

Introduction: Hagecius, a Renaissance Man

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Abstract: The chapter provides an introduction to Tadeáš Hájek of Hájek, a renowned sixteenth-century Bohemian scholar. In a preliminary form, it presents his life, studies, interests, and influence, while emphasizing that Hájek was a scholar with a wide professional network. It briefly introduces the chapters that follow. It also gives an overview of the most important previous studies on Hájek and explains the non-progressivist and multidisciplinary approach used by the authors in this volume.

Keywords: Bohemia; Rudolf II; professional networks; methodology; progressivism

Tadeáš Hájek of Hájek, or, in the latinized version, Thaddaeus Hagecius ab Hagek (also Hayek or Hayck, or Nemicus),¹ is one of the brilliant personalities of European intellectual life in the sixteenth century. A versatile scholar and polymath,² his name appears among the seventy-two memorable names of Czech history under the windows of the National Museum in Prague. He was a key figure in the incipient scientific debates in his native Bohemia and beyond. He was a prism in which both new and traditional currents of thought met in the context of the vibrant intellectual milieu of Central and Western Europe. He adopted and elaborated on them, communicating his ideas to his numerous correspondents and professional colleagues, but also,

1 Czech pronunciation of his full name is *tad̩a:ʃh ha:ɣək z ha:ɣku*. We use the Czech version of the name “Hájek” throughout this volume, with just occasional application of the latinized variant “Hagecius.” The name “Nemicus” derives from Latin *nemus*, i.e., “grove,” or “háj” in Czech (“hájek” meaning “little grove”). Other forms (Hagek, Hayeck, etc.) are just variants of the Czech name in prints.

2 Cf. Burke, *The Polymath*, esp. pp. 26–46.

through some of his works, to a lay audience. It is in this dialectical process of transmitting ideas, so important for the early modern period, that we can see Hájek's great significance. His influence reaches well beyond the limits of the Czech lands—though these limits, at that time, circumscribed one of the most buoyant European centres of knowledge.

Tadeáš Hájek was born in Prague in 1526 as a descendant of a wealthy and educated noble family.³ In the 1540s, he studied mathematics and medicine.⁴ In 1550, he graduated as a bachelor in Prague and two years later as a magister. We know that, in both cases, he defended medical theses. To obtain his doctoral degree in medicine, Hájek went to Bologna, one of the most prominent medical faculties of his time. He graduated from there in 1560. From 1553 he was a professor of mathematics at the University in Prague, but he also led a medical disputation there in 1554. In the same year, he was knighted by Emperor Ferdinand I. He was teaching until 1557, when he married his first wife. From his three marriages he had three sons and a daughter. As a married man, he could not keep his position as professor as it could only be held by single men. However, where he had been employed was not the Faculty of Medicine. After the Hussite Wars in the first half of the fifteenth century, Charles University had been largely deprived of its rights and freedoms by the pope for its anti-Catholic attitude, and only the philosophical faculty (i.e., the liberal arts) survived.⁵ Attempts to re-establish the medical faculty had been made since the 1530s, but they were only successful after the Battle of White Mountain in 1620. The university was then taken over by the Jesuit school in Klementinum (founded in 1556) and both institutions merged into one.

Yet medicine was neither the single object of Hájek's interest, nor the most beloved. It was astronomy and mathematics that his heart yearned for. However, in the early modern period, there were—as there are today—practical reasons to choose the career of a physician, compared to the more theoretical, and less profitable, mathematical disciplines. And Hájek obviously did well in this area: he was appointed *protomedicus* (i.e., the chief medical supervisor) of the Kingdom of Bohemia, and he was granted a hereditary aristocratic title. He also became a physician at the emperor's court in 1566–67, though not a personal physician to the emperor, as older

3 Smolka (2001) identified 1526 as the year of Hájek's birth while previous scholarship had estimated 1525, and even 1527 was proposed. We accept the dating according to Smolka.

4 Smolka, "Postavení Tadeáše Hájka," 13. See chapter 1, section 1, chapter 2, section 1, and chapter 6, section 2.

5 Petrář, *Nástin dějin*, 34–36. For more details, see Petrář, *History of Charles University*.

scholarship has claimed.⁶ He did not hesitate to start a critical debate on the correct method of curing a patient, if he felt it was needed, as we can see from his *Actio medica* (1596), a part of his long-term polemic against the medical methods of Philip Fauchellus.

In fact, Hájek as both botanist and astronomer has survived, to some degree, in the collective memory of his homeland. Primarily, this is as the translator of “Mattioli’s herbal”—the repeatedly published Czech herbal based on the commentaries on the old Greek pharmacologist Dioscorides (c. 40–90), written by the Italian physician and botanist Pietro Andrea Mattioli (1501–1577). He is also remembered as one of the great physicians and astronomers fluttering around the imperial court of Rudolf II. Those more conversant with history may perhaps recall, as something of a curiosity, that he penned a book on the art of brewing beer (*De cervisia*, 1585), while others will point to Hagecius, a crater on the Moon, or at 1995 Hajek, an asteroid observed in 1971 for the first time, both of which bear his name.

