reuerendissima dominatione vestra contraxi, quam adhuc tamquam florentem apud se durare intelligo. Sicque me inter suos familiares connumerando inuitare dignata est ad nuptias cognatae suae. Equidem, Reuerendissime domine, obtemperare debebam Reuerendissimae dominationi vestrae et aliquando me praesentare tanto meo domino et patrono. Nunc vero in negotio occupatus, quod mihi Reuerendissimus dominus Varmiensis iniunxit, abesse nequeo. Quapropter boni consulere dignetur ipsam absentiam meam et seruare antiquam illam de me opinionem quamuis absente, cum plus esse consuevit animorum coniunctio, quam etiam corporum. Reuerendissimam dominationem vestram in omni felicitate, cui seruitia mea commendo, perpetuo valere cupio. Ex Frauemburg, VIII Iunij MDXXXVI.

Nicolaus Copernicus

Reuerendissimo in Christo Patri et domino, Domino Ioanni Episcopo Culmensi, domino suo clementissimo.

APPENDIX X

Letter of Copernicus to Dantiscus, dated 11 January 1539 (copied by Brożek; Plate 4).

Reverendissime in Christo Pater et Domine, Domine Clementissime. Feci iam, quod nullo iure omittere debui vel potui, in quo spero monitis R. D. V. a me satis esse factum. Caeterum quod scire ex me petit, quanto tempore vixerit felicis recordationis quondam Lucas a Waczelrodt, R. D. V. praedecessor, avunculus meus: vixit annos 64, menses 5; in episcopatu annis 23; obiit penultima Martii, anno Christi 1512. In quo illa generatio finem accepit, cuius insignia in antiquis monumentis et multis operibus extant Torunii. Commendo iam obedientiam meam R. D. Vrae.
Ex Frauenburg, 11 Januarii, anno 1539.
E. R. D. Vrae obsequentissimus Nicolaus Copernicus Reverendissimo in Christo Patri et Domino Domino Ioanni, Dei gratia Episcopo Varmiensi, Domino suo clementissimo.

APPENDIX XI

Letter of Felix Reich, canon of Varmia, to Joannes Dantiscus, bishop of Varmia (Marian Biskup, "Sprawa Mikołaja Kopernika i Anny Schilling w świetle listów Feliksa Reicha do Biskupa Jana Dantyszka z 1539 roku," *Komunikaty Mazursko-Warmińskie* [1972], *2-3*:375-376).

Reverendissime in Christo Pater et Domine, Domine et Patrone mi Clementissime. Ex quo D. V. R. se tam liberalem erga me praestat, de quo ingentes gratias ago, ut omnia exhibeat, quae ad restaurandam valetudinem meam spectare possint, significavi venerabili domino administratori Allensteinensi, quae nomine meo a R. D. V. impetrare cum [?] cupiam, quod sine negotio obtenturum spero, modo in potestate sit R. D. V., cui pro alba cervisia nuper missa gratias itidem ago. Ceterum quia video R. D. V. de amovendo apud ecclesiam scandalo serio sollicitum esse, ut non dubitem executionem etiam in promptu fore aliosque honestos canonicos hoc magno desiderio exspectare, ultro nunc et sponte mea praecurro, ut quicquid tam pio operi consilii aut opere adhiberi, dum queo, possim, libenter impertiar. Videtur itaque mihi, quod D. V. R. quam primum per oppor-

tunitatem poterit, tribus his fratribus nostris singulariter singulis mandatum iuxta formulam a me dictatam et fideli manu Fabiani amanuensis exceptam, cui omnia tuto creduntur, cum ipse prope scribere nequeam, obsignatis litteris mittatur. Et nihilo minus mulierculae pariter iuxta formulam a me antea missam moneantur per loci plebanum autoritate vestra, ut etiam hoc considerato, quod id omittatur in aliarum duarum litteris, quae viros legitimos non habent, quod est in illis prioribus, quae ad cocam domini Nicolai legitimum virum habentem pertinent. Incutiet terrorem non parvum, quod mox instituatur etiam contra mulieres processus. Quibus tamen competens terminus concedendus est, ut intra monitionis limites sibi domicilia alia verisimiliter procurare possint. Quae passim hic ferantur, de his rebus venerabilis dominus Achacius, administrator Allensteinensis, R. D. V. certiorem reddat. Nihil tamen harum rerum, quae scribo, conscius, utcumque res sit, constanter agat R. D. V. Cuius brachium confirmabit Deus Omnipotens, ut, quae pro zelo auspicata est, in felicem exitum perducat. Iuvabimus alii omnes, quantum poterimus, ut res ipsa succedat. Sed nihilo minus D. V. R. diligenter curandum est, ut quae iuris ordine processum est institutura, ne quid contra iuris serium et solitum, ut aiunt, stilum futuris suis litteris interserat. Fit enim plerumque, ut vel minima clausula totum vitiet processum, ut, si ad iudicem superiorem devolvatur, irritus pronunciatur. Commen-

do me gratiae et favori R. D. V. Quae diu valeat incolumis, Ex Frawenburg XI Ianuarii 1539.

Eiusdem Reverendissimae Dominationis

F [elix] R [eich]

Reverendissimo in Christo Patri ac Domino, Domino Iohanni Dei gratia episcopo Warmiensi Domino et Patrono meo colendissimo et gratioso.

APPENDIX XII

Letter of Felix Reich, canon of Varmia, to Joannes Dantiscus, bishop of Varmia (Marian Biskup, "Sprawa Mikołaja Kopernika i Anny Schilling w świetle listów Feliksa Reicha do Biskupa Dantyszka z 1539 roku," *Komunikaty Mazursko-Warmińskie* [1972], *2-3*:378-379).

Reverendissime in Christo Pater et Domine clementissime. Litteras omnes ob insignem notarii in unis lapsum remitto corrigendum, quod hic fieri non potest. Scripsit enim pro Alexandro "Henricum." Praeterea admonui superioribus meis litteris de X milliarum proscriptione et ex diocesi, quod D. V. R. non habeat potestatem quemquam ulterius proscribendi quam in sua diocesi, quae in certis locis (ut hic) se longius non extendit, quam ad unum milliare. Ideoque hoc de X miliaribus, ad quorum spatium relegantur mulieres, expungendum fuisse. Quod ut nunc etiam fiat, consulo. Postremo est "innocentes" pro "innocenter gerentes" alicubi scriptum. Et si quae sint alia, propterea omnes processus pariter remitto, ut posthac etiam pariter singuli executionem accipiant. Necessarium etiam est, ut canonicorum litterae seorsum colligentur, cocarum item seorsum et in unam

chartam obsignatae plebano inscribantur. Magnus enim error contingere posset, si hoc non fieret. Si enim ad manus trium illorum canonicorum patentes litterae cocarum pervenirent, non dubito intercipiendas, ne in executionem poni possint. Committet igitur D. V. R. nuntio suo reversuro, ut primum et ante omnia mulierum processus plebano reddat. Deinde canonicorum alicui canonico, qui sine dubio reddet cuique suum ineque [?], si opus fuerit, compellabit cautissime alioqui suspicionem in me non modicam congesturus [?]. Puto R. D. V. legitimam habere causam, cur domino Nicolao paucissimis scripserit nec magnopere refert; concumbunt sine dubio inter se omnia omnes. Quem potum ex liberalitate R. D. petam. Dudum venerabilem dominum administratorem Allensteinensem sollicitatorem constitui. Permittunt nunc prope in ultimo discrimine medici vinum modestissime, quod ad confortationem cordis libere, sed purum defaecatum et mite, non austerum aut nimis dulce aut nimis [...?] forte sed Ungaricum moderatum, muscatellam, malmaticum aut his similia. Ex quorum numero unam stopam mihi suffecturam arbitror. Cervisiam Pyetkowskensem a D. V. R. donatam sentio nunc primum saluberrimam esse. Quotidie igitur eam nunc bibo, sed extat adhuc non parva pars, ut minime R. D. V. sollicitare non sit opus. Cui commendatissimus esse cupio. Ordinacius dilucidiusque nec prolixior esse possum. Christus servet D. V. R. incolumem. Ex Frawenburg 23 Ianuarii sub noctem 1539.

Eiusdem R. D. V. F [elix] R [eich]

Reverendissimo in Christo Patri et Domino, Domino Iohanni Dei gratia episcopo Culmensi [sic], Domino et Patrono meo clementissimo.

APPENDIX XIII

TWO POETIC EULOGISTS OF COPERNICUS: ZORAWSKI AND SKROBKOWICZ

Presumably Starowolski met Zorawski and Skrobkowicz while all three of them were attending the Jagiellonian University. For, "Nicolaus Nicolai Zorauski" and "Joannes Ludovicus Gregorii Skropkouic," both of the diocese of Cracow, enrolled at the Jagiellonian University during the summer of 1612; on 10 December of the same year, "Simon Basilii Starowolski," from the diocese of Łuck (now Lutsk, USSR), entered the Jagiellonian University.[1] The three students were prevented from finishing their undergraduate studies within the customary four-year period by the plague which broke out in Cracow in 1613 and forced the rector to suspend the lectures.[2]

Zorawski received his BA degree in 1618,[3] several months before Skrobkowicz. Next to the name of Zorawski in the *Statuta* a later hand added the following information: "coll., Medic. Doct. et astrologus regius."[4] This succinct entry is fleshed out by Teofil Żebrawski in his "Supplements to the Bibliography of Polish Writings in the Field of Math-

ematics and Physics." In 1647, 1651, 1659, and 1661 Zorawski issued a publication entitled *Hemerologeion*, consisting of a calendar followed by astrological prognostications.[5] He is identified by Żebrawski as a philosopher, physician to the Polish Kings Ladislaus IV (1632-1648) and Jan Casimir (1648-1668), and also as a royal mathematician. Starowolski, in his *Laudatio*, praises Zorawski's fluency in three (ancient) languages ("trium linguarum cognitione celeberrimus").[6]

Skrobkowicz's father Gregory was a professor of both laws (civil and canon) at the Jagiellonian University.[7] The son seems to have had a no less distinguished career, although in his case the information provided by the *Statuta* is not entirely clear. The index has two separate entries "Scrobkowic Joan." and "Skrobkowicz Joan. Lud.," as though these referred to two different men. On p. 282, corresponding to the index entry "Scrobkowic Joan.," this name is followed by a later addition which says only: "coll. minor, Bernardinus." However, on p. 285, corresponding to the index listing: "Skrobkowicz Joan. Lud.," one "Joan. Ludovicus Skrobkowic" receives a higher degree in 1620. This time the later addition reads: "secret. Illmi Ep. Crac., can. S. Georgii, praeposit. Zarn." (secretary of the illustrious bishop of Cracow, canon of St. George, praepositus in Żarnowiec). The *Album* shows only one person named Skrobkowicz matriculating at the Jagiellonian University within a time period permitting graduation in 1618 and 1620. More-

over, a higher degree (MA or Ph. D.) was invariably preceded by a BA. Hence, it may be assumed that the two entries in the *Statuta* refer to the same person. In the *Laudatio*, Starowolski mentions Skrobkowicz, the author whose numerous eulogistic poems appear in the *Hekatontas*.[8]

NOTES TO APPENDIX XIII

1. *Album*, IV, 29, 32.

2. *Statuta*, p. 274: "indicente Rectore silentium studiis, ob suspecta, propter pestem in urbem illatam, pericula." See also *Album*, IV, 36.

3. *Statuta*, pp. 281-282.

4. *Ibid.*, p. 281.

5. Teofil Żebrawski, *Dodatki do bibliografii piśmiennictwa polskiego z działu matematyki i fizyki* (Cracow, 1886), pp. 47, 49, 53; these four publications are extant, but Zorawski may have published one every year.

6. Simon Starowolski, *Laudatio almae academiae cracoviensis* (Cracow, 1639); quoted by Henryk Barycz, *Historja*, p. 95.

7. *Album*, IV, 29.

8. Starowolski, *Laudatio*, p. 20, cited in *Setnik*, p. 300.

APPENDIX XIV

RHETICUS' LOST BIOGRAPHY OF COPERNICUS

In his 26 July 1543 letter to Rheticus, Giese says that he would like to include in the revised front matter of the *Revolutions* the latter's "tastefully written biography of the author."[1] Jadwiga Dianni, editor of the second volume of Brożek's *Wybór pism*, adds to the Polish translation of this sentence the following remark:

> Unfortunately, Giese's appeal to Rheticus did not produce any results. After Copernicus' death Rheticus ceased to be as great an admirer of the master as he once had been in Varmia. The fun poked at Copernicus and his discovery, the inimical attitude toward him shown by the German intellectuals, apparently shook his faith in the infallibility of his teacher's doctrine. Hence Rheticus abandoned the idea of publishing his biography of Copernicus, and he did not attempt to correct the Nuremberg edition of Copernicus' work.[2]

Although Rheticus did move away from Copernicus' astronomical conceptions after they separated from each other, the pupil continued to compare his teacher with one of the greatest ancient astronomers, Hipparchus. In fact, Rheticus called Copernicus "the Hipparchus of our time, who is never praised enough" ("Nicolaus Copernicus nostrae aetatis nunquam satis laudatus Hipparchus").[3] After the celebrated 1563 conjunc-

tion of Jupiter and Saturn, which demonstrated the superiority of the Copernican over the Alfonsine Tables, Rheticus showed a renewed interest in the *Revolutions*. In a letter to a friend, dated 28 October 1563, Rheticus mentioned that recently he had taken Copernicus' work into his hands and contemplated elucidating it by means of commentaries. "For after the recent conjunction of Saturn and Jupiter, which occurred on 25 August, 7½ hours after noon," wrote Rheticus, "some of my friends plead with me and urge me to undertake this work" ("Hoc tempore in manus sumpsi opus Copernici, et cogito illud illustrare nostris commentariis. Nam post praeteritam nuper Saturni et Iovis coniunctionem die 25 Augusti hora 7 cum dimidia post meridiem, quidam amici me orant et urgent, ut hunc laborem suscipiam."[4]

The disappearance of Rheticus' biography of Copernicus is a grievous loss to scholarship, because it was the earliest, and also the only one written by anybody who had been in close personal contact with Copernicus over an extended period of time. Even as early as Brożek's time, Rheticus' biography of Copernicus had completely vanished. In fact, Brożek became confused about the authorship of the biography. For in the Memoranda he says:

> There is nothing for me to say about the biography of Copernicus written by Tiedemann or Rheticus, which either perished or remains hidden somewhere. But it appears that Tiedemann Giese captured its whole idea succinctly in his letters to George Donner and Joachim Rheticus. To

> the former he wrote that while Copernicus was in good health, he loved privacy; to the latter he wrote that he [Copernicus] was inattentive to all matters that were nonscientific. All this you will understand better from the attached letters.[5]

One of the attached letters was written by Giese to Rheticus. It plainly says that the biography of Copernicus was written by Rheticus. Brożek must have been in a great hurry when he mistakenly referred to the "biography of Copernicus written by Tiedemann or Rheticus." In his Polish translation of this passage, Barycz made matters worse by omitting the equivalent of "or Rheticus."[6] This omission leaves the authorship of the biography of Copernicus to Giese, who never wrote a biography of Copernicus.

NOTES TO APPENDIX XIV

1. Ch. III, 38, above.

2. Brożek, *Wybór pism*, II, fn. 117.

3. Burmeister, *Rhetikus*, III, 138.

4. *Ibid.*, III, 181.

5. *MK*, p. 655:

> De vita Copernici descripta a Tidemanno vel Rhetico, quae vel periit vel alicubi latet, non est quod pronuntiem. Videtur tamen Tidemannus Gisius aliquot verbis totam illius idaeam compendio comprehendisse in epistolis, cum ad Georgium Donnerum, tum ad Joachimum Rheticum. Ad illum quidem, quod vita incolumi solitudinem amavit. Ad hunc vero, quod erat ad omnia, quae non essent philosophica, minus attentus: quae omnia ex annexis epistolis melius cognosces [see also Plate 12].

