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The meaning of birth date – the astrological and astronomical dimensions of medieval and early modern natal charts*

Znaczenie daty urodzin – wymiar astrologiczny i astronomiczny średniowiecznych i wczesnonowożytnych horoskopów natalnych

Die Bedeutung des Geburtsdatums – die astrologischen und astronomischen Dimensionen der mittelalterlichen und frühneuzeitlichen Geburtshoroscope

Keywords: astrology, horoscopes, Nicolaus Copernicus, history of science, Cracow University

Słowa kluczowe: astrologia, horoskopy, Mikołaj Kopernik, historia nauki, Uniwersytet Krakowski

Schlüsselwörter: Astrologie, Horoskope, Nikolaus Kopernikus, Wissenschaftsgeschichte, Universität Krakau

ABSTRACT

The date of man's birth is the symbolic beginning of his marriage with earthly existence, and this was shrouded in a fog of mystery. This mystery was attempted to be known by astrologers, who had knowledge and forecasting tools at their disposal. Such tools included birth horoscopes in their various forms (natal, rectified, anniversary). A skilful astrologer was supposedly able to "read" the fate of the horoscope's addressee from the arrangement of planets, zodiac signs, lunar nodes or fixed stars. And as the belief in the reliability of these predictions was great,

* The article is an extended version of the paper presented on September 28, 2023 at the Museum of Warmia and Mazury in Olsztyn during a scientific conference: "Birthdays and active life. How Olsztyn and Toruń argue about Copernicus...", organised by the Museum of Warmia and Mazury and The Wojciech Kętrzyński Northern Institute.

so was the demand for horoscopes and the services of astrologers. It is thanks to the fortunately preserved sources that we are able to investigate how great a role knowledge of the date of birth played in the Middle Ages and early modern era in both astrological and astronomical terms.

STRESZCZENIE

Data przyjścia człowieka na świat to symboliczny początek jego mariażu z ziemską egzystencją, a ta owiana była mgłą tajemnicy. Tajemnicę tę próbowali poznać astrologowie, którzy dysponowali wiedzą i narzędziami prognostycznymi. Do takich narzędzi należały horoskopy urodzinowe w różnych odmianach (natalne, rektyfikowane, rocznicowe). Wprawny astrolog z układu planet, znaków zodiaku, węzłów księżycowych czy gwiazd stałych ponoć był w stanie „wyczytać” losy adresata horoskopu. A że przekonanie o rzetelności tych prognoz było wielkie, zapotrzebowanie na horoskopu i usługi astrologów również. To właśnie dzięki szczęśliwie zachowanym źródłom jesteśmy w stanie zbadać, jak dużą rolę w średniowieczu i wczesnej epoce nowożytnej odgrywała znajomość daty urodzin w wymiarze tak astrologicznym, jak i astronomicznym.

ZUSAMMENFASSUNG

Das Geburtsdatum eines Menschen ist der symbolische Beginn seiner Verbindung mit der irdischen Existenz, und dies war in einen Nebel von Geheimnissen gehüllt. Dieses Geheimnis versuchten die Astrologen zu lüften, die über Wissen und Prognoseinstrumente verfügten. Zu diesen Werkzeugen gehörten Geburtshoroskope in ihren verschiedenen Formen (Geburtshoroskop, korrigiertes Horoskop, Jahrestagshoroskop). Ein geschickter Astrologe war angeblich in der Lage, das Schicksal des Horoskopempfängers aus der Anordnung der Planeten, Tierkreiszeichen, Mondknoten oder Fixsterne zu „lesen“. Und da der Glaube an die Zuverlässigkeit dieser Vorhersagen groß war, stieg auch die Nachfrage nach Horoskopen und den Diensten von Astrologen. Dank der glücklicherweise erhaltenen Quellen können wir untersuchen, welche große Rolle die Kenntnis des Geburtsdatums im Mittelalter und in der frühen Neuzeit sowohl in astrologischer als auch in astronomischer Hinsicht spielte.

The birth of a person was always overshadowed by great unknowns regarding the future. This was to be determined by the moment of birth, which is preserved in the saying “born under a lucky/unlucky star.”¹ Driven by the desire to peek behind the curtain between the present and the future, people resorted to the help of astrologers. As these specialists had the knowledge and skills of reading, analysing and interpreting complex systems of celestial bodies, they offered such information-hungry customers the opportunity to know more about the future². Moreover, since the infant, baby and slightly older children mortality rates were extremely high in the Middle Ages (and not only then)³, a skilled astrologer was supposed to notice the signs of the child’s possible death, or decipher the information relating to the potential length of its life and, what is equally important, the quality of this life. This unknown future of newly born children (this mainly concerned children from wealthy

¹ *Słownik frazeologiczny*, ed. A. Kłosińska, Warsaw 2005, p. 124–125. More in J. Bańczerowski, *Nazwy niektórych ciał niebieskich w przysłowiach i związkach frazeologicznych języka polskiego i węgierskiego*, “*Studia Slavica*” 2013, 58, 2, p. 253–260.

