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I. Introduction

Raguseius was an Aristotelian philosopher with a twist – which makes him no different than a legion of other Renaissance Aristotelians with a twist. However, Raguseius stands out as an Aristotelian who spent an enormous energy, at least judging on number of pages written, on refutation of divinatory aspect of astrology. As we will briefly sketch towards the end of the text, there was an ulterior motive of the destruction of the traditionally dominant role of astrology: by reinterpreting astrology, Raguseius attempted to patch up the seriously damaged ship of Aristotelianism after the sixteenth century storms. However, the focus of our interest in this text will be put on the *pars destruens* of his project: his criticism of astrology. Raguseius was so eager to remove the divinatory aspect of astrology and to preserve the mathematical component that he opted to put forth not only his arguments, but explicitly relied on a Platonic arguments of Pico della Mirandola to support his anti-astrological project.

II. Life and work of Georgius Raguseius

Outside Croatia, Georgius Raguseius (or Raguseus, in his native Croatian Juraj Dubrovčanin, literally: George from Dubrovnik) is not a widely known Renaissance thinker/scientist. Thus it may be convenient to introduce him. A philosopher, theologian and physician, Georgius Raguseius was born in the city of Dubrovnik (Dubrovnik was then an independent republic city-state, today a part of Croatia) in the second half of the sixteenth century, probably shortly after 1550.¹

¹ The first biography of Raguseius was written by Giacomo Filippo Tomasini and published in Padua in 1630. (Tomasinus (1630) 338–341). This biographical sketch was the source of subsequent (very scarce and scattered) mentions of Raguseius in secondary literature. More recently, Raguseius has been discussed by several Croatian historians of philosophy: Banić Pajnić (1980), Brida (1975, 1976, 1977, 1978, 1980) and Josipović (1985, 1993). All the texts except one are available in the Croatian language only. The only extant monograph on Raguseius

“Ragusa” was the Latin and Italian form of the name of the city of Dubrovnik, hence it serves as the origin of his name – Raguseius. His parents were unknown, although in one letter Raguseius mentions the name of his father – Lucas.² There is no information as to when he left Dubrovnik, but we know that he was schooled in Venice and Padua, receiving his doctoral degrees in philosophy (year unknown), theology (1592) and medicine (1601).

From the summer of 1599 to the summer of 1601, he resided in Siena, Pisa, Florence, Rome and Naples, where he was involved in academic activities of the respective universities. Upon returning to Padua in the summer of 1601, he first began teaching theology (at the *Santa Maria* school in Avanzio), then natural philosophy at the *Studio Patavino*, after being appointed directly by the Doge Grimani to replace Cesare Cremonini as professor at the second Department of Philosophy (Cremonini was promoted to teach *in primo loco*). He stayed in Padua until his death in 1622, during which time he regularly taught Aristotelian natural philosophy. During those more than twenty years, Raguseius was also active as a promoter, one of the most famous doctorands he promoted was the famous English physician William Harvey in 1602.

Raguseius was interested in astronomical questions as well: besides his publication of the *Astronomico et filosofico discorso sopra l'anno M.D.X.C. calculato al meridian dell'inclita Città di Venezia* (1590), he participated in discussions on the appearance of the Great Comet of 1618. In these discussions, Raguseius, quite atypically for a scholastic Aristotelian, insisted on the role of senses and experience in the evaluation of natural events: as he himself testifies, he praised the use of the telescope in acquiring first-hand experience in order “to resolve all the controversy tormenting the minds of many philosophers”.³

in a language besides Croatian is the Italian version of Marko Josipović’s book, published under the title *Il pensiero filosofico di Giorgio Raguseo nell’ambito del tardo aristotelismo padovano* (Josipović (1985)).

² Josipović (1993) 17.

³ “[...] controversiam omnem dirimat, quae diu multorum philosophorum ingenia torsit.” This quote is from Raguseius’ letter to Francesco Contarini from 1611 (contained in his unpublished collection of letters collected under the title *Epistolae morales, dialecticae et mathematicae* and preserved in the British Library, MS Add. 10810. This quote is taken from Camerota (2014), 128, fn. 31.

According to several contemporary sources, Raguseus spent the rest of his life closely connected with the university life in Padua, often participating in agonistic public discussions, even with his closest associates such as his predecessor Cremonini – something which seems to have been a norm of academic etiquette. In the sixteenth and seventeenth century Italian universities (including those in Padua), it was statutorily prescribed that professors confront each other at least twice a year in a public disputations (*disputationes*). Raguseus' very polemical altercation with Cremonini is well attested.

Raguseus died in Padua on the 13th of January 1622, and was buried in the Church of St. Francis, also in Padua.

Raguseus' most significant philosophical works are the following two – quoted in full glory of their subtitles:

Georgii Raguseii Veneti, in Patavina Academia philosophi ordinarii, peripateticae disputationes, in quibus difficiliores naturalis philosophiae quaestiones examinantur, praecipua, obscurioraque Aristotelis loca illustrantur. Eius animi sensa, qualiacunque tandem fuerint, ingenue aperiuntur, et veritas Catholicae fidei ubique inviolata servatur

Peripatetic disputations of Georgius Raguseus of Venice, ordinary professor in philosophy⁴ at the Academy of Padua, in which more difficult matters within natural philosophy are examined and Aristotle's more peculiar and darker places illuminated. The ideas of his mind, whatever they may be, are originally displayed and the truth of the Catholic faith is immaculately served, published in Venice in 1613; and

Georgii Raguseii Veneti theologi, medici et Patavinae Scholae philosophi ordinarii Epistolarum mathematicarum seu De divinatione

⁴ The phrase “philosophus ordinarius” is somehow ambiguous and translating it as “ordinary professor” should be taken with caution. The common phrase was “philosophia ordinaria” and it should be understood as a part of pair “extraordinary” – “ordinary” subjects’ division. Lines (2012) 5 gives the following general description of the division: “[...] ‘ordinary’ subject were required for the degree and were typically taught by the most senior (and best paid) professors; ‘extraordinary’ subjects were taught less regularly (by more junior professors) and seem to have been optional, although they often covered what was taught in ordinary lectures in other years.”

libri duo. Quibus non solum divinatrix astrologia, verum etiam chiromantia, physiognomia, geomantia, nomantia, cabala, magia, ceteraeque huius generis superstitiosae disciplinae tanquam inanes exploduntur, et naturalibus rationibus a fundamentis penitus evertuntur

Two Books of Mathematical Letters or On Divination by Georgius Raguseius of Venice, the theologian, physician and ordinary professor in philosophy at the School of Padua. They reject not only divinational astrology, but also palmistry, physiognomy, geomancy, nomancy, Kabbalah, magic and other superstitious and empty skills of that kind, which are then completely refuted from the ground up with natural explanations, published in Paris in 1623.