6. Brożek, *Wybór pism*, I, 187.

APPENDIX XV

"HYPERASPISTICON"

Giese's letter of 26 July 1543 to Rheticus contains the only known reference to Rheticus' "little tract," in which he "entirely correctly defended the earth's motion from being in conflict with the Holy Scriptures."[1] This defense is equated with Rheticus' *Narratio prima* by Dianni.[2] In the *Narratio prima*, however, Rheticus did not defend geokineticism from being in conflict with the Bible. Barycz likwise mistakenly described Rheticus' *Narratio prima* as "containing a defense [of heliocentrism] against the accusation of being in disagreement with the Holy Scripture."[3]

Next to Copernicus' words "on account of some passage of Scripture" ("propter aliquem locum scripture") in his 1566 copy of the *Revolutions*, Brożek wrote the following marginal note:

> See the unpublished Hiperaspisticon for Nicholas Copernicus by Tiedemann Giese, bishop of Chełmno, where Tiedemann himself also cites Erasmus of Rotterdam's very favorable opinion of Copernicus (Vide Hiperaspisticon Tidemanni Gysii Episcopi Culmensis ad Nicolaum Coperni-

> cum nondum typis excusum Vbi etiam sententiam Erasmi Roterodami de Copernico ipse Tidemannus refert valde mansuetam).[4]

Brożek's marginal note is historically of the highest importance, since it shows that Erasmus, the most renowned writer of the time, knew about Copernicus and was favorably inclined toward him. If we did not have Brożek's note, we might suppose that Erasmus had never heard about Copernicus.

In view of its significance, it is unfortunate that Brożek's note is beset by two difficulties. First, the title of the work in question was misread by Hipler as Hyperaspisten instead of Hyperaspisticon.[5] Hipler's misreading has been repeated over and over again in the past hundred years, and is still repeated by Sikorski[6] and Wardęska.[7] Secondly, the work in question may have been Rheticus' reconciliation of Copernicanism with the Bible. If so, it may have been misattributed to Giese by Brożek, just as he wavered between Giese and Rheticus as the author of the biography of Copernicus.

Whether the author of Hyperaspisticon was Giese or Rheticus, the question arises how he found out about Erasmus' opinion of Copernicus. Erasmus maintained a lively correspondence with many Poles, among them Dantiscus.[8] This correspondence contains no reference to Copernicus. If Erasmus mentioned Copernicus in any other letter to a Pole, Rheticus might have learned about it while he was in Varmia for about 2½ years. Rheticus himself never exchanged any

letters with Erasmus, as far as is now known.

What about Giese's relations with Erasmus? In 1536 Giese finished a three-volume work *De regno Christi*, in which he expounded Catholic dogma, as modified in the Reformation direction. Giese sent the work to Erasmus in Basel by the hands of a relative, with a written plea for an evaluation. Giese's plea was dated from Frombork on 28 March 1536.[9] But Erasmus was nearing death (he died on 12 July 1536) and wrote a short apologetical note, dated 6 June 1536, explaining that he was bedridden, had abandoned all his studies, and was unable to read Giese's work.[10] There is no mention of Copernicus in the Giese-Erasmus correspondence of 1536. We do not know whether they corresponded with each other before 1536. As a result, the mystery remains: how did the greatest living writer learn about the greatest living astronomer before the publication of the *Revolutions*, and to whom did Erasmus express his opinion of Copernicus? How was this opinion communicated to Giese or Rheticus, whichever was the author of the Hyperaspisticon?

NOTES TO APPENDIX XV

1. Ch. III, 38, above.

2. Brożek, *Wybór pism*, II, fn. 118.

3. Barycz, "Polski udział w historii badań nad tekstem *De revolutionibus* Mikołaja Kopernika" [Polish Share in the History of Investigations Concerning the Text of Copernicus' *Revolutions*], *Kwartalnik* (1956), *2*:230.

4. See Plate 10.

5. Franz Hipler, *Spicilegium Copernicanum* (Braunsberg, 1873), p. 286.

6. Sikorski, pp. 94-95.

7. Zofia Wardęska, *Teoria heliocentryczna w interpretacji teologów XVI wieku* [The Heliocentric Theory as Interpreted by the Sixteenth-Century Theologians], series *Studia Copernicana XII* (Wrocław, 1975), p. 34.

8. See *Korespondencja Erazma z Rotterdamu z Polakami*, ed. and trans. by Maria Cytowska (Warsaw, 1965). It is regrettable that Cytowska did not include Erasmus' correspondence with Giese.

9. *Opus epistolarum Des. Erasmi Roterodami*, XI, 308-313.

10. *Ibid.*, 322. Andrzej Kempfi, "Erasme et la vie intellectuelle en Warmie au temps de Nicolas Copernic," *Colloquia Turonensia*, I (Paris, 1972), 402, misdates Erasmus' 6 June 1536 note to Giese as 6 July.

APPENDIX XVI

WHEN DID COPERNICUS BECOME A CANON?

According to the "Annales Clarissimae Nacionis Germanorum" and the "Matricula Nobilissimi Germanorum Collegii," *Dominus Nicolaus Kopperlingk de Thorn* was admitted to the German Nation at the University of Bologna toward the end of 1496.[1] At the time of his admission, Copernicus did not describe himself as a canon. According to L. A. Birkenmajer,

> in Bologna it was very scrupulously observed that a scholar, at that period more often than not of a mature age, should enter in the register next to his name all the professional titles and degrees he had the right to use.[2]

Hence the absence of the title of canon alongside Copernicus' name signifies that at the end of 1496 he was not yet a canon. However, elsewhere in that same publication Birkenmajer maintains that sometime in 1495 (late June or early fall) Copernicus became a "'canonicus postulatus' ... advanced to that position undoubtedly through the influence of his uncle, Bishop Lucas."[3] Birkenmajer repeated this statement in another publication. There, on the basis of entries in the account books of the Chapter of Varmia for the years 1493-1563,[4] which he discovered in the State Archives of Stockholm, Bir-

kenmajer declared that

> as early as 1495 Copernicus was a canon of Varmia, newly designated for that position, ... but probably not yet approved since he still had to wait about two years in order to be placed definitively in the canonry as a result of a new (fall 1497?) vacancy.[5]

Birkenmajer based his conclusion on two of these entries, relevant to the question when Copernicus became a canon. In 1495 and again in 1496, Nicholas of Toruń, the bishop's nephew, was recorded as being behind in his payment of eight marks for the church vestments.[6] The Varmian canons had to pay that amount within five years from the date of their admission to the Chapter.[7] In these two entries for 1495 and 1496 Birkenmajer saw an implicit confirmation of Starowolski's statement that Copernicus experienced difficulties in the Chapter "at the hands of envious persons." Birkenmajer reasoned that the only way to explain satisfactorily why Copernicus, although registered in 1495 and 1496 as owing for vestments required of the canons of Varmia, failed to describe himself as such at the time of his matriculation at the University of Bologna, is to assume that

> during the whole of 1495, and throughout the greater part of 1496, our future astronomer held that canonry de facto, but that sometime toward the end of 1496 "difficulties" occurred which are unknown to us but which deprived him for a short while of the title of canon.[8]

Like L. A. Birkenmajer, Rosen says that although Copernicus was elected a canon of Varmia in 1495, "he did not enjoy the perquisites of his office at once, because some obstacle

was thrown into his path." Therefore, even though his

> admission to his canonry was still blocked, he appears in the official records of the Chapter for 1495 and 1496. In those two years, it is noted, he did not pay for his vestments the eight marks demanded by the Chapter's statutes of every newly admitted canon within the first five years of his canonry. Why spend eight good marks for vestments that may never be worn?[9]

To the foregoing plausible conjectures, some additional information may be added. Thus, the 1495 entry reads:

> Subscripti tenentur pro cappa 1495. Dominus noster Episcopus Lucas. - Dnus Jheronimus Walda plebanus in Thorn olim. - Dr. Wernerus Mederiztz. - Nicolaus Crappitz. - Baltasar Stochfisch. - Albertus Bischoff. - Michael Vochsz. - Mgr Fabianus Lusyeyn. - D. Nicolaus de Thorn Nepos Episcopi.[10]

The 1496 entry is nearly identical but for one name (Wernerus Mederiztz):

> Subscripti tenentur solvere pecunias pro cappa.
> Primo dominus noster Lucas Episcopus Warmiensis. - Item dominus Jheronimus Walda olim plebanus in Thorn. - Item d. Nicolaus Crappitcz. - Item Baltazar Stockfisch. - Albertus Bisschoff. - Michael Vochsz. - Mgr Ffabianus Lusyen. - D. Nicolaus de Thorn Nepos Episcopi.[11]

Statute 11 (quoted in Note 7) required the payment "pro ornatibus ad diuinum officium spectantibus" to be made within five years from a canon's admission to the Chapter. But, to take some of the above names at random, Bishop Lucas Watzenrode became a canon of Varmia in 1479, Nicholas Crapitz in 1488, and both Balthasar Stockfisch and Michael Fox (Vochsz) in 1489. Yet in 1495 and 1496, more than five years after becoming can-

ons, these men had still not paid up. Hence it seems that Statute 11 was not vigorously enforced. As a matter of fact, the canons must have been very lax in making their payments, since Copernicus did not discharge his debt until 1507.[12] Like many of his colleagues, Copernicus was not in any rush to make this payment.[13]

Further confirmation that Copernicus was not yet a canon on 22 February 1496 is supplied by a notarial instrument drawn up on that day. In this document Bishop Lucas Watzenrode of Varmia authorizes his secretary to negotiate with the Grand Master of the Teutonic Order. Copernicus is one of the witnesses, and he is described only as a cleric of Chełmno.[14]

We have then, on the one hand, Copernicus listed, among others, as owing for church garments, while, on the other hand, we have documentary evidence that he was not described as a canon by himself or by others. In addition, we learn from Starowolski that Copernicus corresponded with his uncle Lucas and with others about some difficulties experienced in the Chapter. What were those difficulties?

On 21 September 1495 a canonry was vacated in the Chapter of Varmia by the death of Cantor Mathias of Launau (Polish Lunawa).[15] Since the death occurred in an odd month, according to the 1448 Concordat of Vienna, the Papal Curia had the right to place a candidate of its choice in the vacant seat.[16] Apparently Bishop Lucas Watzenrode did not muster enough influence in Rome to receive the Curia's approval of his candidate, his nephew Nicholas Copernicus,[17] for the choice fell

on Jan Scultetus of Königsberg (now Kaliningrad).[18] Thus, presumably, the obstacles which Copernicus experienced were connected with the struggle for the canonry.[19] The situation changed two years later, during Copernicus' stay in Bologna. Johannes Zanau (or Czanow), canon of Varmia, passed away on 26 August 1497.[20] Since Zanau's death occurred in an even month, the bishop was able to secure the canonry for his nephew. Copernicus received the news of the vacancy about 20 September and hastily arranged to have a Bolognese notary public, Girolamo Belvisi,[21] draw up a proxy document authorizing Copernicus' designees in Frombork

> in his name and on his behalf to receive, accept, and opt any and all freeholds and estates, and whatever property, movable and immovable, rights, actions, income, and benefits are due to him from any canonries still vacant.[22]

However, as can be seen from the Belvisi document, its original date, 20 September 1497, was changed to 10 October 1497.[23] Presumably, Copernicus realized that it would be premature to send the proxy document on the basis of the news of Zanau's death and decided to wait for the confirmation of his election to the Chapter. That confirmation arrived on or before 10 October 1497, thus necessitating the above-mentioned change of date.

The statutes of the Varmian Chapter favored well-educated members. If a canon without a university degree asked the Chapter for permission to pursue studies leading to a degree, and if such permission was granted, then that canon

was entitled to the same income as was received by a canon in residence.[24] Since the cost of living for foreigners in Bologna was very high,[25] Copernicus' haste in executing the proxy document may be attributed to his desire to receive as soon as possible the income he was entitled to as a canon. That Copernicus did not have enough money even after he became a canon, is apparent from a letter written by Bernard Scultetus, the dean of the Varmian Chapter, to Bishop Lucas Watzenrode. Scultetus was in Rome, representing the Chapter at the Vatican. From Rome, on 21 October 1499, Scultetus reported to the bishop that his nephews in Bologna ("patruj V. R. P., Bononie degentes") were short of funds, as is customary with students ("scolarium more pecuniis carerent"). For that reason the young men (Nicholas Copernicus, and his older brother Andrew) approached the bishop's secretary, who at the time was passing through Bologna on his way to Rome, and asked for advice. Since the secretary did not have any funds to spare, he contacted Scultetus, who borrowed for the students 100 ducats in a bank at a steep rate of interest, and guaranteed the repayment of the loan within four months.[26] Wasiutyński, while discussing the life-style of foreign students in Bologna during the fifteenth and sixteenth centuries, says that Copernicus' *corpus prebendae,* although substantial, was inadequate in expensive Bologna. "It is almost certain," Wasiutyński remarks,

> that Lucas Watzenrode had to provide his nephews with some additional funds. But, on account of the merry life-style of the students, it happened that these subsidies dwindled faster than the strict uncle-benefactor desired.[27]

Wasiutyński adds that even though Copernicus was an earnest individual, absorbed in his studies, he could not avoid participating in the students' banquets.[28] His income as a canon of Varmia had to be supplemented while he was in Bologna.

NOTES TO APPENDIX XVI

1. Prowe, I[1], 230-232; *Regesta* (English version), no. 27, where there is an incorrect reference to the "German College"; see also Edward Rosen, "Copernicus and His Relation to Italian Science," *Copernico e la Cosmologia Moderna* (Rome: Accademia dei Lincei, 1975), *216*:27.

2. L. A. Birkenmajer, *Mikołaj Kopernik jako uczony, twórca i obywatel* [Nicholas Copernicus as Scholar, Author, and Citizen] (Cracow, 1923), p. 32. See also Pearl Kibre, *The Nations in the Medieval Universities* (Cambridge, Mass., 1948), p. 30.

3. L. A. Birkenmajer, *Mikołaj Kopernik jako uczony*, p. 29.

4. "Ratio officij Custodie Ecclesie Warmiensis perceptorum et expositorum 1493-1563" (*MK*, p. 269).

5. *Stromata*, p. 272.

6. "Nicolaus de Thorn Nepos Episcopi" (*Stromata*, pp. 272-273; see also *Regesta*, nos. 24, 26).

7. Hipler, *Spicilegium*, p. 250, prints Statute 11, as promulgated by Nicholas von Tüngen, bishop of Varmia (d. 1489):

> Statuimus, quod Canonicus de nouo intrans ad fabricam Decem et pro ornatibus ad diuinum officium spectantibus Octo marcas infra Quinquennium a die receptionis sue computandum solvere teneatur.

8. *Stromata*, p. 274.

9. *3CT*, p. 317.

10. *Stromata*, p. 272.

11. *Ibid.*, p. 273.

12. *Ibid.*, p. 275: "Item dnus Nicolaus Coppernick pro cappis solvit mrc. VIII."

13. Jerome Waldau (Walda) never discharged his debt. For he died before 17 September 1496, when he already has a successor (Górski, p.

19), but he is still listed as a delinquent toward the end of 1496.

14. *3CT*, p. 318; *Regesta*, no. 25.

15. The date of Mathias of Launau's death is known from his tombstone in the Frombork Cathedral; Prowe, I^1, 172.

16. Prowe, *loc. cit.*, fn.*:

> In Folge des Beitritts des ermländischen Bischofs Franz Kuhschmalz (†1457) zu den deutschen Konkordaten besass die römische Kurie die Alternativa mensium auch im Ermlande, d. h. der Papst hatte das Recht, die in den ungeraden Monaten erledigten Kanonikate zu besetzen.

Schmauch, "Nikolaus Kopernikus in Italien," *Die Mittelstelle*, 2 (1943), no. 19, p. 31, discusses the converse case, i. e. when the vacancy occurred during an even month:

> nach den Bestimmungen des Konkordats der Deutschen Nation (sog. Wiener Konkordat von 1448), dem das Bistum Ermland seinerzeit beigetragen war, sollte die Bestellung des Nachfolgers durch gemeinsame Wahl des Bischofs und Domkapitels zu erfolgen.

17. Prowe, I^1, 172.

18. That Jan Scultetus became the successor of Mathias of Launau can be proven only indirectly, for Mathias' name is missing from the manuscript containing the list of the canons of Varmia, presumably written about 1532-1533 by the Canon Alexander Scultetus (*Regesta*, no. 23, fn. 1). Prowe, I^2, 120, shows that Jan Scultetus was not yet a canon in 1491, for he was recommended in that year for that position by Emperor Maximilian I. However, Scultetus is listed in the Chapter documents for the years 1498-1499 as the cantor. Hence he must have been enrolled between 1491 and 1498.