² E. Śnieżyńska-Stolot, “*Zamek piękny na wzgórzu...*”. *Horoskopy – zapomniane źródło historyczne*, Cracow 2015, passim. Rich literature on the subject may be found.

³ D. Żołądź-Strzelczyk, *Dziecko w dawnej Polsce*, Poznań 2002, passim; P. Aries, *Historia dzieciństwa. Dziecko i rodzina w czasach ancien régime’u*, trans. M. Ochab, Warsaw 2010, passim.

families because the private services of professional astrologers were expensive) written in the astral alphabet and carefully hidden in the lunar world was “captured” at the moment of birth (much less often at moment of conception)⁴ and recorded in the form of a birth/natal chart.

Horoscope charts contained information relating to all aspects of human life. Such information was recorded in the form of the so-called horoscope houses, i.e. parts into which the horoscope chart (usually a square, less often a circle) was divided. Initially, the astrologers used four houses, counted clockwise. This was based on the division of the Zodiac into parts, the axes of which were the four cardinal points of the horoscope – the ascendant (the rising point of the Zodiac), the Medium Caeli (the highest point of the Zodiac in the sky), the descendant (the setting point of the Zodiac) and Imum Caeli (lying below the horizon, the lowest point of the Zodiac)⁵. According to the astrological tradition, each of these four quarters of the Zodiac was responsible for a different period of a person's life: I – from the ascendant to Medium Caeli represented youth; II – from Medium Caeli to the descendant was the middle period of human life; III – from the descendant to Imum Caeli applied to old age and finally IV – from Imum Caeli to the ascendant for late old age and death⁶. Over time, these four houses were divided into halves, thus creating eight horoscope houses. Already in antiquity (although it is difficult to precisely determine the reason) four houses more were added. This is how the system of twelve horoscope houses came into use. Introducing such a system changed the method of counting them – from then on, they were counted (like the Zodiac signs) in the direction opposite to the daily rotation of the celestial spheres, so that the first house (usually) began in the ascendant. It was also the time of establishing the names of individual houses, thus delineating their spheres of influence. This division and nomenclature were fixed in the medieval astrological tradition thanks to Arab astrologers⁷ and the treatise of Guido Bonatti (died 1296–1300) entitled *De astronomia*⁸. These

⁴ G. Aujac, *Sextus Empiricus et l'astrologie*, in: *Homo Mathematicus. Actas del Congreso Internacional sobre Astrólogos Griegos y Romanos*, ed. A.P. Jiménaz, R. Caballero, Málaga 2002, p. 215–219; A. Bouché-Leclercq, *L'astrologie grecque*, Paris 1899, p. 36, 377; E. Śnieżyńska-Stolot, *Horoskopy dziecka królowej Jadwigi*, “Biuletyn Biblioteki Jagiellońskiej” 2003, 53, p. 22, footnote 99, provides that astrologers differentiated between three time spans of pregnancy, the difference between them being approximately 30 days. The maximum time span for a pregnancy was 288 and 1/3 days, medium was 273 and 1/3 days, while the minimum span was 258 and 1/3 days. Hippocrates assumed that pregnancy lasted 10 lunar months, i.e. 280 days; Vettius Valens stated that it lasts for 276 days. See O. Neugebaure, H.B. van Hoesen, *Greek Horoscopes*, Philadelphia 1959, p. 28.

⁵ J. Włodarczyk, *Astrologia. Historia, mity, tajemnice*, Warsaw 2008, passim.

⁶ S.J. Tester, *A History of Western Astrology*, Suffolk 1990, p. 37–38; R. Hand, *Whole Sign Houses. The Oldest House System. An Ancient Method in Modern Application*, Las Vegas 2000, passim

⁷ J. Casulleras, J.P. Hogendijk, *Progression, Rays and Houses in Medieval Islamic Astrology: A Mathematical Classification*, “Suhayl” 2012, 11, p. 33–102.

⁸ G. Bonatti, *De Astronomia Tractatus X vniuersum quod ad iudiciariam rationem nativitatū, aëris, tempestatum, attinet, comprehendentes*, Basileae: Nicolaus Prucknerus, 1550, coll. 2, [online] http://books.google.pl/books?id=Y5OB-bJ_OLuYC&printsec=frontcover&dq=inauthor:%22Guido+Bonatti%22&hl=en&sa=X&ei=qRntTvC3AaP00gGxu-TKcQ&redir_esc=y#v=onepage&q&f=false (date of access: 1 IV 2014). The system of houses as proposed by Johannes