III. On the *Epistolae mathematicae seu De divinatione*

The book entitled *Epistolae mathematicae seu De divinatione* consists of two parts (“books”). The first book (1–235) contains seventeen letters written by Raguseius to different correspondents all dealing with astrology. The second book (236–599) contains twelve letters to different correspondents (236–599), dealing with other aspects of divination (the topics of each letter are: palmistry, physiognomy, geomancy, nomancy, Kabbalah, magic, necromancy, hydromancy, sorcerers, dreams, prophecies, and Sibylline frenzy). After book 2 there is a treatise entitled *De pure et puella qui ad D. Antonii Confessoris altare delati revixisse putantur disputatio* (600–643), a sort of a medical treatise on different sorts of consciousness.

The entire collection of letters was published posthumously by the French lawyer and translator of the *Basilika* Charles-Annibal Fabrot (1580–1659), who in the introduction makes mention of Paolo Gualdi (1553–1621), an erudite priest who was a friend of Galileo Galilei, Caravaggio, Palladio and Torquato Tasso. According to Fabrot, it was Gualdo who got grasp of Raguseius’ letters against astrologers and considered them worth distributing.⁵ Based on the year of Gualdo’s

⁵ Raguseius (1623) s. p.: “Vir illustrissime, pervenit nuper in manus Pauli Gualdi v[iri] c[larissimi] beneficio libellus Georgii Raguseii, viri bene litterati, quem ille adversum istos qui sese Chaldaeos seu Genethliacos appellant, vulgus autem Mathematicos dicit, per diligentissime conscripsit.” (“The most illustrious sir (Scipione), by kindness of the noblest Paolo Gualdi, a booklet by Georgius

death, we can conclude that preparations for the publication of Raguseius' letters must have started before 1621, that is, during Raguseius' lifetime. Gualdo was a contemporary of Raguseius in Padua, and keeping in mind both men's reputations, it is quite likely that they knew each other. The collection of Raguseius' letters in Fabrot's edition is dedicated to Scipione Cobelluzzi (1564–1616), the titular cardinal of St. Susan and Vatican librarian. The letters were written from 1600 to 1619, and in the collection they are not arranged in chronological order.

Considering the fact that we are dealing with a little-known work, we shall briefly introduce the topics of the letters of the first book which will be in our focus. The topics of the seventeen letters are mentioned in the titles of the letters and they run as follows:

First letter (Raguseius (1623) 4): “Habeantne [sic!] caelestia corpora, praeter motum et lucem, qualitates occultas, quas influentias appellant? (Do celestial bodies have occult qualities which they call influences besides movement and light?)”, addressed to Albertinus Barison.

Second letter (Raguseius (1623) 19): “Quid tractet praecipue divinatrix astrologia. (What is the specific subject of divinatory astrology?)”, addressed to Albertinus Barison.

Third letter (Raguseius (1623) 25): “Divinatricis astrologiae confutatio. (Refutation of divinatory astrology.)”, addressed to Albertinus Barison.

Fourth letter (Raguseius (1623) 51): “De imaginibus, quas astrologi in firmamento esse finxerunt. (On the images which astrologers imaged to exist in the heavens.)”, addressed to Franciscus Contarenus.

Fifth letter (Raguseius (1623) 64): “Vitae hominis longitudinem aut brevitatem non posse ab astrologis per Hylech et Alchochoden cognosci. (The length or shortness of human life cannot be known by astrologers with the help of Hylech and Alchochoden.)”, addressed to Ioannes Pagnonus.

Raguseius, a man well-educated, recently came into (my) hands. He (Raguseius) composed it in the utmost diligent fashion (to argue) against those who name themselves Chaldeans or Genethliacs, and who are popularly called astrologers.”)

Sixth letter (Raguseius (1623) 73): “Partem fortunae atque adeo reliquas omnes, quibus in eorum iudiciis astrologi utuntur, pura figmenta esse. (The role of fortune as well as all else which astrologers use in their judgments are pure inventions.)”, addressed to Ioannes Pagnonus.

Seventh letter (Raguseius (1623) 83): “Planetarum dignitates ab astrologis traditas nullas esse. (There are no such things as dignities of the planets, as astrologers claim.)”, addressed to Franciscus Vianellus.

Eighth letter (Raguseius (1623) 104): “Astrologorum doctrinam de planetarum aspectibus nullo esse fundamento innixam. (The astrologers’ doctrine on the aspects of the planets is unfounded.)”, addressed to Franciscus Vianellus.

Ninth letter (Raguseius (1623) 119): “Neque retrogradationem neque combustionem quicquam infelicitatis aut incommodi planetis afferre. (Neither retrogradation nor combustion bring any misfortune or mischief to the planets.)”, addressed to Vicentius Blancus.

Tenth letter (Raguseius (1623) 128): “Capiti et caudae Draconis nullam inesse agendi vim; atque adeo astrologorum praedictiones ab iis sumptas inanes penitus esse. (The head and the tail of the Dragon possess no power of influence, therefore astrologers’ predictions as based on them are utterly in vain.)”, addressed to Hernestus a Skendorf.

Eleventh letter (Raguseius (1623) 133): “De stellarum tam fixarum quam errantium vi et potestate. (On the force and power of the fixed and errant stars.)”, addressed to Nicolaus Contarenus.

Twelfth letter (Raguseius (1623) 148): “De iis quae caelorum potestatibus subiiciuntur. (On those things that are influenced by heavenly powers.)”, addressed to Octavianus Bonus.