19. Prowe, I^1, 172-173.

20. The biographical studies dealing with the circumstances surrounding Copernicus' entrance into the Varmian Chapter are confused and frequently contradictory (e. g. *Stromata*, pp. 270-271, and Schmauch, "Nikolaus Kopernikus in Italien," p. 31). The confusion stems primarily from the common assumption that Johannes Zanau, the canon whom Copernicus succeeded, died on 26 August 1495 (see for example *Stromata*, p. 271; Wasiutyński, p. 76; Zinner, *Entstehung*, p. 157). But Hipler took 26 August 1497 as the date of Johannes Zanau's death from his tombstone in Frombork Cathedral (*Spicilegium*, p. 267, no. 4; Prowe, I^1, 175). From Alexander Scultetus' manuscript (see fn. 18 above; see also Sikorski, p. 144) it is known that Copernicus was Zanau's successor. All the other known facts fall into place, and Copernicus' enrollment

in the Chapter of the Canons of Varmia must have occurred not long after 26 August 1497.

21. See Ch. II, 13-14, above.

22. *3CT*, p. 319.

23. See Ch. II, fn. 15, and Plate I.

24. Hipler, *Spicilegium*, pp. 246-265, printed the Latin text of the statutes, promulgated between 1485 and 1489 by Nicholas von Tüngen. The statute in question reads in part as follows:

> (22) Statuimus quod Canonicus de Licencia Episcopi et consensu Capituli in studio priuilegiato existens percipiat integram prebendam, vltra quam de consolacionibus et vinalibus marce Quindecim, quas in Quatuortemporibus et Capitularibus defunctorum commemoracionibus eo modo quo eas Canonicus residens deseruit ipse deseruisse intelligatur, sibi pro subsidio cedant.

See also Prowe, I[1], 207-209.

25. *3CT*, p. 322.

26. *Regesta*, no. 33; *Spicilegium*, p. 342, fn. 1. In Hastings Rashdall's *The Universities of Europe in the Middle Ages*, III (London, 1969, reprint of 2nd ed. 1936), 410, fn., Scultetus' letter is attributed to Copernicus.

27. Wasiutyński, pp. 119-120.

28. *Ibid.* Prowe, I[1], 267, remarks that

> the life-style and activities of the students in Bologna set demands which the young and high-spirited canons could not, and would not, evade (Das Leben und Treiben der Scholaren zu Bologna stellte Anforderungen, denen sich die jungen, lebenslustigen Domherrn nicht entziehen konnten und wollten).

APPENDIX XVII

DID BROŻEK WRITE THE 1627 BIOGRAPHY OF COPERNICUS?

Barycz, "Dzieło," contends that Brożek did more than supply Starowolski with the new material in the 1627 biography of Copernicus.[1] Barycz maintains that Brożek actually wrote that biography. Two notes in Brożek's Memoranda are very similar to the corresponding passages in the 1627 biography of Copernicus:

> After the death [on 30 January 1523] of Fabian von Lossainen, bishop of Varmia, the administration of the Varmian bishopric was executed by Nicholas Copernicus. He discharged that duty until Maurice Ferber's election to the bishopric was confirmed [by the pope on 17 July 1523], as is reported in the *Lives of the Bishops of Varmia*, fol. 81:6, which may be found in the Lidzbark library. And when the bishop's estates were seized in part by the burgraves [*starostowie*] of the king, by virtue of the 10 July 1523 royal mandate[2] they were handed over to Nicholas Copernicus in his capacity as administrator, and to Jan Crapitz and Felix Reich, who were the delegates of the Chapter.
>
> Copernicus had many enemies. During his lifetime he was maliciously derided in a stage play by a certain schoolmaster in Elbląg. In addition he had some enemies among the courtiers, as may be gathered from Giese's letters. After his death he had enemies

> in Scaliger, Bodin, and Leovitius. Leovitius was answered by Rheticus in his own hand in letters to Camerarius and Wolf and in two other letters, all of which are in my possession. Nobody thus far has dared to attack Scaliger on account of the learning in which he excels.[3]

This similarity between Brożek's Memoranda and Starowolski's 1627 biography, however, proves only that Starowolski had access to Brożek's notes as well as to letters in Brożek's possession, as Starowolski announces in two places of the 1627 biography.

Barycz quotes the following passage from Starowolski:

> For I need not outdo myself in glorifying the man who is praised by the world itself, which has been enlightened by him through his celebrated belief in the uninterrupted motion of the earth, and through that new reckoning of the heavenly bodies that was unknown to the ancients.[5]

Barycz remarks that "only an expert on the subject and not a shallow polyhistor like Starowolski could write in such a manner."[5] But the "shallow polyhistor" Starowolski could and did write this very passage with which he begins his 1625 biography of Copernicus.[6] The repetition of that passage in the 1627 biography, and its placement within the new context where it does not fit as well as in the short 1625 biography, show that Starowolski himself wrote the passage in question. He also wrote the 1627 biography, with the help of the material supplied to him by Brożek.

NOTES TO APPENDIX XVII

1. "Dzieło," pp. 78-88.
2. Latin text in *Spicilegium*, p. 278.
3. Brożek, *Wybór pism*, I, 187-188.
4. "Dzieło," p. 79.
5. *Ibid.*
6. See Appendix I.

APPENDIX XVIII

"SEPTEM SIDERA"

The manuscript of *Septem sidera* which Brożek discovered in Varmia consisted of seven Latin odes about the birth, childhood, and youth of Christ. Brożek published them in 1629,[1] that is, 11 years after his trip to Varmia,[2] and dedicated them[3] to Pope Urban VIII. In the dedication, Brożek, in a most ambiguous manner, tells of his discovery of the poems and explains their meaning:

> I offer Your Holiness, Most Blessed Father, the childhood and youth of the King of Kings in seven tableaus. This is a new genre of painting. For neither wood nor copper nor canvas bears these images. But the heaven does, and their color is visible during the darkest night. Moreover, they are made with a skill not inferior to that of Apelles, and I wonder whether it does not surpass it. Antiquity divided the heavens into 48 images, many of which are legendary, as is well known from Hyginus and others. It displeased the creator of the new depiction that the darkness of the fables was mixed with the heavenly brilliance. Undertaking to unite the light with the truth, and the truth with the light, he produced only the basic lines. Shortly before his death, however, he commissioned an excellent artist to put in the colors. This artistic secret passed through several hands in the Jagiellonian University since Copernicus' time. I learned this confidentially from professors, and I went to Prussia to find out more about it.

> I was searching in secrecy, afraid that such an extraordinary invention, or rather the remainder of the invention would slip from my hands or somehow be lost, since the envious minds of our age are not docile. But finally the most renowned Simon Rudnicki, of blessed memory, admitted me to the old libraries of Varmia, upon some of which an irreverent hand had already been laid. I overlook nothing, I scrutinize even the tiniest sheets to which fine craftsmen sometimes commit their most excellent inventions. While doing so, I came upon the Archimedean "eureka, eureka." The forty-eight ancient images were rejected, and forty-nine new ones introduced, perhaps because of the excellence of the number seven, or, what I consider more likely, in order to have a middle equidistant from the ends. For this sevenfold tableau is also the middle of that whole sequence, that is, the twenty-fifth composition. Good Lord, how beautiful, how splendid! How appropriate for all times and places! Each verse belongs to a star, none being omitted, or, to use an astronomical expression, subject to eclipse.
>
> Sixteen years ago, when I released the first preliminary announcement, I made some disclosures about this matter. Then, ten years ago, as I was leaving for Italy, I made a second announcement under the auspices of the Most Illustrious Martin Szyszkowski, by the grace of God bishop of Cracow. I sent some copies in small format to my friends in Rome, in particular to the Reverend Abraham Bzowski. I also sent [some copies] to other [friends] in Germany. Whether Bayer or his successors saw them God only knows. For it is certain that neither their precepts nor their means are alike, even though they strive to achieve the same result. I think that this work will be examined by those who attend the flourishing Accademia dei Lincei. Everyone will be allowed to divide the firmament as he wishes. For it is an inheritance bequeathed to all, as is attested by Pliny.[4] This arrangement was intended by its first inventor, Copernicus, for the Sacred Apostolic See; I bring it forth from the old libraries and, as a suppliant, present it to Your Holiness ...[5]

Presumably, as soon as the little booklet was printed,

Brożek dispatched it to the pope, together with a letter which he wrote in Cracow on 28 November 1629:

> When by the disposition of the Holy Ghost, Your Holiness was raised to the highest office in our Church, I perceived a great joy in the souls of many learned men. At the time I was their student in Italy. This [joy] was connected to an unquestionable hope (which was foretelling good things for the sciences). This imprinted itself so strongly on my mind that from then on I began to wonder how I too, surrounded by all who rejoiced, could express my elation. Circumstances, however, prevented me from undertaking anything at that time. It is only now that I can offer Your Holiness these few pages, which contain a certain part of the Christian stellar configuration preserved for the time of your most happy pontificate.[6]

At the behest of the pope, the receipt of the letter and the poems was acknowledged by the pope's nephew, Cardinal Francesco Barberini (1597-1679).[7] On 19 January 1630, the cardinal thanked Brożek very warmly for the poems, which showed not only his erudition, but also his piety. The cardinal ended his letter by conveying the papal blessing on the learned and pious professor.[8]

Certain statements by Brożek in the Dedication-Preface to the *Septem sidera* were misinterpreted. For example, in 1629 Brożek says: "Sixteen years ago ... I released the first preliminary announcement." This first preliminary announcement (*primo prodromo*) was misconstrued as a "partial printing" ("theilweise ... in Druck gegeben").[9] As a result Brożek's trip to Varmia was misdated "about the year 1612" ("um's Jahr 1612").[10] But Brożek himself recorded his presence in Gdańsk in 1618.[11] In 1612 Brożek was not traveling

in Varmia, but teaching in the University of Cracow.[12] Brożek's "second" (*altero*) preliminary announcement was misunderstood to be a "complete edition" ("vollständig in Druck gegeben").[13] These supposed editions (partial in 1613 and complete in 1619 or 1620)[14] are nothing more than misunderstandings of Brożek's statements. As was pointed out, "no trace of these editions is to be found."[15] This critic weakened his skepticism, however, by inserting that no trace is to be found "any more" ("mehr"). No trace has ever been found, for the simple reason that Brożek never referred to any partial edition of 1613 or complete edition of 1619. He confined himself to mentioning "preliminary announcements," without claiming that they were in printed form.

In 1620, on his way to Italy, Brożek met Philip Müller, professor of mathematics at the University of Leipzig. Müller gave Brożek a book, in which Brożek noted that he received it from Müller while he was traveling to Italy.[16] In 1622 Müller published a work in which he said: "I know in a foreign land a most learned man who preserves the Christian images of all the stars, devised by Copernicus, and substituted for the pagan images."[17] Brożek was unquestionably that "most learned man in a foreign land" who told Müller about the new division of the stars into constellations depicting Christian subjects. Whether the idea imposed on the *Septem sidera* by Brożek came to him from Johannes Bayer is not known. Bayer was the author of the famous atlas of

the heavens published in Augsburg in 1603 under the title *Uranometria omnium asterismorum*. Later, together with his student Julius Schiller, he redivided the ancient constellations into ones which were given new Christian names. The Christian atlas, *Coelum stellatum Christianum*, was published in two different editions (Augsburg, 1627), after Bayer's death. When Brożek stated that God only knows whether Bayer or his successors saw the "small outline" he sent to his friends in Germany, he hinted that the Bayer-Schiller Christian heaven was plagiarized from him.

Brożek's statement that the forty-nine images were introduced "possibly because of the excellence of the number seven, or ... to have a middle equidistant from both ends" is inappropriate. For, although the first six poems have seven strophes each, the seventh "sidus" contains nine.[18] Hence the "excellence of the number seven" does not fit the poems. Moreover, the statement that forty-nine new images were introduced must also be discarded, for the actual number of strophes, identified with constellations, is fifty-one.[19]

As may be seen from the Dedication-Preface, Brożek's ascription of the seven odes to Copernicus is very vague. According to Brożek, Copernicus produced only the basic lines and shortly before his death he commissioned an excellent artist to put in the colors. Yet Copernicus' poetic ability has been praised and criticized.[20]

It was not until 1926 that the *Septem sidera* was sub-

jected to a thorough analysis.[21] By comparing the poems with the compositions of the sixteenth- and seventeenth-century Polish poets writing in Latin, and especially with the so-called parodists of Horace, the author of the analysis, Jerzy Krókowski, showed the odes to be the product of a sixteenth-century poet, possibly connected with the Jesuit Seminary of Braniewo.[22] Hence, it must be concluded that Brożek, for reasons of his own, misattributed a religious poem to Copernicus, at a time when the religious establishment was showing increasing hostility to Copernican ideas.

NOTES TO APPENDIX XVIII

1. This little book of 12 unnumbered leaves was printed in Cracow, in the printing shop of Franciscus Caesarius.

2. When Hipler reprinted *Septem sidera*, he wrote an introduction (*Spicilegium*, p. 152), the errors in which have since been widely repeated. According to Hipler,

> The editor of the poems, the Cracow astronomer and physician Jan Brożek, on account of the rumors about the existence of these poems, about the year 1612 journeyed to Varmia, and, as is to be inferred from his ... report, found the original in the libraries there. Then, in 1613, he printed the poems in part, and in 1619 in their entirety. He sent several copies of this [1619] edition to his friends in Poland, Germany, and Rome. However, no trace of these first two editions is to be found anywhere any longer (Der Herausgeber derselben, der krakauer Astronom und Arzt Jan Brożek, war um's Jahr 1612, in Folge des Gerüchtes von der Existenz dieser Gedichte, nach Ermland gereist und hatte sie in dortigen Bibliotheken, seinem ... Berichte nach zu schliessen, im Original aufgefunden, dann im Jahre 1613 theilweise, im Jahre 1619 aber vollständig in Druck gegeben und einige Exemplare dieser Ausgabe an seine Freunde in Polen, Deutschland und Rom gesendet. Von diesen beiden ersten Ausgaben ist indessen nirgendwo mehr eine Spur aufzufinden).

Hipler also presumed that Johannes Dantiscus put the finishing touches on *Septem sidera*.

Brożek, however, traveled to Varmia in 1618, and not 1612; his dedication to the pope mentioned a "first" and "second disclosure" and no printed editions before 1629; hence, *Septem sidera* appeared 86 years (not 76, as Hipler would have it) after the death of Copernicus, who, in addition, was not the author; there is no ground whatsoever to ascribe to Dantiscus any part in writing *Septem sidera*.

Prowe was one of the first scholars, or perhaps the very first scholar, to question the ascription of *Septem sidera* to Copernicus. As Prowe pointed out (I^2, 380), "we have no evidence that anybody besides him [Brożek] saw the poems" ("wir besitzen kein Zeugniss, dass irgend Jemand ausser ihm die Gedichte gesehen hätte"). Yet Prowe felt no need

to accuse Brożek of a "pious deception" ("man braucht ... keinen frommen Betrug bei Broscius vorauszusetzen").

3. Upon his elevation to the papacy in 1623, Cardinal Maffeo Barberini assumed the name of Urban VIII. Karl von Gebler, *Galileo Galilei and the Roman Curia*, trans. by Mrs. George Sturge (London, 1879), p. 109, remarks in his characterization of Urban VIII that "it is no fiction that this imperious pontiff found pleasure in turning passages of the Old and New Testaments into Horatian metre ..." The Horatian style of *Septem sidera* would have pleased His Holiness.

4. Pliny, *Natural History*, II, 26 (24): "caelo in hereditate cunctis relicto ...."

5. Latin text in this Appendix.

6. Translated from the Polish version in Brozek, *Wybór pism*, I, 484-485. The original is in the Vatican Library, Barber. Lat. 6659 (Polonia: *Religiosi diversi eccl. 1614-1696*, LVII, 38).

7. Francesco Barberini, the founder of the famous Barberini library, was the son of Carlo Barberini, brother of Pope Urban VIII.

8. A copy of the cardinal's letter is reproduced on Plate 9. The original has not been found. A professional scribe's copy, however, is attached to the only extant manuscript of *Septem sidera* and its Dedication-Preface to Urban VIII. This manuscript is at present in the Biblioteka Kórnicka near Poznań, and is numbered 493. To the best of my knowledge, Francesco Barberini's letter to Brożek has not been published heretofore, or even mentioned in the literature on the subject.

9. See fn. 2, above.

10. *Ibid.*

11. Ch. III, fn. 44, above.

12. Brożek, *Wybór pism*, II, 14.

13. See fn. 2, above.

14. Edmund Słuszkiewicz, "Kopernikowe 'Siedem gwiazd' i ich losy" [Copernicus' *Septem sidera* and Its Fate], *Nasza Przeszłość* (1966), p. 88, maintained that Brożek "after his return to Cracow quickly printed the *Septem sidera* (in 1620)." Yet Słuszkiewicz admits (p. 97, fn. 39) that Brożek's sentence "Jam ante sedecim annos ... altero ..." (this Appendix) has not yet been satisfactorily explained. Therefore, an edition of *Septem sidera* shortly after Brożek's return to Cracow from his trip to Varmia is unconfirmed.