divisions and assignment of each house to individual spheres of human existence were as follows: first house – life (marked the beginning of life, the beginning of all things, every event, the people asking questions and their questions, doubts, and also the external features [appearance] and disposition of the person to whom the horoscope concerned); second house – wealth (accumulation of material goods, income, remuneration, donations, but also life forces); third house – siblings (closer and further siblings, neighbours, relationships with people, faith, religion, travels, dreams, business trips); fourth house – parents (financial situation of parents, real estate, cities [urban development], treasures mainly hidden in the ground, death and type of burial of parents, end of affairs, house, country); fifth house – children (offspring, parental love, guests, messengers, searching for friends, women, things that may be inherited); sixth house – diseases (weaknesses, diseases, injustice); seventh house – marriage (relationship with the spouse, disputes, travels, things lost during travel; it is also the house of the enemies of the person for whom the horoscope is prepared); eighth house – death (murders, fear, wars, conflicts, inheriting as a result of death, laziness, but also talents); ninth house – travel (long and short journeys, piety, philosophy, science of the stars, fortune telling, religion, faith, dreams, powers of attorney, predicting the future); tenth house – career, honours (king, kingdom, state, power, fame, supreme power, honours, authority, work, profession); eleventh house – friends/good fate (trust, good fate, ruler's fortune, strength, allies, ruler's successors, praise, children's success); twelfth house – enemies/ill fate (enemies, difficulties, sadness, hatred, painful memories, deceit, hard work, prison, animals, distance, isolation)⁹. Therefore, these twelve parts of the horoscope encompassed a person's entire life – from the moment of birth until the inevitable death. Additionally, the astrologer preparing the horoscope had to be aware that some houses had various “powers,” which could weaken or strengthen the power of the planets residing within them. The most important and, at the same time, the strongest were the angular houses, i.e. first, fourth, seventh and tenth. Weaker were the so-called the succedent houses – second, fifth, eighth and eleventh. The weakest were the so-called cadent houses, i.e. the third, sixth, ninth and twelfth¹⁰. The horoscope chart constructed in such

Regiomontanus was immensely popular. F. Johnson, *Astronomical text-books in the sixteenth century*, in: *Science, Medicine and History: Essays on the Evolution of Scientific Thought and Medical Practice written in honour of Charles Singer*, ed. A. Underwood, vol. 1, Oxford 1953, p. 285–302

⁹ S. Konarska-Zimnicka, *Dom rodzinny a domy horoskopowe w średniowiecznej tradycji astrologicznej*, in: *Dom, codzienność i święto. Przestrzeń domowa – ludzie i rzeczy*, ed. B. Popiołek, A. Chłosta-Sikorska, M. Gadocha, Kraków 2018, p. 11–20. In the Middle Ages, it was popular to consider the so-called house rotation, i.e. counting houses not from the ascendant, but from any place in the horoscope, depending on the issue analysed by the astrologer, e.g. “father's wealth was read at the 5th house, because it was the 2nd house for the 4th house (parents).” This procedure was eagerly used because it assisted the astrologers in their creative interpretive work. See P. Piotrowski, *Reguły astrologii tradycyjnej. Od wielkiej polityki do udanych związków z ludźmi*, Białystok 2011, p. 45–47.

¹⁰ J.H. Holden, *JA History of Horoscopic Astrology. From the Babylonian Period to the Modern Age*, Tempe 1996, p. 150.

a way included a specific, unique arrangement of celestial bodies – planets, lights (also considered planets), lunar nodes – the so-called Dragon's Head (*Caput Draconis*) and Dragon's Tail (*Cauda Draconis*)¹¹, fixed stars¹² and Zodiac signs. In order to create such a horoscope chart, the astrologer had to carefully examine and just as precisely sketch the position of all the mentioned celestial bodies at the time of creating the horoscope. This specialist often did this on the basis of own astronomical observations, or used available astronomical tables created on the basis of geocentrically focused calculations¹³. The precision of determining the position of all celestial bodies was extremely important because it influenced the final shape and, consequently, the interpretation of the horoscope of the child being born (and not only that, as prognostic horoscopes were also created, i.e. horary and electional ones)¹⁴.

Luckily, many birth charts have been preserved in Polish library collections¹⁵. They may be found under the names of *nativitas*, *figura geniture*, *figura nativitatis*, *genesis*, *figura rectificatae nativitatis* (this term refers to rectified horoscopes, i.e. improved in relation to the original natal chart by e.g. specifying the moment of birth, for instance by adding the hour, minute and second¹⁶ of birth) or *revolutio nativitatis* (i.e. solar horoscopes, i.e. ones arranged on the anniversary of birth and projected in a way that the Sun is in exactly the same position as in the birth horoscope). In the case of horoscopes enriched with extensive interpretation, the nomenclature uses the terms *iudicium*, *iudicium nativitatis*, or *practica*¹⁷. The vast majority of natal charts

¹¹ Lunar nodes are the points where the Moon's orbit intersects with the ecliptic. The northern node is *Caput Draconis*, the southern node is *Cauda Draconis*. Compare S. Konarska-Zimnicka, „Wenus panią roku, Mars towarzyszem...”. *Astrologia w Krakowie XV i początku XVI wieku*, Kielce 2018, p. 93, footnote 57.