Thirteenth letter (Raguseius (1623) 167): “Prospera vel adversa fortuna, quam multi frequenter in ludis experiuntur, ab astris ne an ab alia occultiore causa proficiscatur? (Does the good or bad fortune that many often experience in games come from the stars or some other more occult source?)”, addressed to Franciscus Pignas.

Fourteenth letter (Raguseius (1623) 195): “Astrologorum electionibus nullam omnino fidem habendam esse. (Choices made by astrologers should be given completely no faith.)”, addressed to Erastus Savona.

Fifteenth letter (Raguseius (1623) 205): “Quae ab astrologis de interrogationibus scripta sunt nullo fundamento veritatis niti. (All that astrologers have written on investigations has no foundation in truth.)”, addressed to Ioannes Pagnonus.

Sixteenth letter (Raguseius (1623) 215): “De veritate astrologicae disciplinae in aeris mutationibus. (On the truth of astrological discipline in the changes of the air.)”, addressed to Ioannes Pagnonus.

Seventeenth letter (Raguseius (1623) 225): “Astrologiam medicae arti nec necessariam nec valde utilem esse. (Astrology is neither very useful to nor necessary for medicine.)”, addressed to Vulpianus a Vulpe.

IV. Raguseius’ criticism of astrology and the free will problem⁶

His early encounter with astrology Raguseius himself describes as following:

Raguseius (1623) 26–27⁷

Therefore, as a young man, burning with a yearning for knowledge and encouraged by grand promises, I invested six years of effort in Venice. My first teacher was Octavian of Ghent, a man highly educated in all sciences, whom I especially valued and from whom I received some rudimental [knowledge]; and then [my teacher was] the most famed Barozzi,⁸ a Venetian nobleman who trained me in not only investigating Ptolemy’s works *Quadripartitum* and *Centiloquium*, but also Chaldean and Arabic detailed observations.

⁶ The first part of this analysis relies on the results presented in Skuhala Karasman (2013).

⁷ “Hinc ego adolescens, sciendi cupiditate inflammatus, magnisque pollicitationibus illectus, sexennium Venetiis operam dedi. Praeceptore usum primum Octaviano Gandavense, viro omni doctrina eruditissimo et de me optime merito, a quo rudimenta quaedam accepi: deinde celeberrimo Barocio, patritio Veneto, qui me non solum in Ptolomaei *Quadripartitio* et *Centiloquio*, verum etiam in Chaldaeorum et Arabum minutis observationibus exercuit.”

⁸ Francesco Barozzi (1537–1604) was an Italian astronomer and mathematician.

This auto-testimony serves as a justification for what Raguseius was to do later – refute astrology. His criticism of astrology would have been quite unconvincing had he not first been well-educated in and familiar with it.

In the second letter of the first book, “Quid tractet praecipue divinatrix astrologia”, Raguseius defines astrology in the following way:

Raguseius (1623) 19⁹

Astrology is one of the mathematical sciences that deals with the contemplation of celestial bodies, predominantly in the way of introducing various affections into this lower realm by its power.

Throughout his letters, Raguseius insists as emphatically as possible that the only astrology whose value he accepts and which he considers worth studying is a mathematical discipline. This notion of astrology emphasizes the relationship between the celestial and the earthly realm in that astrology continues where astronomy, as a discipline dealing with the movement of celestial bodies, left off. Raguseius thus distinguishes two aspects of astrology: the mathematical and the divinatory part: the former he calls “introductory astrology” (*astrologia isagogica*) or astronomy¹⁰, whereas the latter is “judicial astrology” (*astrologia iudiciaria*). The purpose of *Epistolae mathematicae* is to demonstrate how knowing and dealing with the astronomical data need not necessarily be tied to the prophesying of the world’s state, mutations of the air, personal fates, the construction of natal horoscopes etc.¹¹ In this respect, to denigrate the judicial aspect of astrology completely, Raguseius claims that astrology as a science dealing with heavenly bodies actually has no divine origin.

⁹ “Astrologia scientia quaedam est, ex mathematicarum numero, quae in coelestium corporum contemplatione versatur; ea potissimum ratione, qua virtute sua in mundum hunc inferiorem varias affectiones inducunt.”

¹⁰ Raguseius (1623) 42: “Didicerunt quidem ab Abrahamo Aegyptii astrologiam, ut antiquitatis cultores tradiderunt, non eam certe, quae in astrorum iudiciis, sed illam, quae in stellarum cursibus variisque revolutionibus versatur, quaeque verius astronomia nuncupatur.”

¹¹ Raguseius (1623) 22–23: “Haec omnia pertinent ad eam astrologiae partem, quae isagogica dicitur. Ea vero, quae in operatione consistit, quaeque iudicaria passim nuncupatur, quattuor praecipue respicit: statum mundi, aeris mutationem, hominum ortus atque opportunos temporum pro variis rebus agendis electiones [...]”

Even on the contrary, his description of the origin of astrology could hardly be harsher:

Raguseius (1623) 43¹²

I believe, [astrology originates] from primal, dumb, gullible ancient people: it was later heathens, villains, people dedicated to demonic cults and those tainted by every ugliness who nurtured, spread and wrongly implemented it amongst scientific ranks.

Owing to astrology's lacking a divine origin, he attributes its origin as stemming from Pagan elements, so as to disqualify the discipline itself on the basis of origin. Within the context of astrological criticism, the question of astrology's origin also presents an important matter he touches upon in his work. Namely, astrologers have claimed that astrology is a science reported from the Heavens, and not one thought up by human imagination.¹³

Let us come back to our main argument. Raguseius' starting point is Aristotelian natural philosophy. He feels that the celestial sphere influences the earthly one with light, heat and movement, of which we have sensory perception. Movement is merely *a carrier power*, and light only weakly affects the Earth because of the great distance from which it arrives. This is only one portion of the perceived influence, because light, heat and movement are not sufficient, according to Raguseius, to explain all earthly phenomena, such as the existence of various metals and minerals within the Earth's viscera, just as they can't explain the medicinal properties of plants. Here the question presents itself – whether there exists something besides light, heat and movement which influences events on Earth. For this reason, Raguseius accepts the existence of another form of influence, and this is occult qualities (*qualitates occultae*).¹⁴

¹² “Ab hominibus puto rudibus, simplicibus, credulis, antiquis: quam postea viri impii, scelesti, daemonum cultui dediti omnique dedecore infames foverunt, auxerunt et falso in scientiarum numerum retulerunt.”