To some, Hájek’s name may evoke the Prague stay of the English mathematician, philosopher, and alchemist John Dee (1527–1609) and his less happy (and less virtuous) colleague Edward Kelly (or Kelley, 1555–1597), who died in the north of Bohemia shortly after his last failed escape from jail.⁷ Neither association, however, diminishes Hájek’s scholarly portrait. When John Dee dwelt in his Prague house in 1584, Hájek was a savant who had experienced the imperial courts of three emperors: Ferdinand I, his son and successor Maximilian II, and his follower Rudolf II.⁸ Thanks to his skills, education, and experience, he was an important intermediary between the emperor and scholars outside the imperial court, including those involved in alchemy, as he himself was.⁹ Over the years, he developed a robust network of professional contacts, which connected him to some of the brightest stars in the skies of early modern scholarship. Through his letters, he communicated with, among others, Paulus Fabricius, Caspar Peucer, Georg Joachim Rheticus, Paul Wittich, Tycho Brahe, and Johannes Kepler.¹⁰ He even invited Kepler and Brahe to Prague successfully. He was on

6 Smolka, “Postavení Tadeáše Hájka,” 25–27.

7 For Kelly (and Dee), see Karpenko and Purš, “Edward Kelly.”

8 See Purš, “The Habsburgs on the Bohemian Throne,” 106.

9 See Purš, “Rudolf II’s Patronage of Alchemy,” 195 and 201; Purš, “Tadeáš Hájek of Hájek and His Alchemical Circle”; also see chapters 6 and 7.

10 Smolka, “Hájkův přítel a korespondent Andreas Dudith,” 125. For around hundred letters by/to various correspondents, see *Frühneuzeitliche Ärztebriefe des deutschsprachigen Raums (1500–1700)* (<https://www.medizingeschichte.uni-wuerzburg.de/akademie/index.html>), a project organized by Michael Stolberg. To give just another, more specific, example

good terms, especially, with Tycho Brahe (1546–1601),¹¹ who arrived in 1599 and took Hájek for a “very brilliant doctor, extremely skilful in medicine ... as well as in philosophy, most specifically in questions of astronomy.”¹² They corresponded regularly. Brahe, for example, asked for Hájek’s opinion on his quarrel with Reimarus Ursus (1551–1600), another mathematician and astronomer of the imperial court, over the authorship of the geo-heliocentric system.¹³ Brahe invited Hájek to his observatory on the Danish island of Hven (which Hájek refused) and, on one occasion, was himself given the precious *Commentariolus*, an early presentation of the heliocentric theory by Nicolaus Copernicus, which Hájek himself had received from the mathematician and astronomer Georg Joachim Rheticus (1514–1574), who had been given it first-hand.¹⁴ Tycho also sent models of his instruments to Hájek in his letters.¹⁵ And when a comet appeared in 1577,¹⁶ it was also thanks to Brahe’s remarks on Hájek’s measuring of its parallax¹⁷ that made him change his opinion on its nature and location. When Hájek died in September 1600, his funeral ceremony, held in the Bethlehem Chapel in Prague where John Hus had been preaching two centuries earlier, was attended not only by the illustrious masters of the University of Prague, Martin Bacháček of Nauměřice, Jan Campanus Vodňanský, and Jiří Carolides of Karlsperk, but also by the Danish astronomer. Brahe was to die in Prague shortly afterwards, in 1601, while Kepler still had a decade of fruitful scholarly life in Prague ahead of him to finish his *Astronomia nova*, the *Optica*, and other works, and also to formulate the first two of his laws of planetary motion.¹⁸

of Hájek’s connections, we can mention the English poet, scholar, and diplomat Philipp Sidney (1554–1586), whom he might have met personally on the latter’s trip through Bohemia. Hájek and Sidney were certainly friends as Hájek even sent his three sons to study in Oxford under Sidney’s patronage. See Kastnerová, “Philip Sidney’s Poetics,” 9, note 3; Kastnerová, “Viatori in continens.”

11 For the relationship between Brahe and Hájek, see Smolka, “Hájekův přítel a korespondent Andreas Dudith,” 152–54; see chapter 7, sections 6–7.

12 See the French translation of Brahe’s letter in Jardine and Segonds, *La guerre des astronomes*, I, 105.

13 *Ibid.*, I, 162.

14 On the donation, see Birkenmajer in Albertus de Brudzewo, *Commentariolum super Theoricis novas planetarum Georgii Purbachii*, 83–84, 634. On *Commentariolus* as well as on Hájek’s role, see Borski and Kokowski, “Copernicus, His Latin Style and Comments to Commentariolus,” 405–6; see also Czartoryski in Copernicus, *Complete Works*, III, 76.

15 See Mosley, *Bearing the Heavens*, 255; Perkins, “Instruments of Authority,” 270, note 28.

16 On this event, including a chapter on Hájek, see Hellman, *The Comet of 1577*, 184–206; also see Horský, “Přínos Tadeáše Hájka v astronomii,” 1–13.