¹² Fixed stars (*stellae fixae*) was the term for stars that did not change their position in relation to each other when observed from the ground and formed constellations. R. Ebertin, G. Hoffman, *Gwiazdy stałe*, trans. E. Wojtyś, Warszawa 2013; B. Braddy, *Fixed Stars*, in: *The Astrology Book. The Encyclopedia of Heavenly Influences*, ed. J.R. Lewis, Detroit 2003, p. 246–251.

¹³ J. Chabás, *Characteristic and Typologies of Medieval Astronomical Tables*, „Journal for the History of Astronomy” 2012, 43, p. 269–286.

¹⁴ J.D. North, *Horoscopes and History*, „Warburg Institute Surveys and Texts” 1986, 13, p. 1–2.

¹⁵ S. Konarska-Zimnicka, „Przyszłość dziecka zapisana w gwiazdach” – czyli krakowskie horoskopy urodzeniowe do 1550 roku. *Stan badań*, in: *Dzieciństwo i starość w ujęciu historyków*, ed. A. Obara-Pawłowska, M. Kołacz-Chmiel, Lublin 2016, p. 65–81.

¹⁶ The need for rectification often stemmed from the fact that before 1428 the *Alfonsine tables* were most often used to determine the position of celestial bodies, but they did not take into account the latitude of Cracow. See: anonymous author, *Tabulae resolutae super meridianum Cracoviensem ad annos 1428–1808*, BJ, msc 600, pp. 86r–100r; G. Rosińska, *Scientific Writings and Astronomical Tables in Cracow. A Census of Manuscript Sources (XIVth–XVIIth Centuries)*, „Studia Copernicana”, 1984, vol. 22, passim; M. Markowski, *Krakowska szkoła międzynarodowego nauczania astronomii*, in: *Septem artes w kształtowaniu kultury umysłowej w Polsce średniowiecznej (wybrane zagadnienia)*, ed. T. Michałowska, Wrocław 2007, p. 89–90; J. Dobrzycki, *Tablice astronomiczne Jana Regimontana w Krakowie*, „Studia Mediewistyczne” 1988, 26, p. 69–90; compare: J.H. Holden, op. cit., p. 139–140; M. Markowski, „Kanony Piotra Gaszowca do „Złotych tablic astronomicznych” w rękopisach Badańskiej Biblioteki Krajowej w Karlsruhe, Biblioteki Uniwersyteckiej w Padwie, Archiwum Praskiego Zamku w Pradze i Biblioteki Jagiellońskiej w Krakowie”, „Biuletyn Biblioteki Jagiellońskiej” 1986, 36, 1–2, p. 5–22. See J. Dobrzycki, *The „Tabulae resolutae”*, in: *Idem, Selected Papers on Medieval and Renaissance Astronomy*, ed. J. Włodarczyk, R.L. Kremer, wstęp O. Gingerich, „Studia Copernicana” 2010, vol. 43, p. 129–135.

¹⁷ M. Markowski, *Astronomica et astrologica Cracoviensia ante annum 1550*, „Studi e Testi” 1990, 20, passim.

were made at the time of the child's birth. The moment of conception was less often the starting point. This moment was usually determined on the basis of the birth horoscope by changing the position of the Moon back by 10 lunar months. Undertaking such a task undoubtedly demonstrated both the astrologer's proficiency in the art and the knowledge of one of the texts fundamental to astrologers, namely one attributed to Claudius Ptolemaeus (ca. 100–170) entitled *Centiloquium*. This text highlighted the need to determine the date of conception for the sake of precision in the birth chart and gave guidelines on how to do it. The advice was as follows: "consider the sign in which the Moon was located at the moment of birth as the ascendant of the horoscope of conception, and the sign in which the Moon could be located at the moment of conception or opposite to it should be considered the sign rising at the time of birth."¹⁸ Interestingly enough, sometimes, the astrologer was lucky to receive such information from one of the spouses. It is said that King Władysław Jagiełło himself was to provide the date of conception of the child Jadwiga was expecting, which Ludwik Birkenmajer deduced from the fact that such a detailed horoscope "could only be based on a very confidential explanation from the King himself" ("Estimata concepcio Domini Regis filii etc.")¹⁹. The data based on such intimate knowledge was used by the court astrologer to compose one of the most famous birth chart for the son of the royal couple seen in the "stars." From the date of conception, the astrologer derived a horoscope announcing the birth of a male child. It must have been a surprise when Elżbieta Bonifacja was born on June 22, 1399. The astrologer corrected his mistake, and a natal chart was also prepared for the royal daughter, this time based on the time of birth²⁰. What is noteworthy is that the astrologer blamed this mistake on his own imperfection, ruling out the fallibility of astrology as a science and art.