¹³ It was a position of many outstanding astrologers of the time, e.g. John Dee, Campanella, Ficino *et al.*

¹⁴ One could rightfully pose the question here: is it a sort of a contradiction arising within his arguments when he retains the notion of occult qualities because of the impossibility of explaining all phenomena on Earth from the phenomena alone, or from visible celestial influences (light and heat)? By accepting the occult qualities of celestial bodies, he seems to accept an aspect of astrology which is not purely mathematical (astronomical).

However, according to Raguseius, these infamous “occult qualities” (or powers, influences) are limited in their scope: they apply only to some general things. In the realm of finer, more complicated and subtle things they have no power: thus, it is no wonder he refuses to accept the influence of “occult qualities” on the human soul.

Raguseius (1623) 17¹⁵

If Mars, they [astrologers] say, would occupy the eighth house together with Dragon’s head when someone is born, he will end his life by hanging himself. If Mercury and the Moon would be in the ninth house, the man will be wise and religious. If Sun would be in the middle of the sky with the Part of fortune, finding himself in the right position and being affected by benign influences of other planets he will be a king. All such sayings are thoughtless and full of vanity. Namely, if they subject human souls to the powers of heavenly bodies, as though it would be up to certain stars to make the souls more predisposed towards good or evil, they miss the whole point [literally: they go astray by the entire heavens]: the human soul is, namely, nobler than stars as it was created in God’s image and therefore can neither expect nor pursue happiness or misery from them.

Or even more emphatically:

Raguseius (1623) 3¹⁶

Hidden celestial forces, besides movement and light, I consider to be so necessary that without them the world could not exist;

¹⁵ “Si Mars (inquiet) cum aliquis nascitur, una cum capite Draconis octavam domum occupauerit, vitam ille suam suspendio finiet. Si Mercurius cum Luna fuerit in nona, vir erit sapiens et religiosus. Si Sol in medio caeli cum parte fortunae, recte dispositus atque benignis caeterorum planetarum radiationibus affectus, rex erit. Temeraria certe dicta et vanitatis plena. Nam si hominum animas stellarum virtutibus subiiciunt, quasi singulis astrorum aliquod praesto sit, quod eas vel ad bonum vel ad malum proclives reddat, toto caelo aberrant: nobilior est enim astris hominis anima ad Dei similitudinem facta et propterea nullam ab illis potest felicitatem aut infelicitatem expectare et consequi.”

¹⁶ “Abditas caelestium corporum vires, praeter motum et lucem, ita necessarias esse censeo, ut sine illis mundus consistere nulla ratione queat: eas tamen arbitror ad res tantummodo universales non etiam singulares pertinere easque praecipue, quae liberam hominis voluntatem respiciunt.”

however, I think they concern only universal things and not singular, and especially not those which regard human free will.

Thus, in one respect Raguseius does not diverge from the general notion of occult qualities: what could not be explained with light, heat and movement, was explained as the influence of occult qualities of the planets and the Sun.¹⁷ However, this is not valid for the human soul. This leads us to our central issue, the relationship of astrology to free will. Raguseius perceived judicial (divinatory) astrology as a deterministic threat for will's freedom. This gave rise to the question of validity and legitimacy of engaging in astrological business, as in medicine (astral causality and its influence on human body) as in respect to free will. In this context Raguseius emphasizes as strongly as possible that one has to choose: either astrology or free will; astrology, presenting a sort of a macrocosmical determinism, cannot be compatible with his understanding of the soul. This leads Raguseius to claim:

Raguseius (1623) 158¹⁸

In the first place I think and constantly reaffirm that human free will and the soul participating in reason are the least subject to heavenly influences so that not even a spark of their power can reach the soul – whatever the astrologers snare at. Namely, the rational soul, by the nobility of its nature, precedes heavenly bodies, since the mind is the purest and most simple, and distant from any corporeal conditions whatsoever [...].

This general opposition between astrology and free will was nothing new in Raguseius' times. Already in antiquity we have a similar

¹⁷ Grant (2007) 175 writes: "Influence produced metals in the bowels of the earth, where light could not penetrate. Influences from the moon produced the tides. Magnetism also was an effect of celestial influences, an action that seemed obvious to many in the Middle Ages, because magnetism operated even in dense fogs and in the dark where light was absent. Influence played a useful role in medieval natural philosophy: it offered a plausible explanation for a host of otherwise inexplicable, occult phenomena."

¹⁸ "Censeo in primis et constanter affirmo, liberum hominis arbitrium totamque rationis participem animam caelorum defluxibus minime obnoxiam esse, adeo ut ad illam ne scintilla quidem facultatis eorum pervenire possit, quicquid Astrologi obganniant. Anteit enim rationalis anima corporibus caelestibus nobilitate naturae cum mens purissima et simplicissima sit, a quibuscumque corporeis condicionibus aliena [...]."

problem: the question of harmonization of natural determinism, which is mediated by the astral influence, and human activity, which is beyond this deterministic chain of influence but also beyond the contingent, is associated with the Stoic natural philosophy. Although Posidonius can only be accused of accepting astrology, while others are hostile to astral determinism, the dominant determinism remains manifested through Stoicism through destiny and necessity.¹⁹ According to general understanding of the Stoics, the harmonization of necessity and destiny occurs by means of a *logos* in which human beings participate. Also, in the beginnings of Christianity, in St. Augustin, we have the motif of criticizing astrology and opposing it to free will.²⁰

However, there is another argument in Raguseius' writing which explains in more detail the incompatibility between judicial astrology and free will. This argument is dualistic: since the rational soul (or the mind) and matter are two completely different substances by nature and there is no way for matter to influence the mind, being more noble, purer, and primer than the matter. This is valid even for the heavenly bodies. Moreover, there are different sets of causal relations in things that are composed of matter and things that aren't:

Raguseius (1623) 48²¹

The heavenly bodies are created by God, the father of all things, as well as universal causes of the things bellow them. Various effects that appear depend *either* on different affections of matter *or* on man's free will.