17 Sanchez, “De Copernic à Galilée.”

18 Hadravová and Hadrava, “Astronomy in Prague,” 8.

Thanks to his contacts and variety of interests, Hájek was among the first in Bohemia to read the new *Lutherus medicorum*, the Swiss medical reformer, natural philosopher, and lay theologian Theophrastus von Hohenheim, known as Paracelsus (1493–1541). Again, it was from Rheticus¹⁹ that he had obtained a fragment of his *opus magnum*, the *Astronomia magna* (penned largely during the author's visit in Moravský Krumlov in 1537). Hájek had read it in 1567, four years before it came off the printing press.²⁰ Hájek praised Paracelsus as a reviver of the art of the “signature of things” (*signatura rerum*), which he himself mentioned in the foreword to Mattioli's herbal and which he made use of in his book on metoposcopy, or the physiognomic art of interpreting one's wrinkles. We may also note that Mattioli and his secretary and German translator Georg Handsch (1529–1578), with whom Hájek collaborated, are mentioned by Robert Burton (1577–1640) in his famous *Anatomy of Melancholy* (1621) among the leading proponents of the medical use of antimony, i.e., an eminently Paracelsian new method.²¹ Like many others, Hájek accepted the Paracelsian approach to some degree, but he was also critical of it in other aspects.²² After all, his friend Tycho Brahe was also a Paracelsian and befriended the Danish physician and brilliant interpreter of Paracelsus, Petrus Severinus (1542–1602). In a letter, Hájek expressed his wish to attend Brahe's “chymical works.”²³ It is good to note that Paracelsus himself was known not only as an innovative and critical physician. He was also an astrologer who delivered his predictions and prophesies quite regularly. Most of what had been published during his life was of this kind, be it his calendars, his “practicas” and “prognostications,” i.e., forecasts, or his interpretations of comets, rainbows, etc.²⁴ And he was a prolific, and rather unorthodox, writer on theological matters, too²⁵—although this part

19 See Purš, “Tadeáš Hájek of Hájek and His Alchemical Circle,” 435 and 441–43.

20 See Purš and Smolka, “Martin Ruland,” 588–89, note 46; cf. Evans, *Rudolf II and His World*, 239.

21 Burton, *The Anatomy of Melancholy*, II, 4, 2, 1; see Purš, “The Habsburgs on the Bohemian Throne,” 122; Purš, “Tadeáš Hájek of Hájek and His Alchemical Circle,” 437 and notes 74 and 76; Purš and Smolka, “Martin Ruland,” 588–89. See chapter 2, section 4, and chapter 6, section 4.

22 See Kühlmann and Telle, *Corpus Paracelsisticum*, I, 83; Purš, “Tadeáš Hájek of Hájek and His Alchemical Circle,” 424.

23 For Brahe's Paracelsianism, see Shackelford, “Providence, Power, and Cosmic Causality.” For his alchemical interests, see Karpenko and Purš, “Tycho Brahe.” See also chapter 7, section 4.

24 The first was his *Practica, gemacht auff Europen, anzufahren in den nechstkunfftigen 30 Jar biß auff das 34 nachvolgend* from 1529, and by the end of his life in 1541 he had published around fifteen little works of this kind.

25 Quantitatively, Paracelsus' *theologica* is equal to what he has written on other topics (medicine and natural philosophy).

of his literary output remained largely hidden from the public eye until the 1570s when his works, and works falsely ascribed to him, began to be spread at a growing rate and mixed with the theological works of Valentin Weigel (1533–1588) and other authors.²⁶

Indeed, Hájek was a genuine Renaissance man with a broad range of interests. A physician wavering between the traditional Galenic and the new Paracelsian medicine, an astronomer and mathematician as well as an astrologer and alchemist. He embraced most of the arts, or proto-sciences, available in his time. Even though he earned his daily bread by his medical services, he never let mathematics and astronomy go. It is here, in astronomy, that he achieved the greatest reputation both among his scholarly peers and in the eyes of later historians of science. As it may have been a handy source of income, he published popular calendars, prognostics, and minutions²⁷ in his youth, i.e., day-by-day instructions on ideal dates for bathing, bloodletting, purgation, hunting, fertilizing, cutting trees, picking fruits, castrating livestock, etc., calculated on an astronomical and astrological basis. He continued with this activity sporadically until to 1570.²⁸ He was a supporter of calendar reform, declared by the pope in 1582, and was commissioned by Rudolf II to examine all calendars to be published in Prague.²⁹ In the footprints of Copernicus, who overturned the centuries-old Aristotelian theories of the constancy of the supra-lunar spheres and their substantial difference from the world under the Moon, he interpreted his observations of the exploding “new star” (nova) in the constellation Cassiopeia in 1572. He published his findings, together with supporting letters and short texts by other authors (Paul Fabricius, Cornelius Gemma, Johannes Crato von Crafftheim, Hieronymus Muñoz, Johannes Vögelin, Regiomontanus), in his *Dialexis de novae et prius incognitae stellae ... apparitione* in 1574.

The *Dialexis* justly earned him popularity among the most renowned astronomers of his time. Thanks to his contacts and his reputation, Hájek was able to establish a leading network of communication concerning the newly discovered phenomenon on heaven³⁰ which attracted a number of illustrious observers, like Thomas Digges in Cambridge, Michael Maestlin in Heidelberg, Cornelius Gemma in Louvain, Elias Camerarius in Frankfurt, Annibale Raimondo in Verona, Jerónimo Muñoz in Spain, Ciprianus Leovitius

26 See Žemla, “From Paracelsus to Universal Reform.”

27 From Latin *minutio sanguinis*, i.e., bloodletting through phlebotomy.

28 See Hellman, *The Comet of 1577*, 188–89; Vetter, *Tadeáš Hájek z Hájku*, 172–73.

29 Vetter, *Tadeáš Hájek z Hájku*, 179. See chapter 8.

30 See Granada, “Novelties in the Heavens,” 393; Granada, “Telesio y las novedades celestes,” 31–32. See also the repeated occurrence of Hájek’s name in Boner, *Change and Continuity*.

