

# CICERO IN THE LATE-MEDIEVAL *TRACTATUS NAUTICUS*

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## ABSTRACT

Allusions to Cicero in the late-medieval *tractatus nauticus*. The Middle Ages is presented as far removed from the development of the sciences, focusing instead on religious aspects. One of the disciplines that had been turning into a science through the Classical World and the Middle Ages was navigation. Numerous *tractatus nautici*, written towards the end of the Middle Ages, have survived. These attempt to describe systems and navigational techniques based not only on mathematics and astronomy, but also on philosophy. The philosophy of Cicero's is a recurrent question in these works<sup>1</sup>.

## KEY WORDS

Ancient World, Middle Ages, Navigation, Philosophy, Mathematics.

## CAPITALIA VERBA

Antiquitas, Medium Aevum, Ars Navigandi, Philosophia, Mathematica.

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1. This work is part of the research project HUM2006-00560 from the Ministry of Education and Science. The author is a member of the *LHISARTE* (*Textos y Contextos del saber griego, latino y árabe*), Consolidated Research Group at the University Institute of Medieval and Renaissance Studies (CEMyR) at the Universidad de La Laguna.



## 1. General aspects

It is traditional to consider the Middle Ages a long, decadent and dark ten-century period.<sup>2</sup> This is also due to the brilliance of the previous epoch, the Classical Age, and the latter's rebirth in the Renaissance.<sup>3</sup> Thus, the contrast between *lux*, referring to the classic, and *tenebra* is established for the first part of the Medieval age, which expresses the fall of that splendid Antiquity and the birth and development, paradoxically, of a new period in which all the forgotten knowledge that had no place in Christianity, the religion that enveloped all aspects of medieval life, would reappear.<sup>4</sup> Thus, the Renaissance represented a New Age, with this retrospection and awareness of the Classical World that would illuminate the medieval darkness.<sup>5</sup>

Furthermore, the Middle Ages are presented as an innovative period in all the fields and disciplines that made up the science navigation. In some cases, it meant new development and, in others, assimilating influences from other places.<sup>6</sup> The

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2. The name Middle Ages has negative connotations. Without going into the complex aspects of whether the Middle Ages should be considered pure fiction, because this was the humanist vision of it, it was they who gave it this name as an earlier, dark stage between the exalted Greek-Latin World and its recovery in the later Classicism. The Italian humanists in the final decades of the 15<sup>th</sup> century coined the term "Middle Ages", with expressions like *Media Aetas* or *Medium Aevum*. The first to use the term, referring to the period between 410 A.D. (the sack of Rome by Alaric) and his own time, was the bishop of Aleria, Giovanni Andrea dei Bussi, who, in a letter dated 1469, wrote *sed mediae tempestatis tum veteris, tum recentiores usque ad nostra tempora*. However, we owe the denomination "Middle Ages", understood as a historical stage with a certain unity, *a priori* to the Florentine humanist Favio Biondo de Forlì (1392-1463), who coined the term in his 1438 work, *Década de la historia desde la decadencia del Imperio Romano*, to refer to these ten centuries of cultural-social stagnation, and that Dei Bussi picked up again years later.

3. Corral, José L. "Historia y Ficción sobre la Edad Media". *Aragón en la Edad Media*, 18 (2004): 27; Fernández, Gonzalo. "Las grandes periodizaciones de la Historia Universal". *Boletín Millares Carlo*, 26 (2007): 119-120; Torres, Claudia. *Astronomía en el Medievo. Espiritualidad versus materialismo*. Manizales: Universidad de Manizales, 2008: 3-4; Valdeón, Julio. "La valoración histórica de la Edad Media: entre el mito y la realidad", *Memoria, mito y realidad en la historia medieval. XIII semana de Estudios Medievales*, José Ángel García, José Ángel de la Iglesia, Francisco Javier García, José Luis Martín, eds. Logroño: Gobierno de la Rioja-Instituto de Estudios Riojanos, 2002: 311-313.