However, despite this huge mistake, the royal court did not withdraw from using the astrologer's services²¹. Jan Długosz (1415–1480), in his *Annales*, provided a lot of information about birth charts requested by Władysław Jagiełło, prepared, as noted in the historiography, by the respected specialist Henryk Czech (died after 1428)²². It is said that for the horoscope of the oldest Władysław, called later a Ladislaus of Varna (1424–1444), the astrologer read that "he will gain power over many

¹⁸ Z. Stepnicki, *Centiloquium Klaudiusza Ptolemeusza*, "Polski Kalendarz Astrologiczny" Bydgoszcz 1937, p. 70.

¹⁹ L. Birkenmajer, *Krakowskie tablice syzygijów (sic!) dla r. 1379 i 1380. Przyczynek do dziejów astronomii w Polsce XIV wieku*, "Rozprawy Wydziału Matematyczno-Przyrodniczego PAU", S. II, Vol. 1, Cracow 1891, p. 276.

²⁰ Anonymous author, *Iudicium Cracoviense nativitatis filii reginae Hedvigis et regis Wladislai Jagiello*, BJ, msc 805, f. 407v–408r; E. Śnieżyńska-Stolot, *Horoskopy dziecka królowej Jadwigi...*, p. 5–32.

²¹ S.C. Rowell, *The Jagiellonians and the Stars: Dynasty-Sponsored Astrology in the Fifteenth Century*, "Lithuanian Historical Studies" 2002, 7, p. 23–42

²² A. Birkenmajer, *Henryk Czech*, in: *Polski Słownik Biograficzny*, Vol. 9, Wrocław–Warszawa–Kraków 1960, p. 419–420; Idem, *Sprawa magistra Henryka Czecha*, "Collectanea Theologica" 1936, 17, p. 207–224.

kingdoms and principalities if fate does not envy him a long life”²³. For the second son, Casimir (1426–1427), the arrangement of celestial bodies was not favourable as it announced his imminent death (the boy lived for less than a year). As Długosz noted, another descendant – Casimir IV Jagiellon (1427–1492)²⁴ – was said to be conceived under an “unlucky star” and that his rule was to be disastrous for Poland²⁵. Apparently, all of that was read by Henryk Czech from natal charts²⁶.

As a King, Casimir Jagiellon also eagerly used the services of a medic–astrologist (these functions were very often combined, which was facilitated not only by the educational system of the time but also by the close correlation of astrology with medicine, focusing on iatromathematics²⁷). Following the example of his father, he ordered birth charts for his sons, Władysław (1456–1516)²⁸, Aleksander (1461–1506), Fryderyk (1468–1503)²⁹ and Zygmunt³⁰, which were partially preserved in two handwritten codices kept in the BJ (3225, 3227)³¹. Interestingly, when describing the death of Aleksander Jagiellon, Maciej of Miechów (1453 or 1457–1523) in *Chronica Polonorum* referred to his birth chart³². He wrote that a comet passed through the king’s “horoscope”, appearing in the sky on August 8, passed through the signs of Cancer, Leo and Virgo, and then disappeared on August 19. The same applied to King Aleksander (died 19.08.1506). Based on astronomical observations and knowing the monarch’s birth chart, Maciej noticed that the comet passed through the sign

²³ E. Śnieżyńska-Stolot, *Generale iudicium Władysława II zwanego Warneńczykiem*, “Biuletyn Biblioteki Jagiellońskiej” 2011, 61, p. 13–41.

²⁴ E. Śnieżyńska-Stolot, *Horoskop Kazimierza Jagiellończyka – nowe źródło do treści ideowych wawelskiego nagrobka króla*, “Biuletyn Biblioteki Jagiellońskiej” 2010, 60, p. 5–30.

²⁵ *Joannis Dlugossii Annales seu cronicae incliti Regni Poloniae, liber undecimus: 1413–1430*, Varsaviae 2000, p. 229. *Joannis Dlugossii Senioris Canonici Cracoviensis Opera omnia*, Vol. 13, *Historiae Poloniae libri XII*, Vol. 4, ed. A. Przędziecki, Cracoviae 1877, p. 349–350.

²⁶ B. Czwojdrak, *Zofia Holszańska. Studium o dworze i roli królowej w późnośredniowiecznej Polsce*, Warszawa 2012, p. 32, footnote 117, states that “Długosz’s message about the bad prophecy of Casimir’s rule is certainly false and results from the attitude of the historian and Zbigniew Oleśnicki towards this ruler. It is difficult to believe that the queen would keep in her court a man who predicted such a disastrous future for her son.”

²⁷ S. Konarska-Zimnicka, “*Wenus panią roku, Mars towarzyszem...*”, p. 137–207; N.G. Siraisi, *The Faculty of Medicine, in: A History of the University in Europe*, ed. W. Rüegg, vol. 1: *Universities in the Middle Ages*, ed. H. de Ridder-Symoens, Cambridge–New York–Port Chester–Melbourn–Sidney 1992, p. 360–387.