(Leowitz or Lvovický) in Bohemia, and Tycho Brahe in Denmark.³¹ But, most importantly, his ideas inspired Tycho Brahe's own considerations on the new star in his *Astronomiae instauratae progymnasmata* (1602), where he quoted Hájek extensively. However, the *Dialexis* was also an occasion for another long and bitter polemic with one of Hájek's opponents, the Italian astronomer Annibale Raimondo, who claimed the star had always been in the heavens, only hidden to our eyes because of the changing density of the air.³² Besides observing the stars, Hájek also pursued the "lower" heavenly phenomena, i.e., the weather, and his daily observations on the weather in Prague, covering the period between August 1557 and February 1558, are almost complete.³³ In 1556, he published a treatise on comets: a historical overview, to a great part, and in Czech, thus with a limited impact. He returned to this topic, after he had observed the new comet in 1577 (together with some sixty other authors voicing their opinions in their books³⁴), in his two further works. In the *Descriptio cometae* of 1578, he was convinced that the comet was a sublunar phenomenon, and he also gave an astrological account of its origin as well as its "pious Christian explanation"³⁵ (understanding comets as ominous portents had a long tradition reaching well into the modern era as proved by Pierre Bayle's critical treatise from 1682³⁶). Yet Brahe let Hájek soon know that he erred in his calculations of the comet's parallax and its distance from the Earth.³⁷ Hájek revised his conclusions later and, after discussing the views of other authors in his *Epistola ad Martinum Mylium* (1580), he published his important *Apodixis physica et mathematica de cometis* in 1581, after observing another comet in 1580.³⁸ He dedicated the book to his good friend Andreas Dudith (1533–1589), an important Hungarian humanist whose letters have been luckily preserved

31 See Navarro Brotóns, "Continuity and Change in Cosmological Ideas," 33.

32 See esp. Hájek, *Dialexis*, chap. 2, 21–26, 113–22. On this debate, see Coradeschi, "Contro Aristotele e gli Aristotelici."

33 Pfister, "Documentary Evidence on Climate," 78; see Brázdil et al., *Climate of the Sixteenth Century*, 23–26.

34 See Zimmermann, "Wie man den cometen," 323.

35 In chap. 2 ("De causis astrologicis praesentis cometae") of the *Descriptio cometae*, Hájek explains that comets originate under a specific constellation, namely under the conjunction of Mars, Jupiter, and Mercury with their specific astrological qualities. The "pious Christian explanation" is title of the fifth chapter.

36 Bayle, *Lettre où il est prouvé*.

37 Hellman, *The Comet of 1577*, 192–93.

38 Hájek, *Apodixis physica et mathematica de cometis*. Three years earlier, the Görlitzer astronomer and mathematician Bartholomeus Scultetus proclaimed the comet to be a meteorological, i.e., sublunar phenomenon, in his *Cometae anno humanitatis 1577*.

for us. Hájek's mature view was that comets are of a celestial, non-airy, matter. Thus, he was opposing the traditional opinion held by, among others, Raimondo, who kept criticizing him on that matter so fiercely that Brahe felt it necessary to support Hájek's response³⁹ through his complaint in Venice about Raimondo's furious attacks.⁴⁰ In the *Dialexis*, Hájek also felt it necessary to say what the new star might "mean" (*significatio*), but his explanation was far from common astrological interpretation. It is most difficult to state, he thinks, what the star may signify in terms of the future. So, instead of such "lunatic" speculations, we may see it rather as an admonishment to be fair and just in one's own business. Theologically, and in a "pious" interpretation, the new star is a miracle "against the common order of nature" about which we cannot have any "science" but which may serve as a stimulus to "celebrate the Divine Majesty," thus bringing us from ignorance towards the "inaccessible light and the star of the true science that is Christus, the Son of God."⁴¹

We do not know when and why exactly Hájek decided to focus on medicine. Between 1549 and 1555, he regularly published astrological calendars with information about suitable days for bloodletting, agricultural activities, etc.⁴² Such a business was not only a means to make some extra money, but also a way to attract the attention of wealthy patrons. In 1555, Hájek met Mattioli, the personal physician to the archduke Ferdinand of Tyrol (1529–1595), who may have awakened his interest in botany—an interest which would later become manifest in his translation and reworking of Mattioli's commentaries on Dioscorides, published as his famous Czech herbal (*Herbarz: gínak Bylinář*⁴³) in 1562. At that time, herbals not only provided botanical knowledge but also offered instructions on how to prepare medicines so that they were used as practical guides to cure diseases. Such knowledge was, of course, largely based on a long tradition. In 1517, the Czech herbal of Jan Černý or Niger (1456–1530) had been published, but by the second half of the century it was no longer available and even obsolete. The urgent need for a new and reliable herbal in Hájek's time had, from the very beginning, its practical aspects, although Hájek made a great theoretical

39 Hájek, *Responsio ad virulentum & maledicum Hannibalis Raymundi*.

40 See Tessicini, "Viewing the Stars from the Rialto," 223–24.

41 Hájek, *Dialexis*, chaps 14 and 15, 94–113.

42 Purš, "Tadeáš Hájek of Hájek and His Alchemical Circle," 433.

43 To explain variations of the title that appear in literature: In the old Czech, the title of the book was written as *Herbarz: gínak Bylinář*. This, according to modern orthography, is *Herbář, jínak bylinář*. Later translation by Adam Huber of Riesenbach was titled *Herbář aneb Bylinář*. Both titles mean basically the same: "the herbal" or "the book of herbs."

contribution, last but not least, with his Czech nomenclature. In fact, he not only translated the Latin original but made his own choice of herbs (leaving aside all animal, mineral, and chemical substances⁴⁴), added his own and his colleagues' remarks, and enhanced the book with beautiful drawings.⁴⁵ He also wrote an introduction which, in a rather popular way, acquainted the reader with basic terms and principles of traditional Hippocratic medicine, i.e., the theory of the four constitutive bodily humours (black bile, yellow bile, phlegm, and blood). His "translation" was, as a matter of fact, a highly original work.