4. Koyré, Alexandre. *Del mundo cerrado al universo infinito*. Mexico: Siglo Veintiuno, 1996: 5; Lamboa, Joaquín. "El pensamiento como lugar de convivencia en el pasado". *Thémata*, 37 (2006): 302; Valdeón, Julio. "La desmitificación de la Edad Media", *Miradas a la Historia: reflexiones historiográficas en recuerdo*, María Encarna Nicolás, José A. Gómez, Juan José Carreras, Miguel Rodríguez, eds. Murcia: Universidad de Murcia, 2004: 29.

5. For further knowledge about the Middle Ages, see: Heers, Jacques. *La invención de la Edad Media*. Barcelona: Crítica, 1995. For more information about medieval navigation, see: Medina-Hernández, Carlos. "La navegación en Alfonso de Palencia", *Estudios de latín medieval hispánico*, José Martínez, Cándida Ferrero, Óscar de la Cruz, eds. Firenze: Edizioni del Galluzzo, 2011: 569-578; Medina-Hernández, Carlos. "Textos científico-técnicos latinos: desarrollo y evolución de la navegación desde la Antigua Roma hasta la Edad Media", *Actas de las Primeras Jornadas de Jóvenes Investigadores Predoctorales en Ciencias de la Antigüedad y de la Edad Media: Cuestiones metodológicas y estado de la investigación*, Ainoa Castro, ed. Barcelona: Universitat Autònoma de Barcelona, 2011.

6. Alonso, Fernando. "Las embarcaciones y navegaciones en el mundo celta, de la Edad Antigua y la Edad Media", *Guerra exploraciones y navegación: Del mundo antiguo a la edad moderna*, Víctor Alonso, ed. Ferrol: Universidad de A Coruña, 1997: 92-93; Chic, Genaro; de Frutos, Gregorio. "La península ibérica



techniques of astronomic orientation were based on mathematics and arithmetic, but also on philosophy and logic and on the different nautical instruments from the Orient. Framed in mathematical-philosophical laws, they were grounded in the visual knowledge of the heavenly bodies, in that *uis diuina* that the ancient peoples referred to to explain their movements, and a rigorous and scientific study of these forces and inertias, which had been evolving, developing and consolidating from ancient times.<sup>7</sup>

Roman navigation inherited the methods of going to sea from the Greeks and other earlier civilisations, like the Phoenicians. The texts show that these techniques were based on two primitive and rudimentary types: following the coasts, always keeping them within visual contact, and freeing birds to follow routes where it was not possible to keep land in sight.<sup>8</sup> This, combined with the limited preparation and specialisation of the ships, meant the sailors had no guarantee of a safe return after leaving the *Mare Nostrum* behind and crossing the Pillars of Hercules, although there is textual evidence that Roman, and earlier sailors, went beyond this area, despite the legends that the known world ended in the Strait of Gibraltar.<sup>9</sup>

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en el marco de las colonizaciones mediterráneas". *Habis*, 15 (1984): 225; González, José A.; Medina-Hernández, Carlos. "Técnicas astronómicas de orientación e instrumentos náuticos en la navegación medieval". *Fortunatae*, 29 (2009): 17; Gozalbes, Enrique. "La navegación en Tarifa en época romana". *Revista de Estudios Tarifeños*, 39 (2000): 34-36; Naveiro, Juan L. "El comercio en el N.W. peninsular". *Memorias de Historia Antigua*, 13-14 (1991): 27 and 63-66; Vernet, Juan. *Estudios sobre Historia de la Ciencia Medieval*. Barcelona: Universidad de Barcelona, 1979: 234-235. On the other hand, it should not be overlooked that Rome wanted to keep all Europe and the known world under control, by both land and sea.