Słuszkiewicz's article should be used with caution. For example,

Rheticus, who taught in Wittenberg, Constance, and Leipzig, is made into a professor in Nuremberg, where he never taught (p. 83, fn. 1); Osiander's name is given incorrectly as "Ossander" (*ibid.*); Paul III, who became pope in 1534, is elected to the papacy in 1543 (p. 89, fn. 15); moreover, "Pope Paul III and other powerful dignitaries of the Church received favorably the new credo of scientific faith [*De revolutionibus*] from its revolutionary discoverer [Copernicus]" (p. 89; for a refutation of this misstatement see p. 49, above); Brożek, who sent the *Septem sidera* together with a "bombastic dedication" to the pope, "did not live to see any answer" from Rome (p. 90; for Rome's [Francesco Barberini's] answer to Brożek see p. 147, and Plate 9).

15. Prowe, I^2, 373, observes that

> there is no trace to be found anymore of the first two editions which were printed in 1613 and 1619 (perhaps only as a manuscript) ... (Von den beiden ersten Ausgaben, welche in Jahre 1613 und 1619 (vielleicht nur als Manuskript) gedruckt sind, ist jedoch keine Spur mehr aufzufinden).

16. Now in the Jagiellonian Library, Mathes. 1602:

> Hunc librum diu quaesitum (in peregrinatione Prutenica), neque repertum, in Italiam peregre proficiscens, cum salutassem Dominum Philippum Mulerium Mathematicum Lipsiensem, reperi. ab eoque donatum accepi (*MK*, p. 596).

17. *MK*, p. 596:

> Ac notus mihi est vir doctissimus in locis exteris, servans imagines Christianas omnium stellarum a Copernico excogitatas et substitutas in locum ethnicarum (*Phil. Mulleri Examen quaestionum duarum* [Leipzig, 1622]).

18. Wilhelm Bruchnalski, "Kopernik jako uniwersalista i autor poematu 'Septem sidera'" [Copernicus as Universalist and Author of the Poem *Septem sidera*], *Mikołaj Kopernik* (Lwów/Warsaw, 1924), p. 121, claimed he was the first to notice that *Septem sidera* has 7 strophes in the first 6 stars, and 9 strophes in the 7th.

19. Wasiutyński, p. 523, says:

> Had Brożek cared less for exclamations and counted better, he would have seen that *Septem sidera* contains 51 and not 49 strophes, for the last ode has 9 strophes .... Most of the strophes do not suggest any concrete images that would be suitable for a stellar symbolism.

20. For example, Jerzy Kowalski, "Kopernik jako filolog i pisarz

łaciński" [Copernicus as a Philologist and Latin Writer], *Mikołaj Kopernik*, p. 186, does not doubt Copernicus' authorship of *Septem sidera*, but he says that

> Copernicus lacks imagination and is unable to bring out the poetic colorings from his theme. However, he does present his subject with lightness and grace which invariably emanates from poetic simplicity .... He only lacks a livelier and richer poetic feeling.

21. Jerzy Krókowski, *De "Septem sideribus," quae Nicolao Copernico vulgo tribuuntur* (Cracow, 1926).

22. *Ibid.*, p. 109:

> Itaque valde verisimile mihi videtur Septem Sidera in Jesuitarum scholis orta esse, scilicet Societatis Jesu *licei Hosiani* Brunsbergensis ...

Jan Brożek's Preface to *Septem sidera* (Cracow, 1629), in Franz Hipler, *Spicilegium Copernicanum* (Braunsberg, 1873), pp. 153-154.

Urbano VIII. Pontifici. Optimo Maximo. -- Regis Regum incunabula et pueritiam, Beatissime Pater, septem tabellis Tuae Sanctitati offero. Novum est picturae genus. Non enim lignum, non aes, non tela defert istas imgines, sed coelum; color etiam in densissima nocte spectabilis. Artificium porro tantum, ut vel Apelli non cedat: dubito an non superet. Quadraginta octo imaginibus antiquitas coelum distinxerat: in his autem multa fabulosa, ut ex Hygino aliisque patet. Displicuit authori novae picturae, splendori coelesti tenebras fabularum, permistas esse. Veritati lucem, luci veritatem jungere agressus, primas tantum duxit lineas: paulo tamen ante mortem, commisit bono artifici colores inducendos. Hoc artis arcanum per aliquot jam manus a Copernico in Academia Jagellonia ivit. De quo cum ego a praeceptoribus secreto didicissem: ut certiora haberem, in Prussia abii. Tacendo quaerebam, veritus ne tam praestans inventum, vel potius inventi residuum meas manus effugeret; vel ut isto saeculo ingenia aemula sunt non docilia, quoquo modo averteretur. Ac tandem ab Illustrissimo piae memoriae Simone Rudnicio admissus ad veteres Varmiae bibliothecas, quarum non-

nullas jam violenta manus invasit, dum nihil contemno, dum minutissimas etiam chartulas, quibus boni artifices aliquando praestantissima inventa breviter committunt, excutio: ad illud Archimedeum εὕρηκα, εὕρηκα, ventum est. Dejecit antiquas quadraginta octo imagines, novas quadraginta novem induxit, fortasse ob septenarii dignitatem, vel quod magis credo, ut medium haberet ab extremis aequaliter distans. Quae enim tabella hujus septenarii, illa quoque totius seriei media est, hoc est vicesima quinta. Deus bone, quam pulchra! quam nitida! quam omnibus saeculis atque locis communis! Singuli versus stellae sunt, nulli elisioni, vel ut mathematice loquar, nulli ecclipsi obnoxiae. *Jam ante sedecim annos praemisso primo prodromo, de hac re nonnihil indicaveram: deinde, ante decem cum in Italiam irem, altero sub auspiciis Illustrissimi et Reverendissimi Domini Martini Szyszkowski, Dei Gratia Episcopi Cracoviensis: eorumque exemplaria nonnulla minuta forma Romam ad amicos meos, nominatim vero Reverendum Dominum Abrahamum Bzovium transmiseram. Sed et ad alios per Germaniam. Viderintne illa Bayerus aut ejus successores, Deus quidem novit. Certe, neque iisdem principiis, neque iisdem mediis, etsi eundem finem insistunt.* Examinabuntur haec, uti existimo, ab iis qui felicissimum Lynceorum Institutum sequuntur. Licebit cuique, pro suo arbitratu coelum, quod in haereditatem cunctis relictum est Plinio teste, distinguere. Ego hanc dispositionem a primo inventore Copernico, Sanctae Sedi Apostolicae destinatam, ex antiquis Bibliothecis produco, Tuaeque Sanctitati

Magne parens, ter sancte parens, cui credita
coeli Imperia, auspiciis dudum firmata Deorum
supplex offero; liceat enim uti Tui doctissimi
Vatis carmine.

Deus Te, Beatissime Pater, Ecclesiae Sanctae diutissime conservet, ut Meliphtongae Tuae Apes, mel suavissimum publicae per orbem tranquilitatis proferre nunquam cessent. Sanctae Apostolicae Romanae Sedi et Tuae Sanctitati obsequentissimus

Joannes Broscius

Doctor Medicinae, Baccalaureus Sacrae Theolo. et ejusd. facultatis Ordinarius in Acad. Crac. Professor.

APPENDIX XIX

STAROWOLSKI'S EFFECT ON THE LITERATURE CONCERNING "JACOB KÖBEL" (COBELIUS)

Starowolski's confusion of the surname of Jacob Cobelius, the author of the popular *Astrolabii declaratio*, with "Cobilinius," a man from the village of Kobylin, had lasting effects on the literature of the subject.

To give some examples of the resulting confusion, we may begin with Martin Radymiński's *De vita et scriptis Nicolai Copernici Commentatio*.[1] Radymiński, who based his biography of Copernicus on Starowolski, Gassendi, and Brożek's Memoranda, merely repeats Starowolski's terse statement about "Jacob of Kobylin," author of *Astrolabii declaratio* and Copernicus' schoolmate. Wiszniewski, who utilized the Copernicus biographies printed by Starowolski, says that: "Jacob of Kobylin, the student of Brudzewski, published the work *Declaratio astrolabii*, which was once greatly valued."[2] However, being unable to find any traces of "Jacob of Kobylin's" publication, Wiszniewski remarks that Radymiński, too, fails to provide more specific data

concerning that (supposed) treatise.

While enumerating the works of Albert of Brudzewo, Wiszniewski lists *De constructione astrolabii.*[3] About a quarter of a century later, Hipler, combining Wiszniewski's statements about "Jacob of Kobylin" and the work of Albert, reported that the latter wrote *De constructione astrolabii,* "to which his student Jacob of Kobylin wrote a *Declaratio astrolabii*" ("wozu sein Schüler Jacob of Kobylin eine *declaratio astrolabii* schrieb").[4] Wisznieski's and Hipler's assertions were echoed 60 years later by S. Orgelbrand's *Encyklopedia powszechna.* That very popular encyclopedia repeated the misinformation that "Jacob of Kobylin, student of Albert Brudzewski, wrote a work entitled *'Declaratio astrolabii,'* greatly valued by his contemporaries.[5]

Hipler also stated that in 1509 Copernicus accompanied his uncle, Bishop Lucas Watzenrode, on a trip to Cracow. Hipler conjectured that this trip in all likelihood permitted Copernicus to renew his earlier contacts with his former fellow-students, among them "Jacob of Kobylin" ("Hier frischte er damals wohl die frühern Verbindungen mit seinen ehemaligen Mitschülern Jakob von Kobylin,..."). [6] But Hipler's statement about a journey by the bishop and his nephew to Cracow in 1509 is purely imaginary, since the primary sources put neither Watzenrode nor Copernicus in that city in that year.[7]

Karol J. T. Estreicher made the muddle worse. He dated the birth of the imaginary Jacob of Kobylin in 1470, gave him

the alternative surnames Kobel or Kobelius, and attributed to him *Elucidatio fabricae astrolabii* (Oppenheim, 1512). Estreicher felt uneasy enough to say "he does not belong to us [i. e. he is not a Pole], even though he was in Cracow until 1490."[8]

This last statement, concerning Jacob's stay in Cracow, is cited in all seriousness by Starnawski in his commentary to the Polish translation of the *Hekatontas*. Starnawski must have realized that Copernicus did not arrive in Cracow until 1491, and therefore could not have met "Jacob" if the latter stayed in Cracow only "until 1490," as was reported by Estreicher. Hence, Starnawski changed "until" to "in," and misattributed to Estreicher the statement that "Jacob of Kobylin was in Cracow in 1490."[9]

Eisenhart, the author of the biography of Köbel in the *Allgemeine deutsche Biographie*,[10] sends Köbel -- who studied at the University of Heidelberg -- to further his education in mathematics and astronomy to the Jagiellonian University, since it surpassed all the German universities in these fields at that time.[11] Another reason, according to Eisenhart, why Köbel picked Cracow as the place to continue his education may have been the fact that

> he had relatives there, as it seems. For, according to the university records, Copernicus' name was entered on the list of the students at the Jagiellonian University during the ninth rectorate of Mathias Kobilin, a full professor and lecturer on theology.[12]

Thus Rector Matthew of Kobylin (ca. 1425-ca. 1495) is made

into a relative of Jacob Köbel. Again, the similarity between Köbel's latinized surname "Kobelius" (or Koebelius) and "Cobilinius" gave rise to this conjectured kinship between two unrelated persons.

Having found justifications for Köbel's stay in Cracow, Eisenhart repeats Starowolski's misstatement that Köbel pursued mathematical studies there together with Copernicus. Eisenhart even extends Starowolski's misstatement by adding that Köbel may well have maintained these youthful relations with Copernicus also in later years.[13]

Köbel's alleged mathematical studies at the University of Cracow are so well entrenched in the literature that Josef Benzing, the latest biographer of the author of *Astrolabii declaratio*, found it necessary to say that "die Annahme, dass er [Köbel] ... in Krakau studiert hat, lässt sich nicht belegen."[14]

NOTES TO APPENDIX XIX

1. Radymiński's biography of Copernicus, written in 1658, was printed for the first time in *Natalem Nicolai Copernici ... indicit* (Cracow, 1873).

2. Wiszniewski, IV, 146.

3. *Ibid.*, p. 145.

4. Hipler, "Nikolaus Kopernikus und Martin Luther," *Zeitschrift für die Geschichte und Altertumskunde Ermlands*, IV (1868), 491.

5. Vol. VIII (Warsaw, 1900), 334.

6. Hipler, *Zeitschrift*, IV, 509.

7. See for example "Memoriale domini Lucae," 161-166.

8. Karol J. T. Estreicher, *Bibliografia polska*, XIX (Cracow, 1903), 352.

9. *Setnik*, p. 310.

10. *ADB*, XVI, 345-349.

11. Eisenhart repeats Hartmann Schedel's praise of the Jagiellonian University in his *Liber chronicarum* (now known as the *Nuremberg Chronicle*), printed for the first time in Nuremberg in 1493 (not 1491, despite Eisenhart, *ADB*, XVI, 345).

12. *Ibid.*: "Auf die Wahl Krakau's mag bei K. der Umstand mitgewirkt haben, dass er dort, wie es scheint, Verwandte hatte; denn nach den Universitätsacten wurde Copernicus 1491 unter dem neunten Rectorate des Matthias Kobilin, ordentlichen Professors und Lectors der Theologie in das Verzeichniss der Studirenden der Jagellonischen Bursa eingeschrieben."

13. *Ibid.*

14. Josef Benzing, *Jakob Köbel*, p. 8.

BIBLIOGRAPHY

Acta rectoralia almae universitatis cracoviensis. 2 vols. Eds. Stanisław Estreicher and Władysław Wisłocki. Cracow, 1893-1909.

Acten der Ständetage Ost und Westpreussens, 1458-1525, V. Ed. M. Toeppen. Leipzig, 1886.

Akta Stanów Prus Królewskich, V^3. Ed. Marian Biskup. Warsaw, 1975.

Album studiosorum universitatis cracoviensis, I-III, ed. Adam Chmiel. Cracow, 1887-1904; IV, ed. Jerzy Zathey. Cracow, 1950.

Allgemeine deutsche Biographie. Reprint of the 1875-1912 ed. Berlin, 1969.

Altpreussische Biographie, I. Königsberg, 1941.

Baranowski, Henryk, *Bibliografia Kopernikowska, 1509-1955.* Warsaw, 1958.

_____, *Bibliografia Kopernikowska, 1956-1971.* Warsaw, 1973.

Barycz, Henryk, "Dzieło literackie Jana Brożka," *Pamiętnik Literacki,* XLV (1954), 61-90.

_____, *Historia Archiwum Uniwersytetu Jagiellońskiego.* Cracow, 1965.

_____, *Historja Uniwersytetu Jagiellońskiego w epoce humanizmu.* Cracow, 1935.

_____, "Jan Brożek na tle walki elementów postępowych z tradycyjnymi w Uniwersytecie Jagiellońskim," *Krakowskie Odrodzenie.* Cracow, 1954.

Benzing, Josef, *Die Buchdrucker des 16. und 17. Jahrhunderts in deutschen Sprachgebiet.* Wiesbaden, 1963.

_____, *Jakob Köbel zu Oppenheim, 1494-1533.* Wiesbaden, 1962.

Bieńkowska Barbara, *Kopernik i heliocentryzm w polskiej kulturze umysłowej do końca XVIII wieku.* Series *Studia Copernicana III.* Wrocław, 1971.

Biliński, Bronisław, *Galileo Galilei e il mondo polacco.* Wrocław, 1969.

Birkenmajer, Aleksander, "Analiza bibliologiczna traktatu *De revolutionibus,*" *Studia źródłoznawcze,* XV (1971), 3-71.

_____, *Etudes d'histoire des sciences en Pologne.* Series *Studia Copernicana IV.* Wrocław, 1972.

Birkenmajer, Ludwik Antoni, *Mikołaj Kopernik.* Cracow, 1900.

_____, *Mikołaj Kopernik jako uczony, twórca i obywatel.* Cracow, 1923.

_____, *Stromata Copernicana.* Cracow, 1924.

Biskup, Marian, *Regesta Copernicana.* Series *Studia Copernicana VII* (Polish version), Wrocław, 1973, and *Studia Copernicana VIII* (English version), Wrocław, 1973.