The book, published in 1562, was a success. A year later, it was followed by the German edition published through the same renowned publisher in Prague, Jiří Melantrich of Aventino (Georgius Melantrichus, 1511–1580). The disadvantage of the herbal was, however, its high price. Thus, the successor of Melantrich, his son-in-law Daniel Adam of Veleslavín (1546–1599), decided to put together a more accessible abridged edition of Mattioli. It was prepared with the help of Adam Huber of Riesenpach (1545–1613), an important Czech physician, professor at the University of Prague, and translator, and it came out of the printing press in 1595 under the title *Apatéka domácí* (A household pharmacy). Just a year later, a completely new translation of the herbal made by Huber became another instant success.⁴⁶ In fact, the herbals now appeared as follow-ups of another practical handbook on medicine, published in 1587, a regimen of health entitled *O zachování dobrého zdraví* (On preserving good health), written originally in 1576 by a north-German nobleman Heinrich Rantzau (1526–1598), a friend and patron of Tycho Brahe and an author of astrological handbooks.⁴⁷

We know that Hájek was paid well for his translation, so economic aspects might have also played some role when he decided to take up this work. Moreover, he opened his own pharmacy in Prague, probably in connection with Mattioli's medical practice, which, again, may be proof both of his interests and of his practicality.⁴⁸ In 1566, he was employed as the head physician in the imperial army against the Turks. Between 1569 and 1576, he successfully advanced to the imperial court of Maximilian II, which he had already been associated with during the rule of Ferdinand I. Such a position had surely bettered his financial situation in a substantial way. But this does not say

44 Drábek, "Pharmacy in the Rudolfine Age," 703.

45 See Bohatcová, "Čtení na pomezí botaniky," 34.

46 See Drábek, "Pharmacy in the Rudolfine Age," 705–6; Žemla, "Adam Huber of Riesenpach," 540–41.

47 See Žemla, "Adam Huber of Riesenpach."

48 See Drábek, "Byl Tadeáš Hájek z Hájku také lékárníkem?" 51.

that medicine, although not being Hájek's favourite *ars*, was just a means for him to make a living, severed from his more theoretical propensities. We may rightly assume that there was no yawning gap between his medical practice and his botanical, astronomical, and mathematical interests. In a way typical for his time, he was able to conjoin all perspectives in a bigger picture in which also the "Hermetical sciences," stemming from the very origins of human knowledge as was believed, had their place. And medicine was simply making use of other arts which served as its theoretical foundations.

Hájek surely was not unique in his predilection for astronomy among his learned medical colleagues⁴⁹—after all, since time immemorial, medicine was connected with astrology in its practice. As we can see in the foreword to his Czech translation of Mattioli as well as in his edition of three short astrological treatises, Hájek was a convinced protagonist of "astromedicine,"⁵⁰ according to which astral influences must be taken into account by any physician worthy of that name (an idea emphasized strongly, but not exclusively, by Paracelsus). After all, plants and other ingredients used in medicine since the times of Dioscorides were sympathetically or antipathetically interconnected not only with each other but also with the stars and, indeed, everything. The system of universal interrelations naturally also involved the human body and could explain, and cure, its corruptions, i.e., diseases. Specifically, the commentaries to astrological works edited by Hájek show how deeply rooted he is in the Renaissance context of ancient wisdom (*prisca sapientia*), occult qualities, universal sympathies, and the *signatura rerum* theory. The latter was elaborated on *in extenso* in his, obviously successful, book *Metoposcopy (Aphorismorum metoposopicorum libellus unus)*—published in 1562, translated into French shortly thereafter in 1565, and printed anew in 1584.⁵¹ This art of reading and interpreting wrinkles was described also by two famous Italian authors, Girolamo Cardano (1501–1576) and Giambattista della Porta (1535–1615). However, Hájek might have received some preliminary inspiration from his father whose penchant became manifest mainly through the alchemical mural inscriptions in their house, close to the Bethlehem Chapel, eye-witnessed and described by John Dee and the French alchemist Nicolas Barnaud (1538–1604).⁵²

49 Cf. Westman, *The Copernican Question*, 238.

50 See Hirai, "Medicina e astrologia."

51 Let us recall that the famous Paracelsian Heinrich Khunrath (1560–1605) mentions metoposcopy and "Taddaeum ab Hayck" in his early theses *De signatura rerum naturalium theses* of 1588 (theses IX and X). He also recalls Mattioli's "physiognomic" expositions (thesis XVI).

52 See Purš, "Anselmus Boëtius de Boodt," 505–6 (English translation) and 534 (Latin). See chapter 5, section 2, and chapter 7, sections 4 and 5. A special article on this topic by Purš is forthcoming.

In contrast to Hájek's importance, the literature on him and his work is scarce, even in the Czech language, not to speak of what is available in other languages. On the one hand, for a common Czech reader, he was primarily the botanist who in "his" Czech herbal gave a practical and reliable vade mecum to the herbal medicine that makes use of the years-long knowledge of the ancestors and can be used even today instead of (or against) modern medicine. On the other hand, the former scholarship saw Hájek primarily as an astronomer, a scientist, for whom all astrological and magical "esotericism" that we may note in his texts had just been a libation to his more superstitious contemporaries, or simply a means to earn money.