Let us investigate the background of this argument. One of the most important and notable Raguseius' comrades in arms in combatting astrology is Giovanni Pico della Mirandola (1463–1494). In this text we will research only one aspect of Pico's influence on Raguseius – exactly the connection between free will and astrology – a more complete analysis of their relationship would take much more space. We are not to claim that Pico was the only or even most important inspiration for Raguseius' criticism of astrology – Raguseius, as a

¹⁹ Lawrence (2017).

²⁰ Cf. *De civitate Dei* V, 1–8.

²¹ “Quoniam caelestia corpora creata sunt a Deo rerum omnium parente tanquam horum inferiorum universales causae: effectus autem varii qui in lucem prodeunt aut a variis materiae affectionibus pendent aut a libera hominis voluntate.” Our emphasis.

sworn Aristotelian, must even explicitly deny relaying on Pico! – however, in one central point, in contrasting astrology with free will, their positions converge.²²

Pico's posthumously published work and voluminous book, *Disputationes contra astrologiam divinatricem*²³ was his pinnacle of refuting astrology and is considered by some modern scholars the turning point of complete repulsion of astrology from the dignified throne of sciences.²⁴ From this perspective, however problematic the history of astrology may be, it is generally considered that "astrology finally disappeared from the domain of legitimate natural knowledge during the seventeenth and eighteenth centuries, although the precise contours of this story remain obscure" (Rutkin (2008), 541). Thus, one could take Raguseius' verbose criticism, that came to light more than hundred years later, to be but one of the final nails in the coffin of the almost deceased (pseudo)science. However, the importance of Raguseius' criticism does not lie in the originality of its overall project, but in some fine tunings that had to be made in this long history of dismantling astrology and making room for a different perspective of the explanation of the relationship between man and cosmos.²⁵

²² Raguseius (1623) 31: "Novi responsiones, quae ab aliis vulgo afferuntur: sed nolo ego actum agere, nec ab aliis dicta compilare. Cum tibi per otium vacaverit, legere poteris [...] prae caeteris Ioannem Picum Mirandulanum in opere contra Astrologos [...]."

²³ This title is given in Pico (1946–52), edited and annotated by E. Garin. However, different sixteenth century editions of Pico's *Opera omnia* offer different titles for this massive and unfinished work: the Venetian edition from 1557 lists it as *Disputationum adversus astrologos libri duedecim*, a Basle edition from the year 1572–73 quotes the title as *De astrologia disputationum lib. XII*. The extant version was supposed to be just a small portion of a much larger project, cf. de Lubac (1994) 333–334.

²⁴ J. Burckhardt in a short but important passage in his *The civilization of the Renaissance in Italy* and E. Cassirer in his *The individual and the cosmos in Renaissance philosophy* both state that Pico, with his *Disputations against astrology*, significantly reduced the importance of astrology. Against this view, see Rutkin (2010) 118–119.

²⁵ A moment especially worth emphasizing is Raguseius' criticism of astrology in the context of medicine. As it is well documented, medicine is one of the disciplines in which the use of astrology remained the longest as a part of ordinary university curricula. Rutkin (2008) 557–558 mentions that as late as 1766 there were still doctoral dissertations written on astral influences on human body. However, this is beyond the scope of this text.

Although Raguseius in the beginning of his *Epistolae mathematicae* explicitly claims that the arguments he is about to bring are entirely his own and that he will not rely on Pico's words, as mentioned above, even at the first sight it is noticeable that Pico is one of the most quoted author in his *Epistolae mathematicae*: only in the first book Pico was quoted twelve times in various context. Thus, it is of no wonder that in Raguseius we can find a resonance of some of Pico's central ideas.

However, before approaching the analysis of the influence of Pico on Raguseius, a few *caveats* should be mentioned. First, the text of Pico's *Disputations* is quite controversial and hardly penetrable. After Garin's first modern edition with his Italian translation (vol. 1 published in 1946 and vol. 2 published in 1952) the book has received some scholarly attention, however not too much and not many have entered into the depths of textual analysis.²⁶ The general intention of the text is more or less clear: as his nephew Gianfrancesco Pico testifies in the overview of his *vita*, it was a part of his general project of "combatting seven enemies of the Church", astrology being one of them,²⁷ in order to reach the double *concordia* (philosophical and theological) and thus effect the peace among people.²⁸ However, many important points of a general evaluation of this colossal project remain open. For example, the question of the relationship of Ficino's *De vita* and Pico's *Disputations* is unclear. According to some, Pico's *Disputations* is a sort of a continuation of Ficino's astrologically-based and medically-oriented natural magic (most notably by Frances Yates in her influential *Giordano Bruno and the Hermetic Tradition*), according to others, Ficino's and Pico's are "two different, perhaps competing natural-magical traditions being developed" (as suggested more recently by H. Darrel Rutkin).²⁹ Furthermore, there is a quite a significant scholarly disagreement on development and eventual

²⁶ A honorable exception being Vickers (1992).

²⁷ "Postremo ad debellandos septem hostes ecclesiae animum appulerat. [...] Astrologorum acriter taxaverat, duodecimque iam libris et quidem absolutissimis, ex tredecim ad hoc destinatis, eorum deliria insectatus fuerat. Demum hydromantiam, geomantiam, pyromantiam, haruspicinam et caetera id genus inania singillatim exploserat." Gianfrancesco Pico della Mirandola, *Vita*, s.p.

²⁸ Cf. de Lubac (1994) 333.