_____, "Sprawa Mikołaja Kopernika i Anny Schilling w świetle listów Feliksa Reicha do Biskupa Dantyszka z 1539 roku," *Komunikaty Mazursko-Warmińskie* (1972), pp. 371-380.

Bodin, Jean, *The Six Bookes of a Commonweale.* Facsimile of the 1606 English translation, ed. Kenneth Douglas McRae. Cambridge, 1962.

Brahe, Tycho, *Tychonis Brahe dani opera omnia.* 15 vols. Copenhagen, 1913-1929.

Briefe und Documente aus der Zeit der Reformation im 16. Jahrhundert. Eds. Karl and Wilhelm Krafft. Elberfeld, 1876.

Brożek, Jan, *Wybór pism.* 2 vols. Eds.: I, Henryk Barycz; II, Jadwiga Dianni.

Bruchnalski, Wilhelm, "Kopernik jako uniwersalista i autor poematu 'Septem sidera,'" *Mikołaj Kopernik.* Lwów (1924), 111-130.

Brudzewo, Albert, *Commentariolum super Theoricas novas Georgii Purbachii.* Ed. L. A. Birkenmajer. Cracow, 1900.

Burmeister, Karl Heinz, *Achilles Pirmin Gasser, 1505-1577.* 2 vols. Wiesbaden, 1970.

_____, *Georg Joachim Rhetikus, 1514-1574.* 3 vols. Wiesbaden, 1967-1968.

Cappelli, Adriano, *Cronologia, Cronografia e Calendario Perpetuo.* Milan, 1969.

Carstenn, Edward, *Geschichte der Hansestadt Elbing.* 2nd. ed. Elbląg, 1937.

Copernicus, Nicholas, *Nicholas Copernicus Complete Works,* I. London/Warsaw/Cracow, 1972; II, Cracow, 1977.

_____, *Nicolai Copernici opera omnia,* II. Warsaw/Cracow, 1975.

_____, *Nikolaus Kopernikus Gesamtausgabe,* II. Eds. F. and C. Zeller. Munich, 1949.

Cytowska, Maria, *Korespondencja Erazma z Rotterdamu z Polakami.* Warszawa, 1965.

Deusterwald, Paul, "Memoriale domini Lucae episcopi Warmiensis," *Scriptores rerum warmiensium II,* ed. Carl Peter Woelky. *Monumenta historiae Warmiensis,* VIII. Braunsberg, 1889.

Dianni, Jadwiga, *Jan Brożek (Joannes Broscius) akademik krakowski.* Warsaw, 1949.

_____, "Pobyt J. J. Retyka w Krakowie," *Studia i Materiały z Dziejów Nauki Polskiej* (1953), pp. 64-79.

Dictionary of Scientific Biography. 14 vols. New York, 1970-1976.

Dreyer, J. L. E., *Tycho Brahe.* Edinburgh, 1890. repr. NY, 1963.

Erasmus, Desiderius, *Opus epistolarum Des. Erasmi Roterodami,* X. Ed. P. S. Allen. Revised edition, Oxford, 1941.

Estreicher, Karol J. T., *Bibliografia polska.* 32 vols. Cracow, 1870-1938.

Estreicher, Stanisław, "Sądownictwo rektora krakowskiego w wiekach średnich," *Rocznik Krakowski,* IV (Cracow, 1900).

Eubel, Conrad, *Hierarchia catholica medii aevi,* III. Münster, 1923.

Gansiniec, Ryszard, "Rzymska profesura Kopernika," *Kwartalnik Historii Nauki i Techniki* (1957), II, 471-484.

_____, "Tytuł dzieła astronomicznego Mikołaja Kopernika," *Kwartalnik* (1958), III, 195-222.

Garin, Eugenio, "Alle origini della polemica anticopernicana," *Studia Copernicana VI* (Wrocław, 1973), 31-42.

Gassendi, Petrus, *Opera omnia*, V. Facsimile of the 1658 Lyons edition. Stuttgart-Bad Cannstadt, 1964.

Górski, Karol, *Łukasz Watzenrode: życie i działalność polityczna (1447-1512)*. Series *Studia Copernicana X*. Wrocław, 1973.

Hajdukiewicz, Leszek, *Biblioteka Macieja z Miechowa*. Wrocław, 1960.

Hartner, Willy, "Copernicus, the Man, the Work, and Its History," *Proceedings of the American Philosophical Society* (1973), pp. 413-422.

Hipler, Franz, "Analecta Warmiensia," *Zeitschrift für die Geschichte und Altertumskunde Ermlands*, V (1870-1874), 316-488.

____________, "Nikolaus Kopernikus und Martin Luther," *Zeitschrift*, IV (1868), 475-549.

____________, *Spicilegium Copernicanum*. Braunsberg, 1873.

Hugonnard-Roche, H., E. Rosen, and J.-P. Verdet, *Introductions a l'astronomie de Copernic*. Paris, 1975.

Karliński, Franciszek M., *Żywot Kopernika i jego naukowe zasługi*. Cracow, 1873.

Kempfi, Andrzej, "Erasme et la vie intellectuelle en Warmie au temps de Nicolas Copernic," *Colloquia Turonensia*, I (Paris, 1972), 397-405.

Kepler, Johannes, *Gesammelte werke*, I. Ed. Max Caspar. Munich, 1937.

Kibre, Pearl, *The Nations in the Medieval Universities*. Cambridge, Mass., 1948.

Kosko, Allan, "Erreurs et lègendes," *Etudes coperniciennes*. Ed. Stanisław Wędkiewicz. Paris (1955-1957), *13-16*:283-285.

Kowalski, Jerzy, "Kopernik jako filolog i pisarz łaciński," *Mikołaj Kopernik*. Lwów (1924), 131-186.

Krókowski, Jerzy, *De "Septem sideribus," quae Nicolao Copernico vulgo tribuuntur*. Cracow, 1926.

Liber diligentiarum facultatis artisticae universitatis cra-

coviensis (1487-1563). Ed. Władysław Wisłocki. Cracow, 1886.

Markowski, Mieczysław, "Marcin Biem z Olkusza," *Krakowski krąg Mikołaja Kopernika.* Series *Copernicana Cracoviensia III.* Cracow, 1973.

_____, *Burydanizm w Polsce w okresie przedkopernikańskim.* Series *Studia Copernicana II.* Wrocław, 1971.

Moesgaard, Kristian Peder, "Copernican Influence on Tycho Brahe," *Studia Copernicana V* (Wrocław, 1972), 31-55.

_____, "From Copernicus to Tycho Brahe," *Avant, avec, après Copernic.* Paris (1975), pp. 187-190.

Monumenta Poloniae typographica XV et XVI saeculorum, I. Ed. Jan Ptaśnik. Lwów, 1922.

North, John D., "The Medieval Background to Copernicus," *Vistas in Astronomy XVII* (1975), 3-16.

Oko, Jan, "Paweł Deusterwalt nieznany humanista XV wieku," *Ateneum Wileńskie,* VII (1930), 186-198.

Polkowski, Ignacy, *Kopernikijana.* 3 vol. Gniezno, 1873-1875.

Prowe, Leopold, *Nicolaus Coppernicus.* 2 vols. Osnabrück, 1967, reprint of the 1883-1884 edition.

Rashdall, Hastings, *The Universities of Europe in the Middle Ages,* III. London, 1969, reprint of the 2nd edition, 1936.

Ravetz, Jerome R., "The Humanistic Significance of Our Copernican Heritage," *Vistas in Astronomy XVII* (1975), 141-152.

Rheticus, G. J., *Narratio prima.* Facsimile of the 1540 Gdańsk edition. *Milliaria VI.* Osnabrück, 1965.

Riccioli, Giovanni B., *Almagestum novum.* Bologna, 1651.

Rosen, Edward, "Copernicus' Axioms," *Centaurus,* 20 (1976), pp. 44-49.

_____, "Copernicus' Hispalensis," *Organon,* 11 (1975), pp. 138-149.

_____, "Copernicus' Spheres and Epicycles," *Archives internationales d'histoire des sciences,* 25 (1975), pp. 82-92.

_____, "Galileo's Misstatements about Copernicus," *Isis*, 49 (1958), pp. 319-330.

_____, Review of R. S. Westman, ed., *The Copernican Achievement* in *The Polish Review*, XXI (1976), 225-235.

_____, "The Authentic Title of Copernicus's Major Work," *Journal of the History of Ideas*, IV (1943), 457-474.

_____, *Three Copernican Treatises*. 3rd ed. New York, 1971.

_____, "Was Copernicus a Pythagorean?", *Isis*, 53 (1962), pp. 504-508.

_____, "Was Copernicus' *Revolutions* Approved by the Pope?", *Journal of the History of Ideas*, XXXVI (1975), 531-542.

_____, "When Did Copernicus Write the *Revolutions?*", *Sudhoffs Archiv*, 61 (1977), pp. 144-155.

Schmauch, Hans, "Des Kopernikus Beziehungen zu Schlesien," *Archiv für schlesische Kirchengeschichte*, 12 (1955), 138-156.

_____, "Neue Funde zum Lebenslauf des Coppernicus," *Zeitschrift für die Geschichte und Altertumskunde Ermlands*, 28 (1943), pp. 53-99.

_____, "Nikolaus Coppernicus ein Deutscher," *Jomsburg*, I (1937), 164-191.

_____, "Nikolaus Kopernikus in Italien," *Die Mittelstelle* (May, 1943), 2:no. 19, 30-37.

_____, "Um Nikolaus Coppernikus," *Studien zur Geschichte des Preussenlandes* (Marburg, 1963), pp. 417-431.

Scriptores rerum prussicarum. 6 vols. Reprint Frankfurt/Main: Minerva, 1963 of the Leipzig 1861-1874 edition.

Seeger, Raymond J., "Introductory Remarks," *Vistas in Astronomy*, XVII (1975), 137-140.

Sikorski, Jerzy, *Mikołaj Kopernik na Warmii: chronologia życia i działalności*. Olsztyn, 1968.

Słuszkiewicz, Edmund, "Kopernikowe 'Siedem gwiazd' i ich losy," *Nasza Przeszłość*, 25 (1966), pp. 83-110.

Śniadecki, Jan, *Pisma filozoficzne*, I. Cracow, 1958.

Stamm, Edward, "Z historii matematyki XVII w. w Polsce," *Wiadomości Matematyczne*, XL (1936), 1-216.

Starnawski, Jerzy, "Szymona Starowolskiego *Hekatontas* i początki bibliografii polskiej," *Roczniki Humanistyczne*, XII (1964), 133-150.

Starowolski, Simon, *Scriptorum polonicorum ἑκατοντάς; seu centum illustrium Poloniae scriptorum elogia et vitae.* Frankfurt/Main, 1625.

_____, 2nd ed. Venice, 1627.

_____, *Setnik pisarzów polskich albo pochwały i żywoty stu najznakomitszych pisarzów polskich.* Translation and commentary by Jerzy Starnawski. Cracow, 1970.

Statuta nec non liber promotionum philosophorum ordinis in universitate studiorum Jagellonica ab anno 1402 ad annum 1849. Ed. Józef Muczkowski. Cracow, 1849.

Strzelecka (Modelska), Bożena, "Bernard Wapowski," *Krakowski krąg Mikołaja Kopernika.* Series *Copernicana Cracoviensia III.* Cracow, 1973.

Swerdlow, Noel M., "The Derivation and First Draft of Copernicus's Planetary Theory, A Translation of the *Commentariolus* with Commentary," *Proceedings of the American Philosophical Society*, 117 (1973), pp. 423-512.

Szujski, Józef, "Kroniki Bernarda Wapowskiego z Radochoniec, kantora katedr. krakowskiego," *Scriptores rerum polonicarum*, II. Cracow, 1874.

Vernet [Gines], Juan, "Copernicus in Spain," *Studia Copernicana V* (Wrocław, 1972), 271-291.

_____, "Copernic en Espagne," *Studia Copernicana XIV* (Wrocław, 1975), 101-103.

Wardęska, Zofia, *Teoria heliocentryczna w interpretacji teologów XVI wieku.* Series *Studia Copernicana XII.* Wrocław, 1975.

Wasiutyński, Jeremi, *Kopernik, twórca nowego nieba.* Warsaw, 1938.

Wąsik, Wiktor, *Andrzej Glaber z Kobylina, problematysta polski.* Warsaw, 1916.

Westman, Robert S., ed., *The Copernican Achievement*. Berkeley, Cal., 1975.

Wiszniewski, Michał, *Historya literatury polskiej*. Cracow, 1840-1857.

Zinner, Ernst, *Entstehung und Ausbreitung der coppernicanischen Lehre*. Erlangen, 1943.

_____, *Leben und Wirken des Joh. Müller von Königsberg, genannt Regiomontanus*. 2nd ed. Osnabrück, 1968.

Zins, Henryk, "Kapituła fromborska w czasach Mikołaja Kopernika," *Komunikaty Mazursko-Warmińskie*, 66 (1959), pp. 399-434.

_____, *W kręgu Mikołaja Kopernika*. Lublin, 1966.

Żebrawski, Teofil, *Dodatki do bibliografii piśmiennictwa polskiego z działu matematyki i fizyki*. Cracow, 1886.

The above bibliography comprises only works frequently consulted.

Plate 1

IOANNES BROSCIVS CVRZELOVIENSIS, ACADEMIÆ Cracouien. Ordinarius Aſtrologus. Lectori S.

REuerendus Dominus IOANNES RYBKOVVICZ, *Collega Maior in Academia Cracouienſi, pro ſuo in me arteſq; Mathematicas amore, dedit mihi perlegẽdas Reuereudiſſimi D. Tidemanni Giſii Epiſcopi Varmien. epiſtolas, quarum plurimæ ad Copernicum abſolutæ ſubtilitatis Mathematicum ſunt exaratæ. Legi auidè, vnamq; reperi plenam querimonia, propter opus Reuolutionum, primæ editione mala fide publicatũ. Eam nunc Lector accipe: alias Frueburgo reuerſus, ſi Deus vitam conceſſerit, dabo. Vale.*

Georgio Donnero.

CONturbauit me, quod de afflicta valetudine Venerabilis ſenis noſtri Copernici ſcripſiſti. Huic vt vita incolumi ſolitudinem amauit, ita nunc ægroto paucos extare familiares arbitror, qui caſibus ipſius afficiantur, cùm omnes ſimus illi propter integritatem & excellentem doctrinã debitores. Scio autẽ eum ſemper in fidiſſimis habuiſſe te. Oro igitur, ſi ita fert fortuna illius; velis tutoris ei eſſe loco, & curam viri, quem mecum ſemper amauiſti, ſuſcipere, ne in hac neceſſitate deſtituatur fraterna ope, & nos ingrati erga bene merentem habeamur. Vale. Lubauia die 8. Decemb. Anno 1542.

D Ioachi.

Cim. 1320 b

Ioachimo Rhetico.