The more scholarly reception of Hájek in the Czech lands in modern times opens in the nineteenth century with the mathematician and historian Josef Smolík (1832–1915). He published his enthusiastic thoughts on Tadeáš Hájek in a biographical chapter dedicated to him in a history of Czech mathematics, published in Prague in 1864.⁵³ For the author, Hájek is "the most ingenious of all Czech astronomers of the past centuries." It is wrong, according to him, to see Hájek only through the lenses of his popular texts written in Czech, i.e., his prognostics, minutions, etc. (which was, obviously, the typical way of how he was seen in those days); we are invited to look into his Latin writings, "mainly those astronomical ones," to understand that he was, in fact, a great mathematician and astronomer. Smolík voiced his opinions in the framework of the nineteenth century nationalism thus coining the positivist and progressivist ("whiggish"⁵⁴) interpretations that were typical in the Czech historiography of that, and also later, time. Here, Hájek appears as a pioneering figure of a proto-scientist whose thoughts foreshadowed modern scientific ideas.

After this reference, we find just a few short notes on Hájek in the nineteenth century, mainly in the *Časopis českého musea* (Journal of the Czech Museum),⁵⁵ calling for an appropriate evaluation of all of Hájek's literary activities. In 1878, the journal *Kvas* (Ferment) brought a Czech translation of the book *De cervisia* (On beer), which is one the very first descriptions of this kind. Hájek dedicated it to the south-Bohemian magnate William of Rosenberg (1535–1592) who was interested in alchemy, similarly to his *Prognosticon* of 1554 with its foreword on the use of astrology.

It was not until 1925, however, that the (alleged) four hundredth anniversary of Hájek's birth provoked another Czech mathematician and

53 Smolík, *Mathematikové v Čechách*, 57–77.

54 Cf. Butterfield, *Whig Interpretation of History*.

55 See Rybička, "Tadeáš Hájek, jinak Nemicus."

historian of mathematics and sciences, Quido Vetter (1881–1960), to pay attention to Hájek in a journal.⁵⁶ At the same time, Hájek's translation of Mattioli's herbal was being reprinted in separate instalments between 1924 and 1928. Other versions of the herbal followed in 1931, 1982, and 2005, intended mainly as practical manuals for those interested in herbalism and "alternative medicine."⁵⁷ Still in the 1930s, an abbreviated Czech translation of Hájek's *Metoposcopy* appeared, published in the wake of an international congress of the history of sciences in Prague in 1937.⁵⁸

In addition to these two works, Hájek's astronomical treatise on the supernova also appeared in a modern edition. His *Dialexis*, originally published in Frankfurt in 1574, was reprinted in Prague in 1967 and published with a commentary by the eminent Czech historian of science, Zdeněk Horský (1929–1988), who focused on Hájek in his numerous studies.⁵⁹ On the occasion of the 450th anniversary of Hájek's presumed birth in 1975, an exhibition dedicated to his life and times was held in Prague. Its catalogue was prepared by Horský and the librarian and historian Emma Urbánková (1909–1992).⁶⁰ A year later a book of greater size and importance came out, a collection of papers from the conference held on the same occasion, with contributions by, for example, Jiří Bouška (also the editor of the volume), František Fabian, and Ladislav Niklíček. Its proclaimed aim was to shed light on the life and work of the important humanist scholar and on his scientific contribution to the development of botany and astronomy as well as to his place in the development of Czech medicine in the sixteenth century.⁶¹ It was Hájek's allegedly progressive thoughts that were highlighted and seen as crucial.

A formally similar undertaking to see Hájek more clearly was made a quarter of a century later, in 2000, the four hundredth anniversary of the Renaissance scholar's death, which initiated further debate on him. The most ambitious publication, be it humble in its form and size, was a collective volume edited by the distinguished pharmacy historian Pavel Drábek (1932–2018). Here, a number of leading Czech scholars from various fields assembled to present the versatility of Tadeáš Hájek and various

56 Vetter, *Tadeáš Hájek z Hájku*. On Vetter, see Hermann and Hladký, "Zdeněk Horský," 16. For the year of Hájek's birth, see above, note 3.

57 Such was the advertisement for the 2005 edition.

58 Hájek, *Metoposkopie*.

59 Recently, some of them appeared in a new Czech edition, Horský, *Koperník a české země*. For studies in other languages, see, e.g., Horský, "Die europäische Bedeutung der böhmischen Tradition"; "Die Wissenschaft am Hofe Rudolfs II. In Prag."

60 Urbánková and Horský, *Tadeáš Hájek z Hájku*.

61 Bouška, *Tadeáš Hájek z Hájku*.

aspects of his works. This important volume paved new ways to deal with this Renaissance figure. Yet even this publication, however significant it may have been in its multifaceted approach, primarily discussed Hájek in a progressivist framework. Besides the more historically oriented texts—five of them dealt with Hájek's life from various perspectives—we find here an important chapter on his astronomical instruments as well as chapters pertaining to astronomical questions of the sixteenth century. Other chapters are dedicated to Hájek's meteorology, his instructions on how to grow hops and the art of brewing beer, his botanical work, his professional medical disputes, and his correspondence with the Hungarian humanist Andreas Dudith (1533–1589). Three chapters discuss his metoposcopy and its context, thus broadening the scope beyond what might have been seen as positivist limitations of the volume. All in all, the portrait of the Czech humanist author, given in the volume edited by Drábek, was vivid, historically detailed, and informative, but, despite being supplemented with four pages of bibliography, still incomplete. The editor himself, aware of this, expressed his humble wish that their studies would help another to pen a monograph on Hájek, something he felt was an important desideratum.