²⁹ A full discussion of the controversy can be found in Rutkin (2010) 118–120.

change of Pico's positions within his lifespan which makes the positions in the *Disputations* hard to evaluate.³⁰

A complete analysis of all the points in which Raguseius' positions can be compared with Pico's would be quite a lengthy project which would by far exceed the purpose of this text. For example, Raguseius argues that astrology is imprecise and arbitrary based on astrologers' logic in assuming that the ninth and tenth celestial spheres also possess some influence over people (since other lower spheres are somehow influential, too). Ancient astrologers were not aware of the existence of the ninth and tenth spheres, but nonetheless claimed their accurate predictions of future events – the same as the astrologers of Raguseius' times who use the same method as the old ones but with quite different starting points. "What would then be the basis of certainty of the ancient astrology and the observation of the recent one?", asks Raguseius.³¹ This argument obviously correlates with Pico's argument from the Chapter 2 of the book VIII.³² On the other hand it should be mentioned that there are also many divergences between the two authors. For instance, the already mentioned issue of the "occult qualities" is one of those moments: Pico explicitly denies their existence.³³

³⁰ Rutkin (2010) 120 summarizes Zanier's analysis in the following way: "Giancarlo Zanier provides a scorecard of the different positions. Focusing on the astrological evidence, Zanier divides them into three groups: the first group comprises those scholars who support the view of an evolution in Pico's thought, but disagree on its evaluation (Thorndike, Di Napoli). The other two groups support the continuity of Pico's thought, but come to opposite conclusions. The second group sees in the *Disputations* a defense of Ficinian astrology, convinced that Pico had also accepted an astrological conception of the world in his early writings (Walker, Yates). The third group, finally, convinced that the *Disputationes* provides a refutation of astrology, also find evidence of such a refutation in his early works (Garin)."

³¹ Raguseius (1623) 41: "Praetera putasne nonam et decimam sphaeram influendi aliqua facultate pollere? Id profecto rationi consentaneum videtur et tamen sphaerae illae fuerunt veteribus ignotae. Quanam igitur erit veteris astrologiae certitudo, aut recentis observatio?"

³² Pico (1952) 236: "Si supra octavam sphaeram alia sit, falsam esse veterem astrologiam; si nulla, novam, quam etiam si sit nona, ruere omnino necesse est." This point of comparison was brought to our attention by an anonymous reviewer of our text.

³³ Pico (1946) 384: "Occultas vires caelestibus non inesse per quas occultas inferiorum rerum proprietates producant, sed calorem tantum lumenque vivificum."

The role of free will in Pico is, curiously enough, not quite an explored area. However, it is beyond doubt that free will (*liberum arbitrium* or just *arbitrium*) played an important role for Pico, especially in his *Oration on dignity of man*.³⁴ Moreover, some commentators, like Ernst Cassirer, went so far as to say that perseverance of free will is the basis of Pico's overall project of rejection of astrology (Cassirer (1942) 342): "Everything physical is subject to strict necessity; everything spiritual rests on freedom and can be understood only in its terms. The conclusive objection Pico raises against astrology is that it fails to see this distinction. Instead of understanding each of the two realms, the world of bodies and the world of spirits, in its own specific sense, and instead of applying to each its appropriate method of knowing, astrology willfully obliterates all distinctions. It tries to derive the being of man from the heavens, and to read his destiny in the stars. But for Pico the destiny of man lies in himself; it is determined by his will and his action." Humans are truly humans only if they exercise their higher nature instantiated by the exercise of free will; if they rely on the heavens or the stars, they

³⁴ This view is not quite convincingly challenged by Darrel Rutkin (2010) 21: "In this autobiographical (or at least self-referential) poem, Pico presents a view of man's relation to the world which explicitly denies free will! [...] 'We are compelled', he begins; 'there is a force in us greater than the mind (animus), which denies that anyone lives by their own choice', their own arbitrium. Beyond the surprising sentiment expressed here, the terminology is perhaps even more striking. The denial of free choice (*liberum arbitrium*), along with a strict determinism, are the two major features that a legitimate astrology must avoid. *Stat fati series; stat non mutabilis ordo; stant leges*: one could hardly ask for clearer language in prose or poetry! Pico presents here an extremely fatalistic world view, where every single person is explicitly and emphatically *denied* freedom of the will and its concomitant free choice, and this by the supposed avatar of man's dignity!" Another criticism on the role of free will comes from William G. Craven, quoted by Rabin (2008) 173 fn. 71: "William G. Craven, in *Giovanni Pico della Mirandola: Symbol of His Age: Modern Interpretations of a Renaissance Philosopher* (Geneva: Droz, 1981), highly criticized Cassirer's view and suggested that the issues of free will and human freedom were really incidental to the work and that this is the only point at which Pico mentions them. Although this is a useful corrective to an overzealous imputation, Craven seemed more bent on disparagement than on a true understanding of Pico and his work. These issues come up throughout the work, and Craven contradicted himself on p. 144 where he discussed book 4 in the Disputations and wrote about Pico's examples of how the astrologers 'subject the mind to the heavens even where it does not depend on the body'."

are not just neglecting their own spiritual development but also diverging from the path to God.³⁵

The evidence of this position can be found scattered in the *Disputations*, where Pico discusses free will in several different contexts.³⁶ In Book 1 of the *Disputations* Pico mentions that astrology not only presents a threat to free will but also is, simply put, conceptually false:

Pico (1946) 88³⁷

The error of astrologers is double: one is that they attribute to the Heavens many things that do not depend on them; the other that those things, that indeed depend on the Heavens, cannot be predicted by them; and since the Church teachers refute the both equally, how can it be said that they disapprove of astrology only because it negates free will or introduces the necessity of fate?

And later:

³⁵ More recently, we see a similar interpretation of Pico's main stance in Sheila Rabin's words: "Pico, furthermore, believed that astrology blocked the road to the divine through its fatalism, its interference with the human exercise of free will, for it was only through human will that one could achieve true nearness to the deity." Rabin (2008) 172 ff. Sheila Rabin shows this by quoting the book 3 of the *Oration*.

³⁶ Vickers (1992) 66–67 makes the following remark: "Among the recurring themes of Pico's work [*Disputations*] are the traditional attacks on astrology for the vice of *curiositas*, man meddling with God's design in a way that suggests the devil's influence; for encouraging determinism and denying human dignity (although the argument from free will does not occur as often as some scholars lead us to expect); for damaging virtue, prudence, activity, thus not being 'useful to life'; and for encouraging deceit, fraud, the imposture of 'charlatans'." However, in the accompanying footnote (43, p. 85) Vickers lists 17 places in which Pico brings arguments from free will (how is that "not often"?!) and we found several others in the *Disputations*.