EX nuptiis Regiis Cracouia rediens, reperi Lubauiæ geminum à te missum exemplum recens excusi operis nostri Copernici, quem è viuis excessisse, non ante acceperam quàm Prussiam attigissem Erepti fratris viri summi dolorem, lectione libri qui illum redhibere mihi viuum videbatur pensare potuissem, verum in primo limine sensi malam fidem, ac vt tu verè appellas, impietatem Petreij, quæ indignationē mihi priore mœstitia atrociorem resudit. Quis enim non discrutietur ad tantum sub bonæ fidei securitate admissum flagitium? Quod tamen haud scio an non tam huic excusori ex aliorum industria pendenti sit tribuendum, quàm inuido cuipiam, qui dolens decedendum sibi esse à pristina professione, si hic liber famam sit consecutus, illius simplicitate in deroganda operi fide forsitan est abusus. Ne tamen impunè ferret, qui se concessit alienæ fraudi corrumpendum, scripsi ad Senatum Noribergensem, docens quid ad integrandam authori fidem necessarium mihi videretur. Epistolam ad te mitto cum ipsius exemplo, vt pro re nata diiudicare queas, quem in modū sit instituendum negotium, nam hoc qui apud Senatum illum agat, te neminem video accommodiorem aut etiam volentiorem, qui Choragū egisti peractæ fabulæ, vt iam non magis Authoris interesse videatur quàm tua, restitui quæ à recto dilapsa sunt. Si quid tamen refert, te vt id quam diligētissimè efficias vehementer rogo. Si recudendæ venient priores chartæ, affigenda videtur à te præfatiuncula, qua etiam ea quæ iam emissa sunt exemplaria à calumniæ vicio repurgentur. Quin optem etiam præmitti vitam Authoris, quam à te eleganter scriptam olim legi, nec deesse historiæ aliud puto nisi exitum vitæ, quem ex sanguinis profluuio & subsecuta dextri lateris paralysi nono Kalen: Iunij accepit, multis ante diebus memoria & vigore mentis destitutus, nec opus suum integrum nisi in extremo spiritu vidit, eo quo decessit die. Id ante mortem excusum exisse nihil obstabit, nā annus consentit, & diem finiti operis non adscripsit excusor. Vellem adnecti quoq; opusculum tuum, quo à sacrarum scripturarum dissidentia aptissimè vindicasti telluris motum. Ita explebis iusti voluminis magnitudinem, & compensabis id quoque incommodi, quo in præfatione operis præceptor tuus tui mentionem omisit. Quod ego non tui neglectu, sed lentitudine & incuria quadam (vt erat ad omnia quæ Philosophica nō essent minus attentus) præsertim iā langueſcenti euenisse interpretor, non ignarus quāti facere solitus fuerit tuam in se adiuuando operam & felicitatem. Quod ad me misisti operis exempla, magnam habeo donatori gratiam, erunt hæc mihi monumenti perpetui loco ad tuendam memoriam, non solùm authoris, quem ego charum semper habui, sed etiam tui, qui vtæ illi labo-

Plate 2b

ranti Theseum strenuè præstiteras, ita nunc nobis, ne confecti operis fructu careremus, cura & solicitudine tua contulisti. Pro quo studio tuo quantum tibi debeamus omnes, non est obscurũ. Cupio me facias certiorem, sitné summo Pontifici liber missus, nam si factum non est, vellem ego id officium præstare defuncto. Vale. Lubauiæ die xxvj. Iulij. Anno 1543.>

EPISTOLA DEDICATORIA ex Iudicio Astrologico Alberti Caprini Buccouiensis desumpta.

Reuerendissimo in Christo Patri & Domino,

DOMINO SAMVELI MACIEIOVVSKI, DEI GRATIA EPISCOPO Plocen. ac Procancellario Regni Poloniæ, Domino & Mecœnati studiosorum Benignissimo.

Albertus Caprinus Buccouiensis, humiliter sese commendat.

TVam illam summam Reuerendissime Antistes in rebus perspiciendis prudentiam, & moderandis æquitatem & agendis industriam, cum maximis omnis generis ornamentis coniunctam, nunc publicè tantò impensius extollo atq; veneror, quanto ad merita illa tuæ amplitudinis maior indies authoritatis accessio increscit augeturque. Rex enim Serenissimus atque inuictissimus Princeps pro sua preclara prudentia, & absolutissima rerum experientia iudicioq;, non contentus ad id muneris Republicæ Reuerendam Paternitatem tuam magna cum laude honoreq; ipsius euehere, in quo rerum summa & totius Regni cardo vertitur: nouis subinde, ijsq; maximis Celsitudinem tuam ornat honoribus, quo magis omnibus spectatam reddat, excellentem tuam virtutem & in Rempublicam fidem. Itaq; nemo est amplissime Præsul, qui nesciat honores istos virtutis tuæ esse præmia dignissima. Nemo item est qui non istas virtutes, meritò amet suspiciat atq; veneretur, præsertim cùm intelligamus omnes ad communem Reipub. vtilitatem dignitates istas in tuam collatas amplitudinem ex æquo pertinere. Quare cùm & ego, hæc nostra in quibus versamur studia: aliquantulam Reipub. esse partem censeam: & meipsum quoq; Celsitudini tuæ & insinuatum & deditum ostendere vellem: quod vnum per fortunæ modulum potui, leuidense hoc munusculum, impar quidem magnitudini tuæ, sed nõ ingratum vt arbitror, studiorum meorum primitias, Prognosticon nempe seu iudicium ex stellarum decretis appellare libet, tibi nuncupandũ duxi Præsul Ornatissime quo animi mei promptitudinem & alacritatem erga tuam prudentiam interim testarer. Vtinam autem facultate id possem, quam voluntate facio certè promptissima. Quare tua prudentia me & hoc genus artium

Plate 2c

[illegible] famam & [illegible] dignitatem [illegible] Germania [illegible]: hac enim urbs fouit viros, summi in- genij [illegible], qui has disciplinas tum propaga- runt, tum illustrarunt, quorum multi his [illegible] fatis iniquis decesserant. Ex hoc enim Gymnasio multi Mathemata hauserunt qui in Germania magna cũ laude & emolumento stu- diosorum eadem profitentur, quorum honoris gratia, nomino Nicolaum Copernicum Canoni- cum Varmiensem qui huius urbis olim hospi- tio usus est, & haec quae scripsit in rebus Mathe- maticis admiranda, plura etiam edenda institu- it, ex hac nostra Vniuersitate ceu ex fonte pri- mum accepit. Id quod ipse non solùm non diffite- tur (benignum esse & plenum ingenui pudoris Iudicio Pliniano existimans, profiteri per quos profecerit) verùm hoc quicquid est totum no- strae fert acceptum Academiae. Dominus igitur Iesus diu te nobis seruet incolumem. Cracouiae 27. Septemb. Anno Christi 1542.

In Pro-

Plate 2d

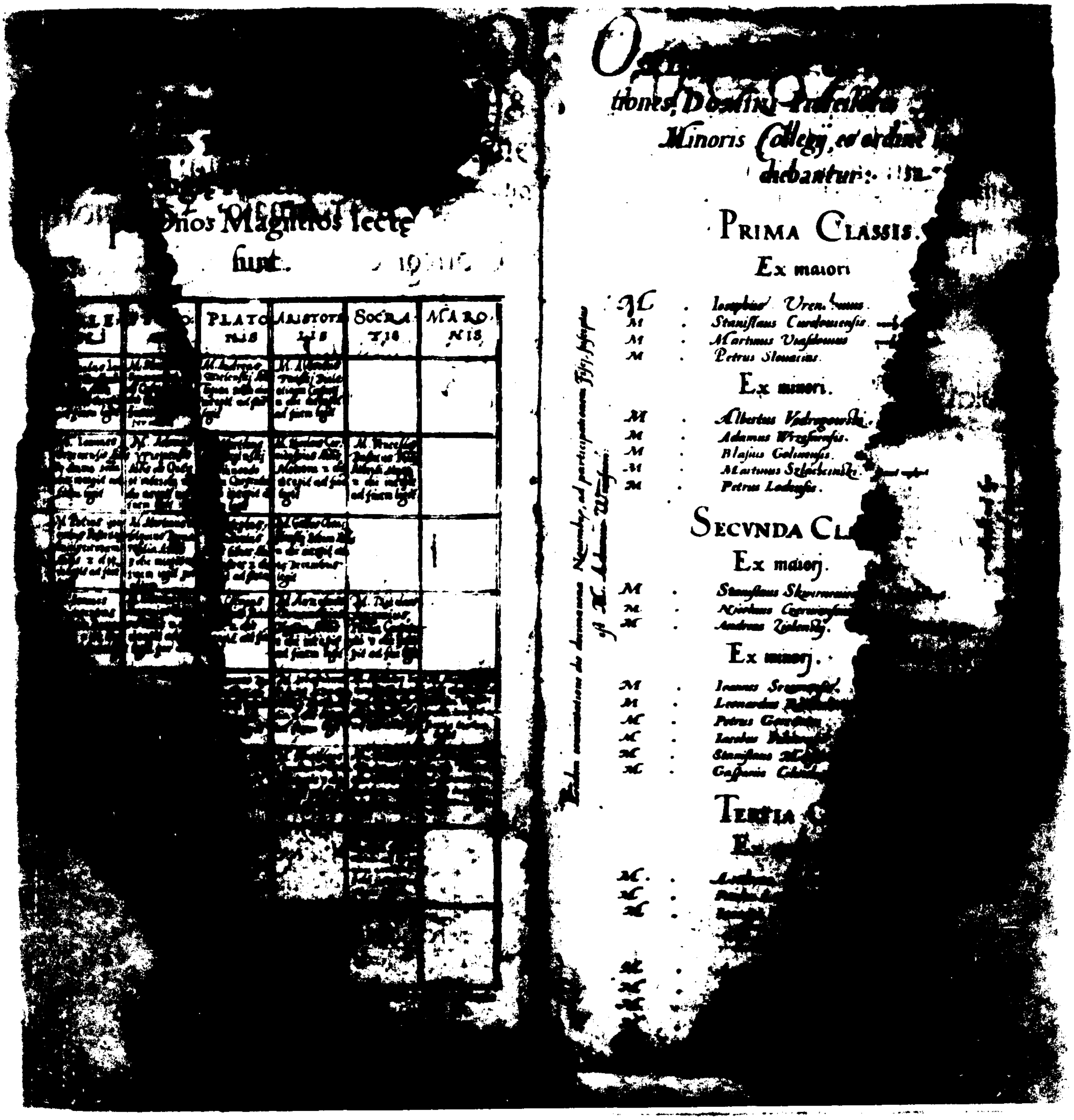

Dnos Magistros lecte
sunt.
PLATONIS
ARISTOTELIS
SOCRATIS
MARONIS
tiones, Domini
Minoris Collegij, et ordine
dicebantur.
PRIMA CLASSIS.
Ex maiori
Ex minori.
SECVNDA CL
Ex maiorj.
Ex minorj.

Plate 3a

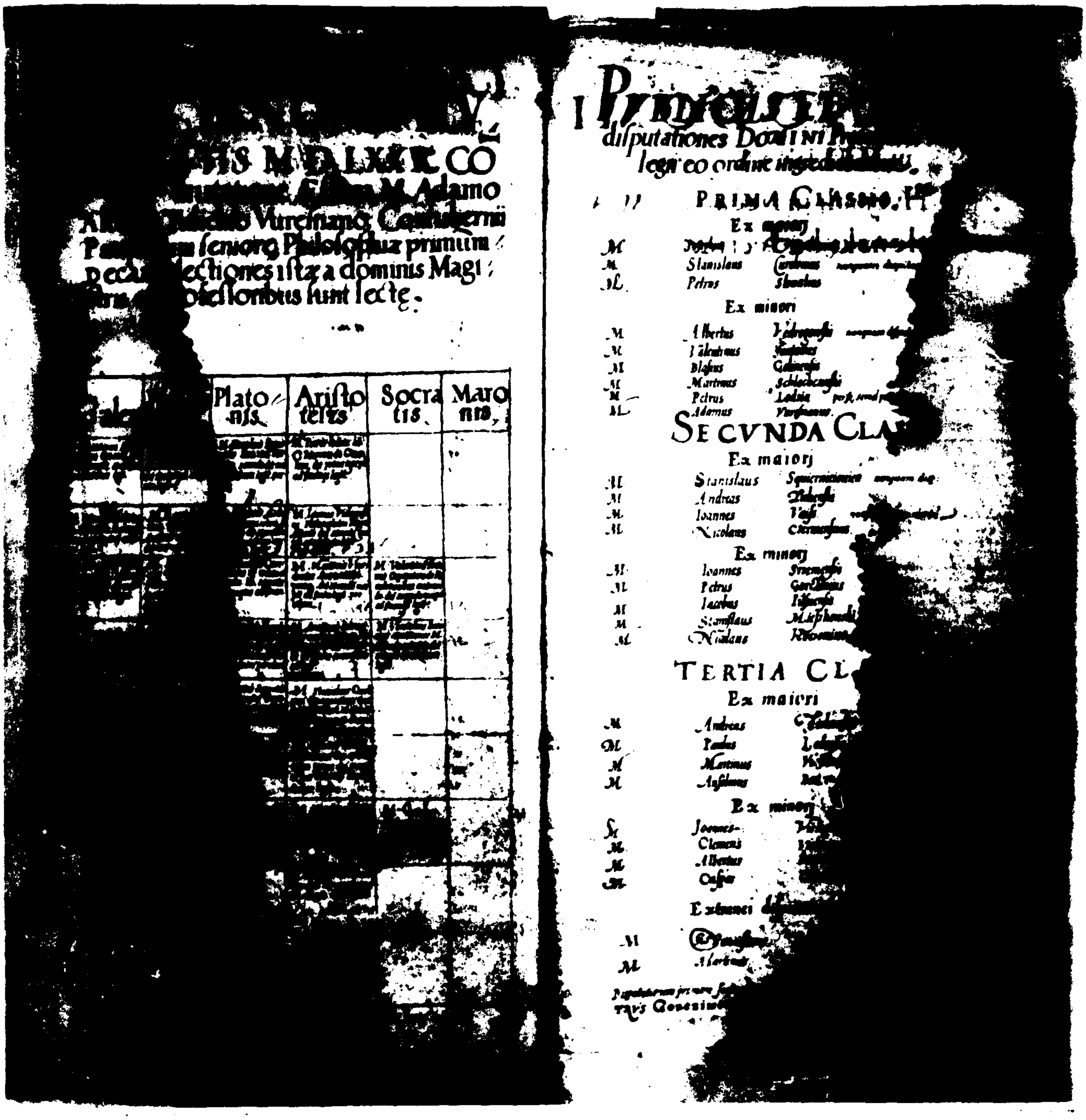
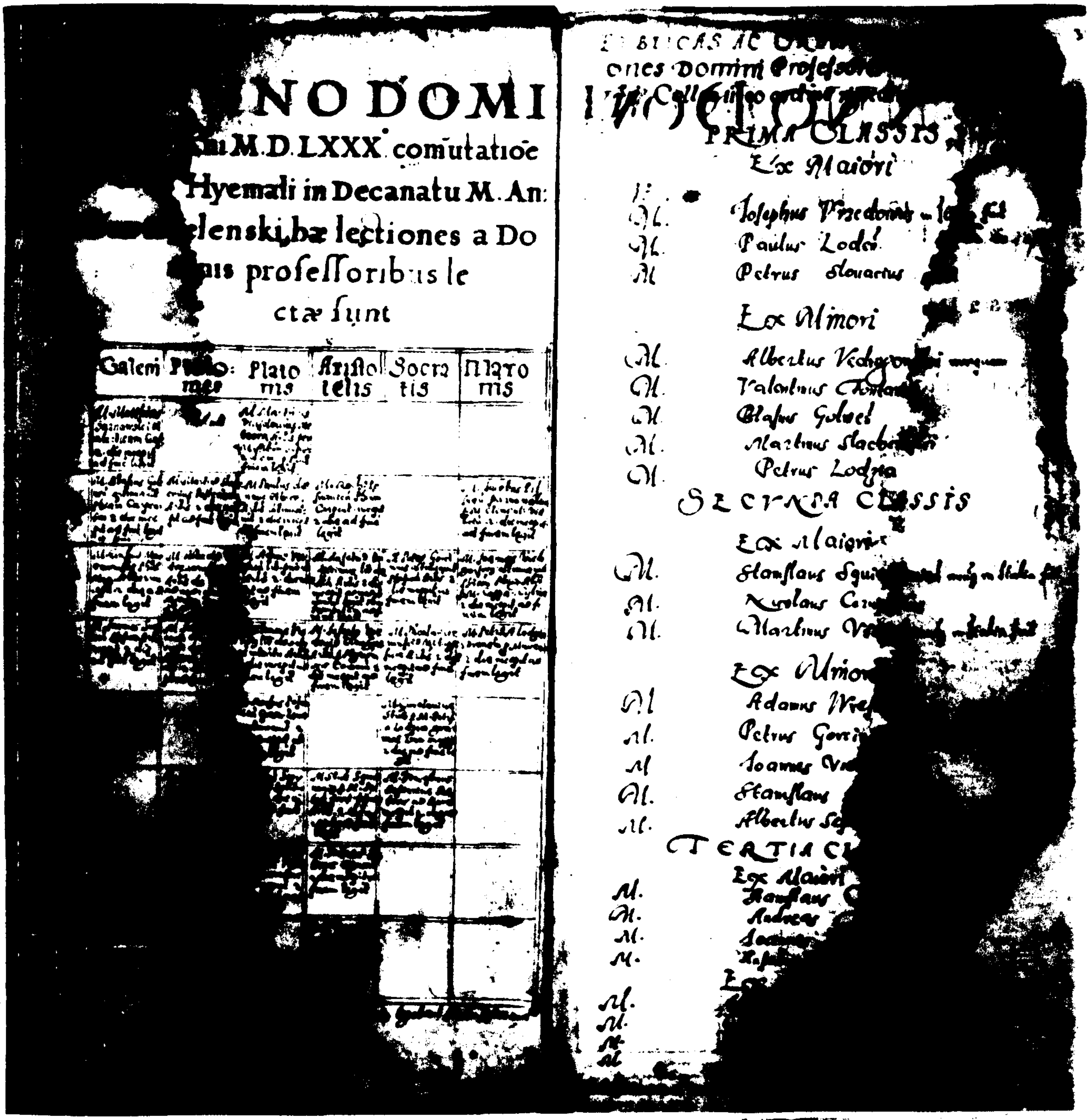