7. Guerrero, Víctor M. "La navegación en el mundo antiguo. Mercantes, fenicios y cartagineses". *Aldaba*, 30 (1998): 181-182; Millàs, José M. *Assaig d'història de les idees físiques i matemàtiques a la Catalunya medieval*. Barcelona: Edicions Científiques Catalanes, 1983: 43-45; Wallis, Faith. "Science: Introduction", *Medieval Latin. An introduction and bibliographical guide*, Frank Anthony Carl Mantello, Arthur George Rigg, eds. Washington: Catholic University of America Press, 1996: 342-345. Cicero se referred to this *uis diuina* that the gods left for the working of the cosmos, as we shall see below. See, for this regard the following text from the Ciceronian *De natura Deorum*: *Sed non omnia, Balbe, quae cursus certos et constantis habent, ea deo potius tribuenda sunt quam naturae. Quid Chalcidico Euripo in motu identidem reciprocando putas fieri posse constantius, quid freto Siciliensi, quid Oceani feruore illis in locis, "Europam Libyamque rapax ubi diuidit unda"? Quid aestus maritimi uel Hispanienses uel Britannici eorumque certis temporibus uel accessus uel recessus sine deo fieri nonne possunt? Uide, quaeso, si omnis motus omniaque, quae certis temporibus ordinem suum conseruant, diuina dicimus, ne tertianas quoque febres et quartanas diuinas esse dicendum sit; quarum reuersione et motu quid potest esse constantius? Sed omnium talium rerum ratio reddenda est.* (Cicero. *Natura Deorum*, 3, 24).

8. Antelo, Antonio. "El Atlántico en la historia y la leyenda". *Espacio, Tiempo y Forma*, 3 (1993): 573-575; González, José A.; Medina-Hernández, Carlos. "Técnicas astronómicas de orientación...": 17-19; Millàs, José M. *Assaig d'història de les idees físiques...*: 25-45.

9. Izquierdo, Pere. "Los condicionantes de la navegación en la antigüedad: una aproximación al caso de la Provincia Hispania Citerior mediterránea", *I Simposio de Historia de las técnicas. La construcción naval y la navegación*, Juan J. Achútegui, ed. Santander: Universidad de Cantabria, 1996: 300-301; Santana, Antonio; Arcos, Trinidad. "El conocimiento geográfico del Océano en la Antigüedad". *Eres: Arqueología/Bioantropología*, 10 (2002): 19-25. A Mycenaean wreck has recently been found at the mouth of the Tagus. This shows that since the Mycenaeans, at the end of the Bronze Age, there has been a desire to travel the



However, amongst the ancient peoples, the Ocean was seen as an undefined, infinite and even unreal place. In contrast, the Mediterranean was common and understandable.<sup>10</sup> Compared with the vastness of the Ocean, the Mediterranean is a landlocked basin, limited in size, and with a favourable climate for navigation in the corresponding period, ideal for voyages and also offering sailors more or less optimum conditions to sail to their destination and return to port the same way.<sup>11</sup>

In the Medieval period, the techniques used for astronomical orientation were of great complexity, attested by the fact that in this period the theoretical aspects of navigation began to be gathered in *tractatus* with detailed descriptions, which were of great importance for the development of civilisation.<sup>12</sup> These centuries allowed astronomy to develop, and become a central point of the nautical world, constituting and building these techniques on a mathematical-philosophical base that also englobed other disciplines, like cartography or hydrography.<sup>13</sup> The linking of these astronomic techniques to earlier knowledge that lacked an astronomical basis, generated a compendium of information and data that the medieval wise men knew how to interpret to compose their treatises in Latin, and gave shape to the scientific character that navigation was acquiring.

## 2. Allusions to Cicero from Medieval Navigation

Although many *tractatus* were written about nautical knowledge in the Middle Ages, the one that features in this study is the *De navigatione libri tres quibus*

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seas and sail out into the Ocean. See: Domínguez, Adolfo J. “Hércules en España”. *Historia*, 16 (1992): 56-88.

10. Aznar, Eduardo. “Del mar soñado al mar hollado: redescubrimiento del Océano”. *Cuadernos del CEMyR*, 15 (2007): 175-176; Molina, Ángel L. “Los viajes por mar en la Edad Media”. *Cuadernos de Turismo*, 5 (2000): 114; Chic, Genaro. “Roma y el Mar”. *Guerra, exploraciones y navegación: del mundo antiguo a la edad moderna*, Víctor Alonso, ed. Ferrol: Universidad de A Coruña, 1995: 55.

11. Molina, Ángel L. “Los viajes por mar...”: 114-116; Izquierdo, Pere. “Los condicionantes de la navegación en la antigüedad...”: 300-301 and 304-306. These elements, that favour navigation during spring and summer led the ancient peoples to divide the year into two, in function of the weather, when talking about sailing: *mare apertum* and *mare clausum*, as Vegetius shows us. Greek authors, like Hesiod, had already shown the existence of a nautical season corresponding to the forty days before the fall of the Pleiades and other seasonal events.