³⁷ "Duplex enim error astrologorum: alter, quod multa caelo subiciant quae inde non dependent; alter, quod quae etiam efficit caelum, inde tamen ab eis, ut putant, praevideri non possunt [...]; et, cum doctores Ecclesiae utrumque pariter refellant, quomodo dici potest id eos tantum non probare quod libertatem tollat arbitrii, aut fati necessitatem inducat?"

Pico (1946) 134³⁸

Whence could we think that the heresies of the Manicheans, who deny free will, emerge but from that astrologers' false opinion on fate?

The power of free will versus astrology is illustrated by an example of homosexuality among nations: the Gauls (French) were once, according to some ancient sources,³⁹ prone to homosexuality (pederasty), but now, thanks to “the beneficence of the Christian law and the holiest king Louis, they despise it more than any nation under the sun”.⁴⁰ The argument is the following: astrologers assume that habits and customs of peoples depend on their physical constitution, which is the basis of their astrological deterministic predictions. However, Pico claims, there are other factors that influence human behavior: he mentions education (the Aristotelean *habitus*) and laws which, if obeyed, influence the mentality of entire nations. This is not just a demonstration of the futility of astrology but also a corroboration of free will – without a willing acceptance of new habits and laws no change would be possible.

However, the main argument against astrology based on free will is the one similar to Raguseus': human soul cannot be influenced by matter. The whole chapter 8 of book 4 deals with this, the main point being:

³⁸ “Iam haereses Manichaeorum, arbitrii libertatem tollentes, unde potius putamus emanasse, quam ex ista de fato astrologorum falsa opinione?”

³⁹ Pico quotes Ptolemy and Aristotle. Aristotle refers to this in *Politics* II.6 1269b and *Athen.* XIII 603a and Ptolemy in *Tetrabiblos* (II.3) mentions Celts as being inclined to sexual relations with other men and especially boys.

⁴⁰ Pico (1946) 292: “Accedunt leges quibus in ea re plurimum est momenti, adeo ut feras nationes mansuetissimas reddere, si rite ferantur, et contra fortissimas enervare et ex optimis reddere malas, si sunt malae, facillime possunt, unde arbitrii libertas contra omnem naturae necessitatem evidentissime declaratur. Infames olim Galli fuere amoribus puerorum, si Ptolemaeo etiam credimus et Aristoteli, quod ita nunc scelus beneficio christianae legis et sanctissimi principis Ludovici regis exhorrent, ut sub caelo nulla natio magis.”

Pico (1946) 474⁴¹

Moreover, what is posited within our soul and our free will is neither evident to angels' cognition nor subjected to their power. Finally, if the [soul's] union with the body connects the soul with the heaven, in what way can they [astrologers] talk about its [the soul's] condition based on heavenly constellation if it is posited outside the body?

And similarly, in chapter 6 of book 2:

Pico (1947) 138⁴²

It is human characteristic to dispose of his free will and reason, while everything that is connected to and dependent on matter is completely subjected to its changes.

This leads Pico to conclude that humans depend much more on one another and are influenced by one another (by one another's souls) much more than by some arbitrary celestial bodies or events.

A form of the notion of the incommensurability between the soul and the body as an argument against astrology, used both by Pico and Raguseius, can also be found in Savonarola. In his book *Ficino, Pico and Savonarola* Amos Edelheit quotes a passage from Savonarola's *Prediche* in which Savonarola advocated a similar idea: "And in like manner, despite the fact that the sky governs the corporeal things, it is not above free will, because it is corporeal, and our free will is a spiritual thing. But a body does not affect the spirit. So the sky cannot influence directly free will, but it only influences the sensitive parts."⁴³ Since Savonarola is only eleven years older than Pico, and the both of them had quite an intense exchange of ideas and mutual influences, it is hard, if not impossible, to establish who influenced whom in this point.

However, there may exist an even older source of the similar position: it is Al-Ghazali, a 11th-12th c. Muslim mystic and philosopher.

⁴¹ "Quibus in manu animi et nostra magis libertate nihil positum est, nec ita ut angelicae pateant cognitioni, nec potestati subiciantur. Denique, si societas corporis caelo animam sociat, quomodo de statu eius, cum extra corpus est posita, de caelesti constellatione pronunciant?"

⁴² "Nam et hominis proprium arbitrio et ratione res suas disponere, et id quod materiae undique annexum est et colligatum, illius mutationi vehementer est obnoxium."

⁴³ Edelheit (2008) 448 (quoting Savonarola).

According to Craig Truglia, Pico was influenced by Al-Ghazali into accepting the idea that human being can transcend/change his position in the “chain of being” by the help of his free will. Truglia’s argument is that Pico could not have taken this idea from Ficino, who never developed such a potent theory of free will as Pico. However, Taglia shows, that Pico possessed Al-Ghazali’s books in which he could have come across such ideas.

For this text it is not relevant who was the first to come up with this argument. What is relevant is that there is no evidence that Raguseius was acquainted with this aspect of Al-Ghazali’s teaching – Raguseius, who is otherwise very meticulous in quoting his sources, does not mention Al-Ghazali in *Epistolae mathematicae* even once.⁴⁴ On the other hand, Raguseius is not reluctant to show his familiarity with Pico’s text. It is therefore reasonable to suppose that this particular argument against astrology – the argument from free will if we may call it thusly – could quite likely be Raguseius’ elaboration of Pico’s idea.

V. A sketch of Raguseius’ *pars construens*⁴⁵

What was the reason that made Raguseius try to preserve the mathematical part of astrology (=astronomy) and reject *in toto* the divinatory part of astrology? Raguseius never explicitly elucidates why. However, the most likely reason for this maneuver seems to us to be *jettisoning*: Raguseius, an Aristotelian faced with a deep crisis of Aristotelianism in the beginning of the seventeenth century, decided to throw overboard a cargo, or of part of the vessel’s superstructure, in the event of an emergency to stabilize the vessel during a storm. Let us explain this metaphor.

One moment is the link between Aristotelianism and astrology. As Alain de Libera in the chapter “Le philosophe et les astres” of his *Penser au moyen âge* showed, medieval and Renaissance astrology was tightly bound with Aristotelianism: it was a certain interpretation of some passages from *Meteorologica*, *De caelo*, and *Metaphysics* Λ

⁴⁴ Raguseius mentions Al-Ghazali in his other major work, *Peripateticae disputationes* (1613), however not in this context.