Paulum seniorisq; Philosophiae primum
lectiones istae a dominis Magi
professionibus sunt lectae.
Platonis
Aristotelis
Socratis
Maronis
disputationes DOMINI
legit eo ordine
PRIMA CLASSIS
Ex maiori
Stanislaus
Petrus
Ex minori
Albertus
Valentinus
Blasius
Martinus
Petrus
Adamus
SECVNDA CLA
Ex maiori
Stanislaus
Andreas
Ioannes
Nicolaus
Ex minori
Ioannes
Petrus
Iacobus
Stanislaus
Nicolaus
TERTIA CL
Ex maiori
Andreas
Paulus
Martinus
Anselmus
Ex minori
Ioannes
Clemens
Albertus
Caspar

Plate 3b



NO DOMI
M.D.LXXX. comutatioe
Hyemali in Decanatu M. An:
lenski, hæ lectiones a Do
nis professoribus le
ctæ sunt

Galeni	Ptolomei	Platonis	Aristotelis	Socratis	Platonis

ones Domini Professo
PRIMA CLASSIS
Ex Maiori
M. Iosephus Vnedowski
M. Paulus Lodci
M. Petrus Slouartus
Ex Minori
M. Albertus Vecha
M. Valentinus C
M. Blasius Golcel
M. Martinus Slacb
M. Petrus Lodna
SECVNDA CLASSIS
Ex Maiori
M. Stanislaus Squi
M. Nicolaus C
M. Martinus V
Ex Minori
M. Adamus Wie
M. Petrus Gorri
M. Ioannes V
M. Stanislaus
M. Albertus S
TERTIA C
Ex Maiori

Plate 3c

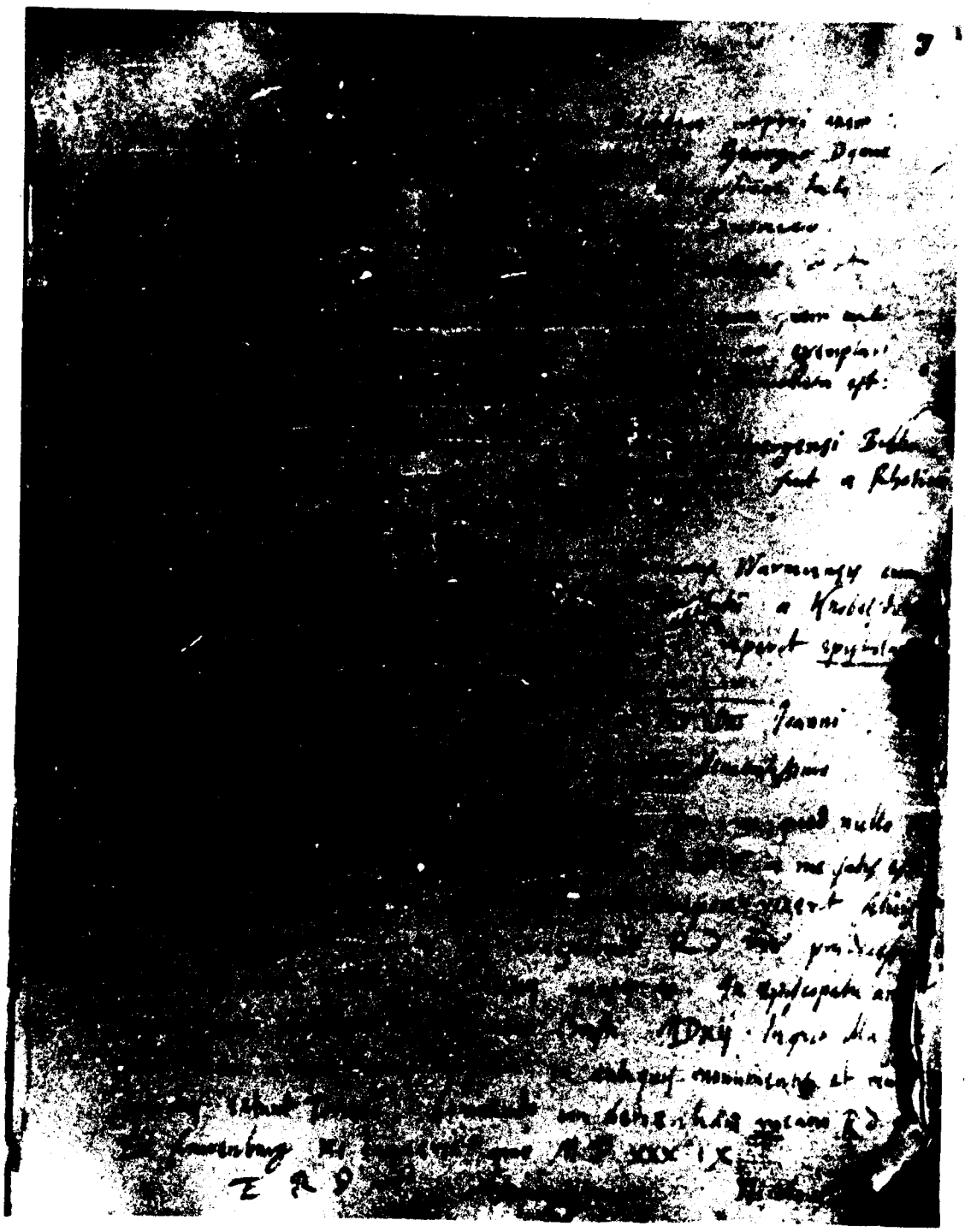


Plate 4

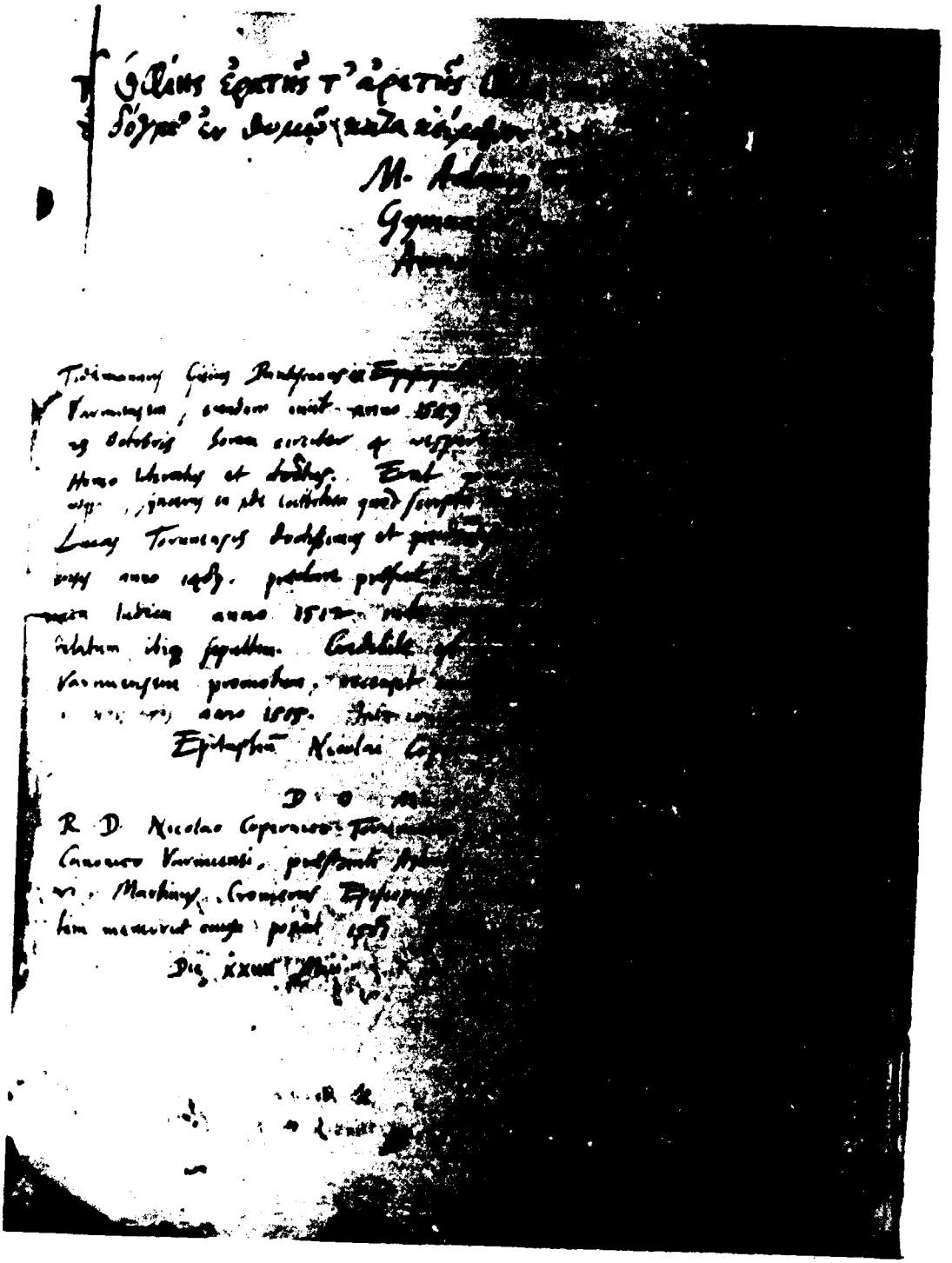


Plate 5

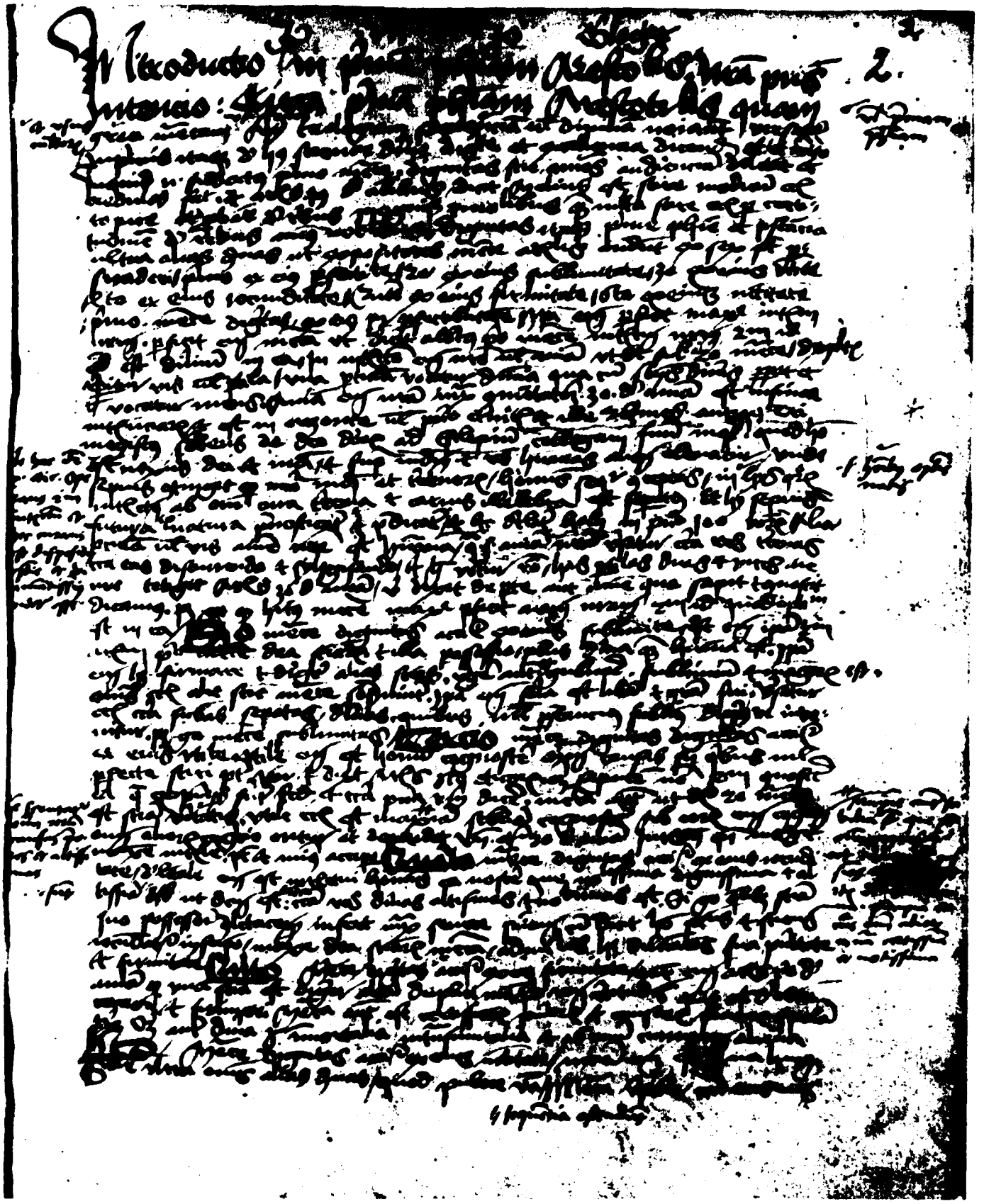


Plate 6

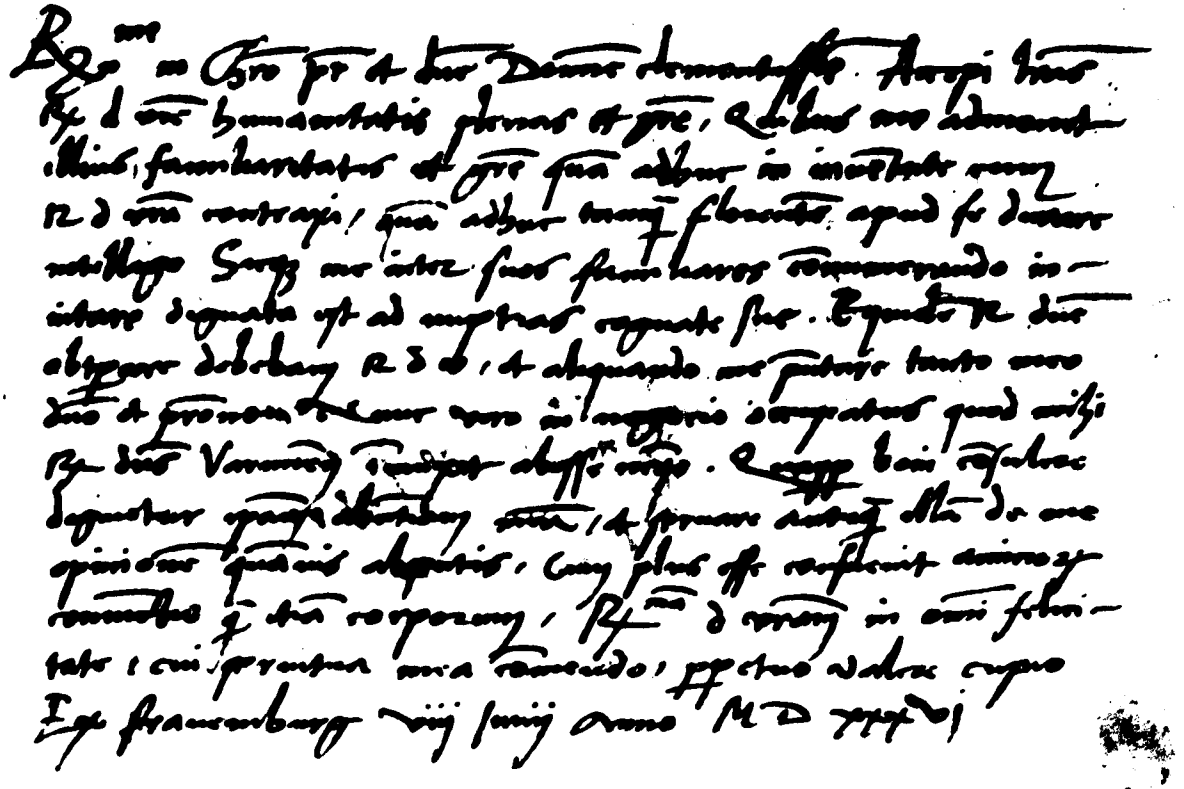


Plate 7a

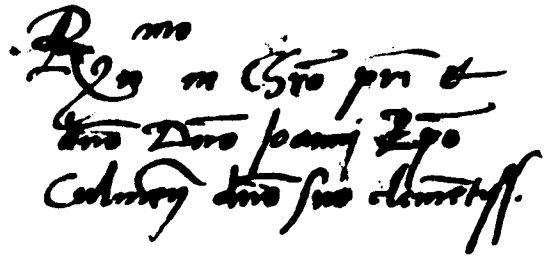


Plate 7b

In Nomine Dni [illegible]

SEPTEM

SIDERA REGIS REGUM

INCHNABILIA ET UNIVERSITATEM

REPRAESENTAN-TIA.