In fact, such an undertaking had been planned already by Horský but, unfortunately, only fragments of it were completed due to the author's untimely death; parts of his project appeared in 2011 in a book dedicated to this great historian of science.⁶² Horský's opinion on such a project is telling:

To this day, there is no monograph of adequate width. It will be very difficult to fill that gap because the scope of Hájek's work was truly wide. In this sense, the task of writing such a monograph is almost equivalent to the task of writing an entire history of the sciences in Bohemia in the second half of the sixteenth century.⁶³

All the undertakings mentioned above approached Hájek's alleged "modernity" and "scientific" character while leaving rather aside the philosophical background which connected him not with the future of modern natural sciences but with the past, and which were, of course, fundamentally important to him. One significant exception were the texts dedicated to metoposcopy.

Although the authors of the volume edited by Drábek aimed at seeing metoposcopy in accordance with his other scientific undertakings, it is

62 See Horský, *Koperník a české země*, 195–282. About the planned publication on Hájek by Horský, see *ibid.*, 11.

63 Horský, "Tadeáš Hájek a astronomické problémy," 232–33.

here, in our opinion, that Hájek's connections with the currents of thought stemming from the distant past becomes obvious. Historically, it is a part of physiognomy, known from ancient times (see, e.g., the pseudo-Aristotelian *Physiognomonica*) and popularized later by Johann Kaspar Lavater (1741–1801) as well as by the infamous phrenology, misused in racist theories and stigmatized as pseudo-science in the twentieth century. So, in a way, this field of Hájek's interests might also have pointed to the future in a somewhat “scientific” way, or, at least, might have been explained as such. But there are other aspects of Tadeáš Hájek's thought, those that can hardly be linked with modern scientific mentality, and yet, at the same time, connect him with his Renaissance milieu and its theories. He was keen on new approaches in medicine but remained a follower of traditional humoral medicine—while looking back to the “ancient wisdom” (*prisca sapientia*), hidden in the distant past. He was an astronomer but believed in astrology (who did not at that time?) and published “ancient” and “Hermetic” astrological treatises.⁶⁴ He believed in the universal system of sympathies and antipathies, but this is what the “natural magic” of the Renaissance is all about. In his metoposcopy, he was following both the Renaissance concept of the signatures of things (the outer form revealing the inner forces, qualities and character), and praised Paracelsus for its revival, and the old theological concept of the vestiges of God in nature (which was related to the doctrine of signatures anyway). To put it simply, with metoposcopy we just may start to see full contours of Hájek's mental horizon. This is what we are trying to emphasize in this volume.

Another question is whether Hájek's interests and views remained unchanged during his life or if there is an evolution in his thought (from the more traditional to the more “scientific” thought, in progressivist terms). As Vetter remarked,⁶⁵ astrological topics appear mainly in Hájek's earlier works (the *Metoposcopy* and the *Herbarz* of 1562, the *Opuscula astrologica* of 1564, many *prognostica* and astrological calendars). But, at least partly, they are also present in later works (in the *Descriptio cometae* of 1578 or in the later prognostics): even in the *Apodixis physica et mathematica de cometis* of 1581, i.e., seven years after publishing his famous *Dialexis* on the new star. Hájek did not entirely reject astrological predictions, both general and particular ones, if they were understood not as “an exact science,” but as “artful conjecture,” and were “sober and modest.”⁶⁶

64 See chapter 4.

65 Vetter, *Tadeáš Hájek z Hájku*, 172–73.

66 See Mosley, “Past Portents Predict,” 26. This is, after all, how Ficino was theorizing about astrology. See Kristeller, *Supplementum Ficinianum*, 68.

Since the publication of the volume edited by Drábek in 2000, there have been newer studies researching various aspects of the life and work of Hájek, mostly in the Czech language. A glimpse into academic online repositories reveals that the Renaissance astronomer and physician has not been totally neglected by university students either.⁶⁷ Secondary sources available in English (or other “world languages”) are quite scarce, but not entirely absent. Some texts written by Czech scholars have been published in English.⁶⁸ In the studies on the history of astronomy, botany, etc., by non-Czech authors, Hájek often seems to be mentioned only in passing, although some deal with him more extensively.⁶⁹ Miguel Granada and Robert Westman, in particular, have discussed his ideas in the context of astronomy.⁷⁰ Hájek’s considerations on comets have been analysed *in extenso* already by C.D. Hellman in the 1970s.⁷¹

This volume makes use of these newer studies,⁷² together with reading Hájek’s original texts. It benefits from the many-sided expertise of the authors’ team to tackle various facets of Tadeáš Hájek, to see him in the mirror of his multiple areas of interest. Having new technical possibilities, instruments, and methods, we have tried to look at him in such a way that we can present—so we hope, at least—his less biased intellectual portrait in the context of the early modern period, less obscured, perhaps, by our expectations of how a true “scientist” should look and think like. This does not mean that we diminish his historical and intellectual importance. On the contrary, it is our conviction that he is an author who deserves the attention of an international audience.

The volume is divided into eight main chapters according to the fields of Hájek’s interest. His medical engagement and opinions are debated, rather chronologically, in the first chapter, presenting a portrait of Hájek as a physician. Not only his medical education in Italy is examined but also his practice, methods, theoretical views, his attitude to his colleagues as well as to the new approaches in medicine, including the often-debated Paracelsianism.