⁴⁵ This is slightly beyond the scope of this paper which is primarily about Pico’s influence on Raguseius since it opens a whole new set of problems. However, it may be useful as a general guideline of understanding the context of Raguseius’ position.

as well as insertion of some pseudo-Aristotelian texts into *corpus Aristotelicum* that justified astrologers' proclamation of the influence of celestial spheres on sublunary world. It was not Aristotle's original intention; however, historical development and a particular contextualization gave room to corroborate this ancient discipline. Thus, the development and flourishing of astrology was preceded by "d'une déformation, d'un déplacement de la pensée d'Aristote, c'est celui de *l'aristotélisme arabe* où les éléments d'astronomie et de théologie naturelle et astrale disséminés dans le livre Λ de la *Métaphysique* ont été repris, travaillés, repensés dans un cadre théorique distinct de l'aristotélisme d'Aristote: l'émanatisme néoplatonicien."⁴⁶

The other moment is the criticism of Aristotelianism of the second half of the sixteenth century that was much too sharp, much too ubiquitous and much too devastating to be neglected by any Aristotelian. Aristotelianism was attacked on all fronts, however some of these attacks were especially pernicious for the stability of the structure of Aristotelian edifice: for us especially relevant are two moments. The first is that Aristotle's concept that natural world cannot be properly described with a mathematical precision was put in question with the rise of modern science. The second is that Aristotelian system offered an all-encompassing classification and hierarchization of sciences, which, with the rise of Renaissance Platonism was challenged by alternative classifications and hierarchizations.

Raguseius seems to have been conscious of these moments. By jettisoning a big part of astrology, he tried to fix the problem of how to position astrology within the Aristotelian classification of sciences. The problem is the following. Astrology studies celestial bodies (i.e. refined but nevertheless material objects) and their influences on lower spheres on the one hand, and, on the other, it applies mathematics to study their positions, motions etc. This caused a confusion as how to systematize astrology within Aristotelian division of sciences. The general and simplified version of Aristotelian division of sciences is quite familiar: existence of a science depend on existence of relative subject matter. Metaphysics (or the first philosophy, theology) has as its subject the unchangeable and incorporeal (distinct and separable from matter); mathematics deals with things that are unchangeable but

⁴⁶ Libera (1991) 257.

have no separate existence because they are abstractions from physical bodies in our mind; natural philosophy (or physics) deals with changeable and separate things that have source of movement and rest within themselves. These substances cover the entirety of Aristotelian cosmos: each type of substance has its corresponding science. This was also the reason why many Renaissance Aristotelians interpreted that mathematics couldn't be applied in the study of natural phenomena, since it would present a *μετάβασις εἰς ἄλλο γένος*.⁴⁷ In this respect astrology presents a problem. Since the substance of the celestial regions and bodies (*aether, quintessence, the fifth element/substance*), that has none of the qualities of the remaining four elements, is observable and in motion (presumably circular), the question arose whether it would belong to natural philosophy (for its subject being separated, unchangeable and observable – the celestial; and separated, changeable and observable – the terrestrial) or to mathematics (for its subject being in motion and thus graspable by mathematical apparatus).

In the traditional Aristotelian academic context, astrology was considered to be a part of natural philosophy curriculum, rather than of mathematics or metaphysics. Raguseus noticed a problem here.⁴⁸ Classifying astrology as a part of natural philosophy seems to undermine the very foundation of Aristotelian concept of science by claiming that there is a science that has not one but two subjects of two different genera, which would stand in contradiction with the Aristotelian requirement that a science have one subject. Thus Raguseus vehemently rejects the divinatory aspect of astrology – the natural-philosophical aspect of astrology, but retains the mathematical aspect of it. In his description of astrology (see fn. 9 above) he insists of subsuming it under mathematical disciplines. By doing that, he may have tried to fix what he may have considered a weak spot in Aristotelianism – astrology's vulnerability to its position in the classification of sciences or its expulsion from it. Or, conversely, if astrology that combines mathematics with observables were considered a science, it would open the door to putting in question the entire Aristotelian concept of science.

⁴⁷ Such an attitude towards mathematics is ubiquitous in the Renaissance. It can be, e.g. found in Mazzoni (2010) 250–1, Pereirus (1579) 111–9. Pereira is one of the authors whom Raguseus quotes in his *Epistolae mathematicae*.

⁴⁸ This line of interpretation has been suggested by Mihaela Girardi Karšulin (2017 and 2018). In her texts she points to the bellow quoted *loca* in Raguseus' *Peripateticae disputationes*.

There is more to the problem. How to understand the proper subject of astrology? Astrology deals, on the one hand, with changeable observables (in the sublunary realm) and, on the other, with celestial substances which are observable but unchanging. Raguseius here interprets Aristotle's requirement of scientificity of science to have one subject matter as a requirement of science to possess a univocal subject. This univocal subject would be, as Raguseius writes in his earlier work, the *Peripateticae disputationes, corpus naturale coelo mortalibusque commune* – and could be understood equivocally and analogically.⁴⁹ And since “nothing equivocal could be a reasonable subject [of a science]”⁵⁰, Raguseius has to reconceptualize astrology and remove from it the part that threatens to undermine the theoretical basis of Aristotelian science. He realized that astrology became a thorn in Aristotelianism's eye and he tried to pull out this thorn.

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⁴⁹ Raguseius (1613) 7: “Dicere igitur commune hoc naturale corpus de caelo et mortalibus, non univoce, sed analogice praedicari, est diserte fateri, illud esse nomen aliquod aequivocum, cum analogia coniunctum, quod a naturalis scientiae subiecto, ex Aristotelis decreto, excludendum omnino est.”

⁵⁰ Raguseius (1613) 7: “Tota vis argumenti, a nobis superius propositi, ad probandum corpus naturale, coelo mortalibusque commune, pro vero et adaequato naturalis scientiae subiecto statui non posse, in eo posita erat; quia corpus naturale sic acceptum, est aequivocum et nullum aequivocum subiecti rationem habere potest.”

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