URBANO VIII.

PONTIFICI OPTIMO MAXIMO.

[illegible] Regum immutabilia, et Inconcussa, Beatissime Pater, [illegible] Tabellis, Tuae Sanctitati offero. Novum est Picturae genus. Non enim ligneam, non aes, non tela desiderat, sed [illegible] [illegible] Color etiam, in densissima nocte, spectabilis. [illegible] tantum. Ut [illegible] Apelles non vidit. [illegible] [illegible] octo [illegible] Antiquitas [illegible] multa Fabulosa, et ex [illegible] Auctor [illegible] Picturae, [illegible] Fabulas [illegible] [illegible] Veritate lucem, [illegible] [illegible] aggressus, Primo [illegible] [illegible] nostra, [illegible] colores [illegible] [illegible] Arcanum per aliquot iam [illegible] Copernicus, in Academia [illegible] [illegible] [illegible] a Praeceptoribus [illegible] [illegible] in [illegible] [illegible] cum tacendo [illegible] [illegible] inventum, Vel [illegible] [illegible] Vel [illegible] non [illegible]

[illegible]

MS. Auctor hujus operis ut subscriptum in fine dedicationis est Joannes Broscius Professor in Academia Cracoviensi Doctor medicinae &c in anno 1630.

1

Plate 8a

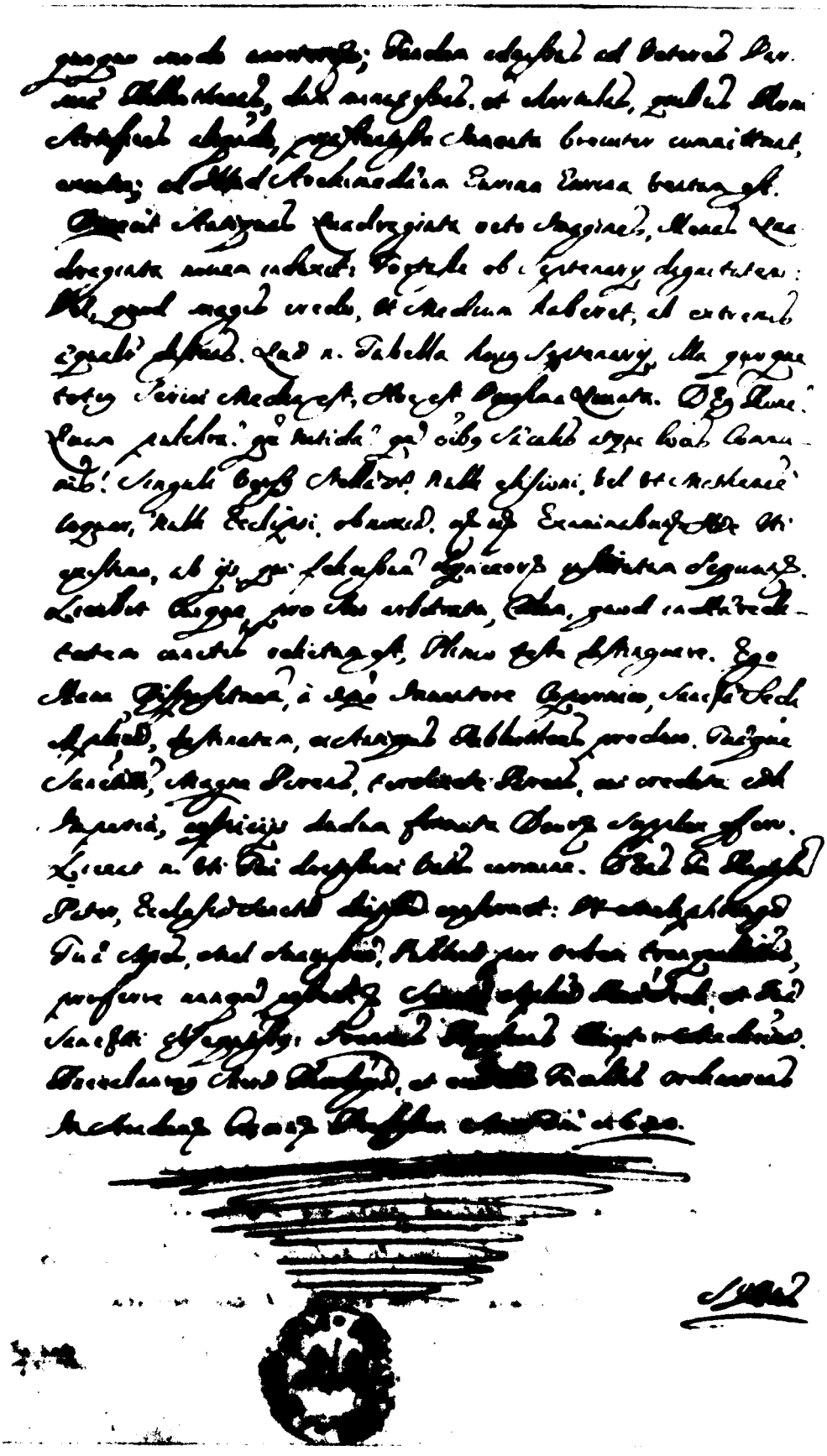


Plate 8b

EPISTOLA

FRANCISCI BARBERINI CARdinalis Sanctae Romanae Ecclesiae. Ad Clarissimum Dominum Ioannem Broscium, Medicinae Doctorem, Sacrae Theologiae Baccalaureum, et Matheseos in Academia Cracoviensi Professorem

Franciscus Cardinalis Barberinus, Clarissimo
Domino Ioanni Broscio Salutem plurimam.

Clarissime Vir, Redditae fuerunt Sanctissimo Domino Nostro Tuae literae, cum lucubrationibus, quas Beatitudini misisti. Quemadmodum vero Tua doctrina, ita illa Tuae pietatis luculentum praebuerat argumentum. Neque profecto Erudito Viro, ornamentum ullum, aeque convenire video, quam Religio, atque observantia erga Apostolicam Sedem: Cuius arbitrio, dum Tu, Te ipsum Tuaque Scripta subiicis, non minus existimationi, quam saluti Tuae prudenter consulis. Nullum enim erroris periculum subire, nullam famae iacturam facere potest is, qui monentem audit Ecclesiam, quam ab omni erroris suspicione liberavit Deus. Grata itaque Sanctitati Domini Nostri fuere studia, atque officia Tua: Pro quibus Sanctitas Sua Paternum Amorem Tibi spondet, atque Apostolicam Benedictionem amanter tribuit. Romae 29. Ianuarii Anno Domini 1630.

Plate 9

maluí tuæ Sanctitati, quàm cuiquam alteri has meas lucubrationes dedicare: propterea quòd et in hoc remotissimo angulo terræ, in quo ego ago, ordinis dignitate, & literarum omnium atque Mathematices etiam amore, eminentissimus habearis, ut facile tua authoritate & iudicio calumniantium morsus reprimere possis: etsi in prouerbio sit, non esse remedium aduersus sycophantæ morsum.

Si fortasse erunt ματαιολόγοι, qui cum omnium Mathematum ignari sint, tamen de illis iudicium sibi sumunt, propter aliquem locum scripturæ, male ad suum propositum detortum, ausi fuerint meum hoc institutum reprehendere ac insectari: illos nihil moror, adeo ut etiam illorum iudicium tanquam temerarium contemnam. Non enim obscurum est, Lactantium, celebrem alioqui scriptorem, sed Mathematicum parum, admodum pueriliter de forma terræ loqui, cum deridet eos, qui terram globi formam habere prodiderunt. Itaque non debet mirum uideri studiosis, si qui tales nos etiam ridebunt. Mathemata mathematicis scribuntur, quibus & hi nostri labores, si me non fallit opinio, uidebuntur etiam Reipub. ecclesiasticæ conducere aliquid, cuius principatum tua Sanctitas nunc tenet. Nam non iam multo ante sub Leone X. cum in Concilio Lateranensi uertebatur quæstio de emendando Calendario Ecclesiastico, quæ tum indecisa hanc solummodo ob causam mansit, quòd annorum & mensium magnitudines, atque Solis & Lunæ motus nondum satis dimensi haberentur. Ex quo equidem tempore, his accuratius obseruandis, animum intendi, admonitus à præclarissimo uiro D. Paulo episcopo Semproniensi, qui tum isti negotio præerat. Quid autem præstiterim ea in re, tuæ Sanctitatis præcipue, atque omnium aliorum doctorum Mathematicorum iudicio relinquo. & ne plura de utilitate operis promittere tuæ Sanctitati uidear, quàm præstare possim, nunc ad institutum transeo.

a Vide Hypotyposeon Tidemanni Gysii Episcopi Culmensis ad Nicolaum Copernicum nondum typis excusum. Ubi etiam Erasmus Roterodamus de Copernico ipse Tidemanno refert valde manifestam.

INDEX

Plate 10

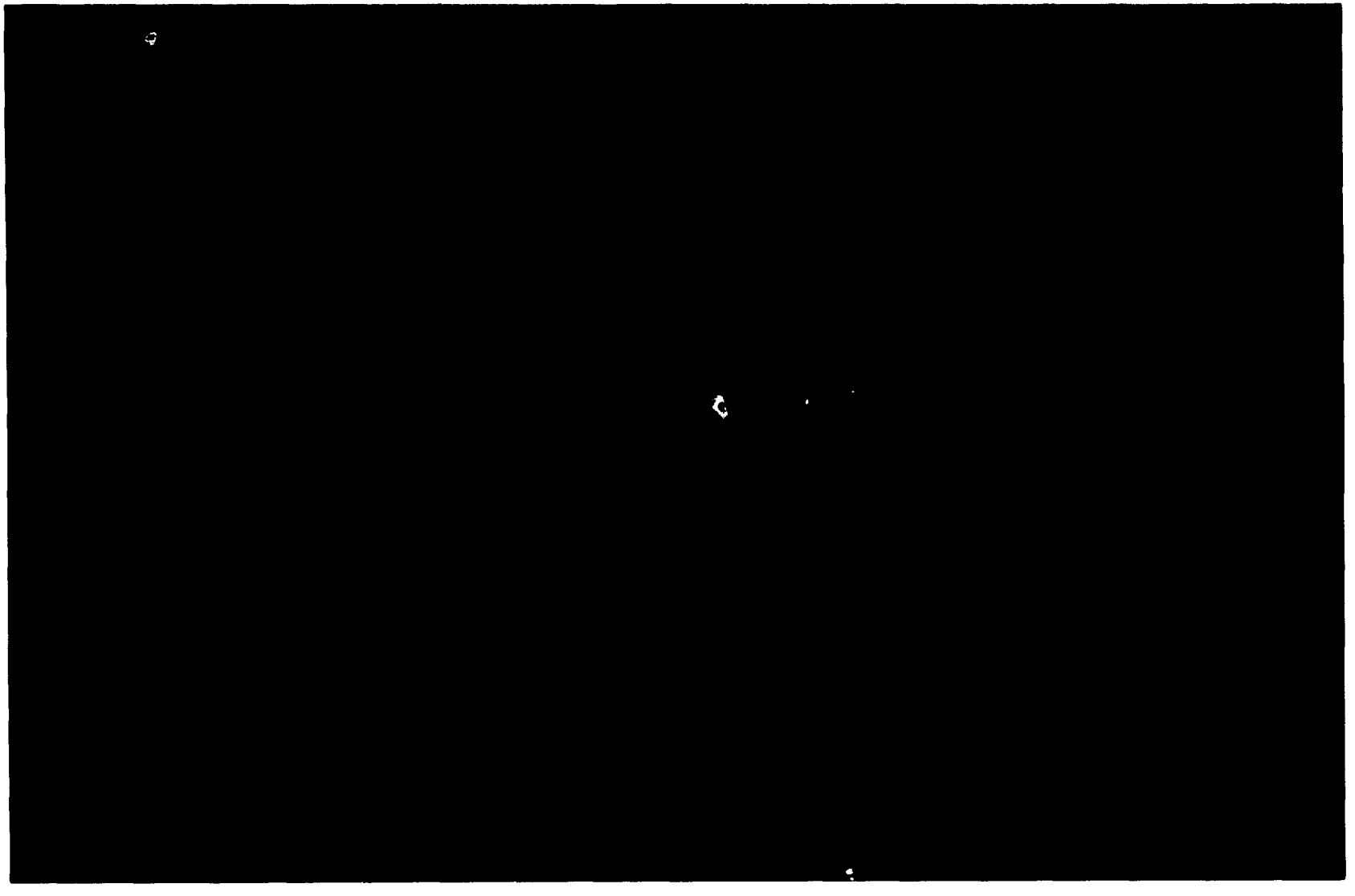


Plate II

Astronomer Nicolaus Copernicus lecturing on Astronomy in Rome in the year 1500.

PAINTING BY WOJCIECH GERSON

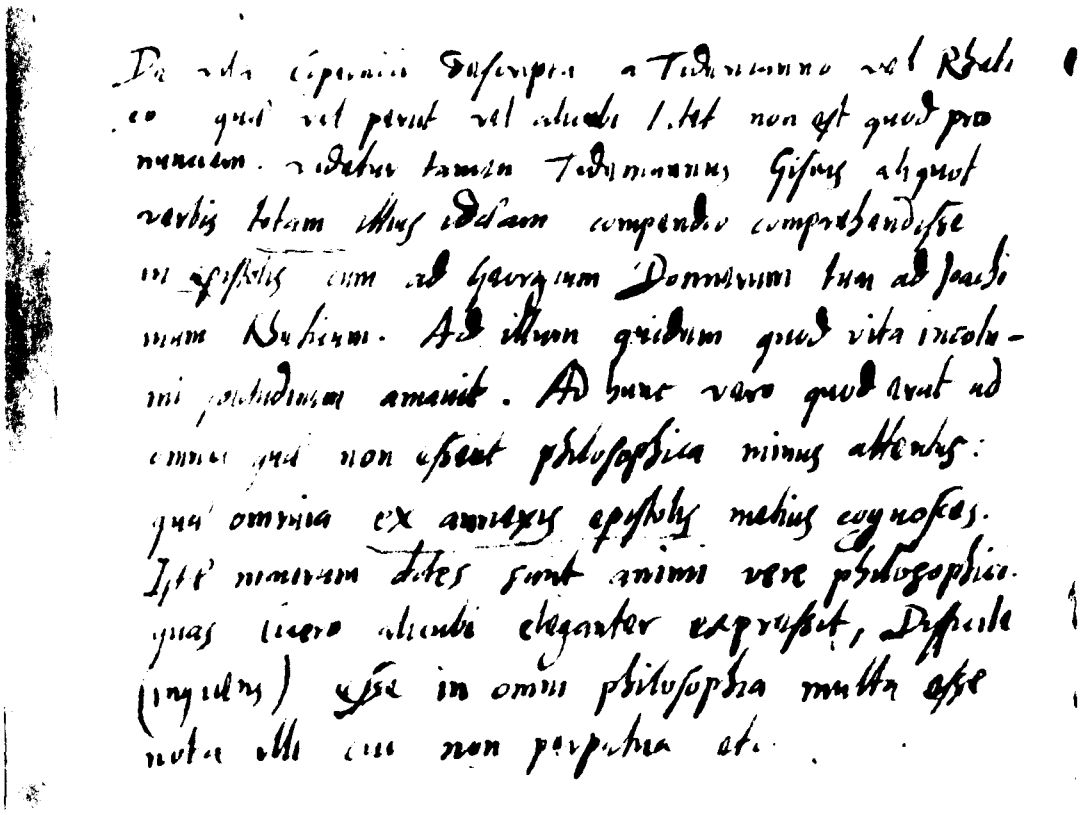


Plate 12