²⁸ Anonymous author, *Figurae nativitatis et coronationis Wladislai, regis Ungariae et Bohemiae cum nota*, BJ, msc 3227, p. 7–8

²⁹ E. Śnieżyńska-Stolot, *Almanach pro reverendissimo domino cardinali Fryderyka Jagiellończyka – historyczne źródło warsztatu astrologa*, “Biuletyn Biblioteki Jagiellońskiej” 2013, 63, p. 5–70. The first person to attend to this manuscript was J. Muczkowski, *Rękopisma Marcina Radywińskiego*, Cracow 1840, p. 36, 138–141. See A.S. [A. Sobańska], *Almanach für das Jahr 1501 für den Kardinal Friedrich den Jagiellon (Lateinisch)*, in: *Polen im Zeitalter der Jagiellonen 1386–1572*, ed. F. Stolot, G. Stangler, Schallaburg 1986, p. 244–245.

³⁰ Anonymous author, *Figurae nativitatis 1467a Ianuarii 1d 12h 17m 15s Sigismundi, regis Poloniae*, BJ, msc 3227, p. 145.

³¹ M. Markowski, *Astronomica et astrologica Cracoviensia...*, p. 309–313; G. Rosińska, *Scientific Writings...*, p. 46, 250; W. Wisłocki, *Katalog Biblijoteki (sic!) Uniwersytetu Jagiellońskiego*, Part 2: *Rękopisy 1876–4176. Indeks*, Cracow 1877–1881, p. 708–710;

³² Maciej of Miechów, *Chronica Polonorum*, Cracow: Hieronim Wieter, 1519, BJ, st. dr. cim. Vol. 8023, L. IV, c. 82, p. 371.

of Leo in the ascendant, i.e. in the key horoscope house for Aleksander's natal chart, and he saw it as a sign of the monarch's death. All the more so because comets were primarily heralds of the death of rulers. Moreover, the monarch had the planet Saturn in the sign of Leo in his natal chart, which in turn indicated diseases that greatly weakened the monarch before his death. As a result, the astrologer saw the birth chart combined with a rare, unexpected astral phenomenon and concluded it would bring mourning to the country.

Other sons of Casimir Jagiellon also used the services of astrologers. Sigismund the Old (1467–1542) was known for his inclinations towards astrological predictions. The king used to consult astrologers when taking decisions on issues of matrimony, diplomacy, politics, health, etc.³³ Therefore, it is not surprising that he also ordered *Iudicium Cracoviense de rege Sigismundo Augusto neonato* to be prepared for his long-awaited son.³⁴ This horoscope was undoubtedly intended to reassure the monarch as to the future fate of the much-desired heir to the throne. It should not come as a surprise that Sigismund Augustus (1520–1572), brought up trusting in astrological forecasts, was also willing to follow astrological guidelines (he greatly appreciated the services of the famous master, professor of the Kraków University, Piotr Proboszczowic (ca. 1509–1565)).

Apart from the natal charts of royal descendants, the mentioned codices also contain horoscopes of nobility and bourgeoisie, including: *Figura nativitatis Andreae Vitreatoris*³⁵, *Figura nativitatis Matthiae Drzewicki* (later Archbishop of Gniezno, Primate of Poland, Grand Chancellor of the Crown)³⁶, etc.³⁷ There is a considerable number of rectified horoscopes, i.e. improved in relation to natal charts, in addition to those made at the time of birth. Such horoscopes were chosen by, among others, Krzysztof Szydłowiecki (1466–1532)³⁸ and Jan Veneti, a pharmacist from Płock. The famous merchant and councillor of Krakow, Jan Morsztyn (1481–1541), used the services of the outstanding astronomer and astrologer Wojciech of Brudzew (1445/1446 – approx. 1495) and commissioned him to prepare a rectified birth horoscope for his son.

Powerful and influential people were also tempted to learn about the events awaiting them in the next year of their lives. The possibility to obtain such information was offered by astrologers who prepared solar charts, i.e. horoscopes prepared

³³ *Zbiór pamiętników do dziejów polskich*, published by W.S. Broel-Plater, Vol. 1, Warszawa 1858, p. 66–67.

³⁴ Anonymous author, *Iudicium Cracoviense de rege Sigismundo Augusto neonato*, Biblioteka Narodowa, msc 907, p. 1.

³⁵ Anonymous author, *Figura nativitatis Andreae Vitreatoris 1502a Novembris 30d 4h 26m 21s*, BJ, msc 3225, p. 110.

³⁶ Anonymous author, *Figura nativitatis Matthiae Drzewicki*, BJ, msc 3227, p. 492.

³⁷ M. Markowski, *Astronomica et astrologica Cracoviensia...*, passim.