The second chapter deals with Hájek as a physician again from a different point of view. It situates him in a broader context of medical practices of

67 See Karlík, *Tadeáš Hájek z Hájku*.

68 E.g., Smolka, “Correspondence between Tycho Brahe and Thaddeus Hagecius.”

69 E.g., Weinberg, “A Humanist in the Kloyz”; Boner, *Change and Continuity*; Mosley, “Past Portents Predict”; Granada, “Tycho Brahe’s Anti-Copernican Campaign”; Zambelli, “*Astrologi Hallucinati*”; for a more detailed presentation, see Almási, “Tycho Brahe and the Separation of Astronomy.”

70 Westman, *The Copernican Question*, 238–42, etc.; Granada, “Novelties in the Heavens”; Granada, “Telesio y las novedades celestes”; Granada, “Tycho Brahe’s Anti-Copernican Campaign.”

71 Hellman, *The Comet of 1577*.

72 For details, the reader is invited to consult footnotes and bibliographies in this volume.

his time and discusses the status of a physician in the early modern society in a more general perspective. In the core of the chapter lies Hájek's later polemical work, his *Actio medica*, in which he criticized one of his indignant colleagues.

The chapter on botany and Hájek's relations to Pietro Andrea Mattioli and Georg Handsch gives further insights into his approaches in the broad field of medicine. It has been said that this is often the perspective under which Hájek tends to be seen in his homeland. The chapter aims at depicting Hájek not only as a creative translator (or, rather, co-author) of Mattioli's herbal—a work that is certainly respectable in its own right—but also as a systematic thinker who contributed to Czech botanical nomenclature.

Although Hájek's introduction to his translation of Mattioli's herbal already made use of some astrological topics, and we can easily trace them in his other works, too, it is in his edition of the three short astrological treatises that his astrological and “Hermetical” penchant fully enters the scene. This is the topic of the fourth chapter, dealing with Hájek's earlier period and revealing his interest in some of the typical Renaissance motifs, such as the figure of Hermes, universal sympathies, and the quest for the “ancient wisdom” (*prisca sapiential*).

The fifth chapter comes as a useful supplement, seeing Hájek through the lens of his interest in metoposcopy, the art of interpreting one's wrinkles. His interest in this art is contextualized and explained both historically and systematically; among others, his relation to Cardano's similar undertaking is debated. Again, Tadeáš Hájek appears here as fully immersed in the Renaissance teaching on signatures, sympathies, and astrological symbolism.

Such an impression cannot but become stronger when we look at his alchemical interests in the sixth and seventh chapters. We know that Hájek had some knowledge of alchemy, but, in his later years, he seems more sceptical, or more cautious, about it as well as about astrology. He was not after making gold. Alchemy was interesting to him, as it was to the Paracelsians, as a means to prepare more efficient medicines and cures. Thus, it is the iatrochemical (or, rather, chymiatrical⁷³) aspect that is important to him,

73 Throughout this book, we will refer to the production of medicines through alchemy or chemistry using the term *chymiatría*, a portmanteau consisting of the contemporary term for alchemy or chemistry (*chymia*) and the Greek word for “physician” (*iatros*). According to Wolfgang Schneider, this word is more accurate than the more commonly used term *iatrochemistry*. One of the key factors for this is that “chymiatry” was the term chosen in 1609 for the first university teaching of chemistry at the University of Marburg run by Johannes Hartmann (1568–1631). See Schneider, *Geschichte der pharmazeutischen Chemie*, 71; cf. Ganzenmüller, “Der chemische Laboratorium”; Moran, *Chemical Pharmacy*.

as it was for Mattioli and Handsch with whom he collaborated, primarily, in the field of botany. It is the aim of the seventh chapter to present Hájek from this point of view, on a wider historical backdrop.

Including of other topics than those once acclaimed by positivist historiography should not lead to the conclusion that Hájek was in fact an “esotericist” immersed in *artes incertae*,⁷⁴ or that there is nothing of special interest in his endeavour. His genuinely rational effort to understand is obvious everywhere, and the last chapter on his astronomical debates in this volume only shows what was seen as the “most scientific,” or the most mathematical, of his interests. And still, also here, we may observe how astronomical and theological ideas overlap in a way quite typical for a theorist of his times—and hardly acceptable for a modern scientist.

Our collection of essays cannot be considered a definitive monograph on Hájek. It has been said that Horský had planned a book on this Renaissance author in which he would put together all pieces of the puzzle of his life and work which he had been putting under scrutiny for years. To some degree, and rather from a historical point of view, his intention was taken over by his once colleague and author of important studies on Hájek, Josef Smolka (1929–2020).⁷⁵ From the very beginning of our editorial plans, he was a member of our team of authors. Alas, he was not allowed to complete his work and to contribute to this publication but with unfinished fragments. We have not substituted his work with a full-fledged chapter on Hájek’s life. Instead, biographical details are touched upon in this foreword and remain spread all over the book.

Last, but not least, we would like to express our gratitude for the chance to have access to the unpublished research of both Zdeněk Horský and Josef Smolka. Our thanks go to the heirs who made the work of both authors available to us. We want to dedicate this book to the memory of these two Czech scholars.

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74 Cf. Henry, “The Fragmentation of Renaissance Occultism.”

75 For other studies by Smolka, see the bibliography to this chapter.

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