³⁸ Anonymous author, *Iudicium Cracoviense revolutionis nativitatis Christophori Szydłowiecki 1508a Novembris 15d 21h 34m cum figuris caeli*, BJ, msc 3227, p. 461–467 (here also a solar horoscope chart for the year 1527). S. Konarska-Zimnicka, *Rola źródeł astrologicznych późnego średniowiecza w poznaniu historycznym. Horoskop urodzeniowy Krzysztofa Szydłowieckiego*, "Z Dziejów Regionu i Miasta. Rocznik Oddziału Polskiego Towarzystwa Historycznego w Skarżysku-Kamiennej" 2016, 7, p. 45–56.

on the anniversary of birth. Sigismund the Old himself was the recipient of anniversary horoscopes for his 42nd, 43rd, 44th and 45th birthdays. Fortunately, these charts have survived to this day³⁹. Following the example of members of the royal family, the wealthy Krzysztof Szydłowiecki, a close friend of Sigismund the Old, decided to order such a horoscope⁴⁰.

In each instance, the people using the services of astrologers had one goal – to lift the veil of mystery about what was to come. For the astrologer, it was a test verifying the possessed knowledge and skills, both astronomical and astrological. However, the precision in projecting the arrangement of celestial bodies onto the horoscope chart played an equally vital role. It was essential to specify the exact date and moment (hour, minute, second⁴¹) and the geographical coordinates of the place of birth. However, it should be emphasised here that in the geocentric system, so the one in which the Sun revolves around the Earth, capturing and reflecting the movements of individual planets in precise numerical data was extremely difficult. Nicolaus Copernicus (1473–1543) came to the astrologers' rescue by publishing his work *De revolutionibus*. Barbara Bieńkowska concluded that “for the astronomers [let us also add – astrologers] of the 16th century, or at least for most of them, the merits of Copernicus as an observer and author of tables were more important than those of Copernicus as the creator of the heliocentric theory⁴². This stemmed from the fact that these tables passed the practical test in the short term, while the theory of the Earth's actual movement was contrary to the authorities present since the dawn of time and evidence of the senses. Moreover, during the period in question, practical astronomy was the main approach practised at the University of Cracow. Copernicus immediately gained great recognition for the tables themselves⁴³.” And that was indeed the case. Astrologers received much more precise (though, of course, still not perfect) data, allowing them to create more accurate horoscopes, which also implicitly lowered the risk of error.⁴⁴

³⁹ Anonymous author, *Revolutio nativitatis Sigismundi, regis Poloniae, pro anno nati 42, 43, 44, 45*, BJ, msc 3227, p. 146–149.

⁴⁰ Maciej of Miechów (?), *Nativitas eiusdem, qui supra Cristopheri Schidlovyczy. Annus nati 45 currente, qui incepit anno Christi 1510 die 15 hora 14 Novembris*, BJ, msc 3227, p. 468–470.

⁴¹ This is where astronomical tools came in handy. The astrolabe allowed not only to precisely determine the time of birth, but also to figure out the exact geographical location. On the role of an astrolabe broadly in *Astrolabes in Medieval Culture*, ed. J. Rodríguez-Arribas, C. Burnett, S. Ackermann, R. Szpiech, Leiden 2019.

⁴² J. Włodarczyk, *Kilka uwag o obserwacjach i teoriach astronomicznych w czasach Galileusza*, “Zagadnienia Filozoficzne w Nauce” 2003, 32, p. 92–93, noted that “astronomical tables based on the Copernicus' model did not bring a significant improvement in the accuracy of predictions of the places of planets on the celestial sphere; still, as in the case of the *Alfonsine tables*, the maximum error reached several degrees.”

⁴³ B. Bieńkowska, *Kopernik i heliocentryzm w polskiej kulturze umysłowej do końca XVIII wieku*, “Studia Copernicana” 1971, Vol. 3, p. 94–95.

⁴⁴ Astrologers also began to create astrological forecasts, popular at that time, based on astronomical data contained in *De revolutionibus*. In 1549, the Cracow astrologer Hilary of Wiślica created his astronomical and astrological *Ephemerides*, based on astronomical data calculated according to Copernicus' instructions. A. Birkenmajer, *Czy Hilary z Wi-*

Although not on the basis of own astronomical tables, Copernicus himself may have attempted to create horoscopes in his youth. One of astrological treatises he possessed was entitled *Preclarissimum in iudicis astrorum*. It was written by Haly Abenragel (died after 1037). Near the fragments relating to individual horoscope houses Copernicus made notes – extracts from Claudius Ptolemaeus' *Tetrabiblos* concerning the art of creating horoscopes. He was interested not only in the houses responsible for property, commerce and single life, but also the life expectancy of parents and the fate of siblings, which makes the notes clearly influenced by Copernicus' personal affairs. Unfortunately, apart from these important notes, no horoscope prepared by the master has survived. It should be noted, however, that Nicolaus Copernicus himself became the object of interest of detailed astrological forecasts. To this day, several birth charts of the great astronomer have been preserved. An anonymous horoscope from around 1541 was probably created in the circle of Wittenberg or Nuremberg scientists, in which the date of birth of the Olsztyn scientist was set on February 19, 1473, at 4:48 a.m.⁴⁵ Based on similar data, the chart of Copernicus' birth chart was included in the collection of horoscopes prepared by Johannes Garcaeus the Elder (1502–1558) entitled *Astrologie Methodus*, although here the astronomer's date of birth was moved back to February 10, 1473.⁴⁶ Some time later, in the extensive work of Francesco Junctino Florentino (1522–1590) entitled *Speculum Astrologie*, published in 1583, Copernicus' horoscope presented there presents the following information recorded for February 19: "Nicolaus Copernicus nascitur anno Christi 1473. minutis 38. post quartam horam pomeridianam"⁴⁷. Just as in the works of Franc-

ślicy był szermierzem heliocentryzmu w Krakowie?, "Kwartalnik Historii Nauki i Techniki" 1959, 4, 3, p. 419–464; compare: H. Barycz, *Pierwsze krakowskie spotkania z dziełem Mikołaja Kopernika*, in: *Przeszłość – przyszłość. Księga ofiarowana Bogdanowi Suchodolskiemu*, Warszawa 1975, p. 37–45, p. 39. A year later, Copernicus' student and friend, Jerzy Joachim Retyk, prepared an ephemeris for 1551. R.S. Westman, *The Copernican Question. Prognostication, Scepticism, and Celestial Order*, Berkeley–Los Angeles–London 2011, passim. Erasmus Reinhold himself in 1551 prepared the so-called *Prutenic Tables*, the first tables used to calculate the positions of the Sun and Moon. They were based entirely on the work of Nicolaus Copernicus. J.-P. Luminet, *Tajemnica Kopernika*, trans. A. Kałużny, Cracow 2008, p. 365. Many outstanding scientists of their time based their forecasts on data obtained from Copernicus, just to mention the Dutch doctor, mathematician, cartographer and philosopher Reiner Gemma Frisius, and Giovanni Antonio Magini, professor of mathematics in Bologna. P.D. Omodeo, *Copernicus in the Cultural Debates of the Renaissance Reception, Legacy, Transformation*, Leiden–Boston 2014, p. 136–140. The outstanding German astronomer, mathematician and astrologer Johannes Kepler was also a great supporter of the Polish astronomer's views. He viewed astrology as being able to best express the eternal harmony of the world and the cosmos in a way inaccessible to any other science. J. North, *The Fontana History of Astronomy and Cosmology*, London 1994, p. 309–326.

⁴⁵ M. Biskup, *Regesta Copernicana*, "Studia Copernicana" 1973, Vol. 7, p. 51 and Fig. after p. 192); compare: L.A. Birkenmajer, *Mikołaj Kopernik cz. 1: Studia nad pracami Kopernika oraz materiały biograficzne*, Cracow 1900, p. 409–411.

⁴⁶ *Iohannis Garcae Astrologiae Methodvs: In Qva Secvndvm Doctrinam Ptolemaei, Exactissima Facillimaqve Genturas qualescunq[ue] iudicandi ratio traditur ... Nunc primùm in lucem edita ... Accessit Hvic: Erasmi Osvaldi Schreckenfvch-sii Mathematici Opvs Novvm, Nobiliss. Gentivm ... Calendaria: hoc est, annos numerandi uiam & modum, eorundemq[ue] cum anno Romano siue Iuliano collationem adaptionemq[ue], eruditissimè demonstrans: Vnà cum Instrumentis ad eam rem necessarijs. Opera Antehac Nvsqvam Visa ... Praefiximvs Indicem ...*, Basilea: Officina Henricpetrina, 1576, Bayerische Staatsbibliothek, Res/2 Astr. p. 11, p. 138.

⁴⁷ F.J. Florentino, *Speculum astrologie, quod attinet ad iudiciariam rationem nativitatum atque annuarum revo-*

esco Junctinus', the same date was given by Bernardino Baldi (1553–1617), an Italian mathematician, poet and translator, author of the oldest biography of Copernicus and *Lives of Mathematicians*⁴⁸. Therefore, thanks to the horoscope chart, February 19, 1473, entered history as the date of birth of the astronomer. It is worth mentioning that the astrologers' interpretations show that the actual life and fate of Copernicus were, in fact, reflected in his natal chart.

Therefore, the innovative work of this outstanding astronomer contributed to the creation of more accurate horoscopes, which were constantly in great demand. This need is understandable and current, regardless of the place and time. Who would not like to open the door leading to the future? This future is hidden in symbols and numbers inscribed in a diagram consisting of 12 parts of the horoscope and could be deciphered by astrologers who know this astral code. And the beginning of the decryption process was (most often) the moment of birth...

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⁴⁸ B. Biliński, *Najstarszy zyciorys Mikołaja Kopernika z roku 1588 pióra Bernardina Baldiego*, "Studia Copernicana" 1973, Vol. 9.

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