12. In addition to the treaty offered in this study, there are many others used for navigation in relation to astronomy, cosmography, geodesy, etc. like *De Arte atque ratione navigandi libri duo*, in *quorum priore tractantur pulcherrima problemata, in altero traduntur ex mathematicis disciplinis regulae et instrumenta artis nauigandi, quibus uaria rerum astronomicam phenomena circa coelestium corporum motus explorare possumus* (1546), *In Problema Mechanicum Aristotelis de motu Nauigii ex Remis*, *In Theoricis Planetarum Georgii Purbachii Annotationes*, *De erratis Orontii Finaei liber unus* (1546) by the Portuguese Pedro Núñez (1502-1578), or *Commentarium in Astrolabium, quod Planisferium uocant* (1551), *Arithmetica*, *Cosmographia seu de Sphaera Mundi*, *Geometria Practica*, *De incertitudine iudiciorum Astrologiae* by Juan de Roxas.

13. The treatises on navigation deal broadly with astronomy, mathematics, hydrography, philosophy and other relevant disciplines. Herein lies the multidisciplinary nature of navigation.



*Mathematicae disciplinae explicantur*, one of the earliest to appear.<sup>14</sup> It was composed at the end of the Middle Ages by the Portuguese erudite Jacobo de Saá, and printed and published in Paris in 1549.<sup>15</sup> Bearing in mind the inexistence until then of a work that recompiled all the nautical knowledge of the Classical World and the new medieval contributions, including astronomy and other sciences related to navigation, the author, in his approach to such a vast amount of knowledge, composed his work dialogically. Its two principal elements were the main bases for navigation in those times: mathematics, representing the *ratio*, and *ars*, the philosophy.<sup>16</sup>

Our study is based around five examples that allude to philosophy and Ciceronian thought. Although there are abundant references to authors from the classical and post-classical era, we concentrate on the allusions to Cicero as

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14. The cover of the book states: *De nauigatione libri tres quibus Mathematicae disciplinae explicantur: ab Iacobo a Saa equite lusitano nuper in lucem editi. Parisiis. Ex officina Reginaldi Calderij et Claudij eius filij. 1549. Cum priuilegio Regis.*

15. The life of the Portuguese Jacobo de Saá (*Iacobus a Saa* in Latin and *Diogo de Sá* in the Portuguese documentation) remains obscure. He is known to have been a humanist and member of the militia and decorated for his many years of service in Asia. He acquired a vast erudition, far above that of a soldier, and wrote a treatise about the practice of naval sciences, techniques of orientation and other associated aspects. His only known work is the *De nauigatione libri tres quibus Mathematicae disciplinae explicantur* (Paris, 1549), that was presented as a direct, sarcastic and on occasions, violent attack on the thesis of Pedro Núñez (*Petrus Nonus* Latinised and *Pedro Nunes* in Portuguese) in his works about the treatment of mathematics referring to navigation and, by extension, reality. (In this regard, there was a debate in the 15<sup>th</sup>-century Portuguese world and later on the *quaestio de certitudine mathematicarum* and especially, on the importance of practical knowledge. Controversy arose between *ars-praxis* and *ratio-teorica*). The *De nauigatione* is divided into three books structured as a dialogical debate (*Philosophia* is represented by Saa's ideas, and *Mathematica* by Núñez) about the certainty of mathematics and its efficiency at providing true and accurate knowledge. Also, De Saá held that true and accurate knowledge, as Aristotle maintained, was obtained through study and the application of philosophy to any aspect of navigation that one wanted to work on. The *De nauigatione* was presented as an interesting treatise where both the proposals he made, and his attacks on Núñez, are vital for understanding medieval nautical science. His use of mathematics as a principle of absolute certainty over the knowledge of nature, reality, and the *mathematisation* of all these scientific disciplines would be the principal attacks that De Saá made on him. The *Liber primus* of the *De nauigatione* is about the application of mathematics to navigation and its certainty. In the *secundus*, allusions are made to the hierarchy of the sciences and the mathematical principles of nautical science with respect to its application in those. The *Liber tertius* ends the work with illustrated proposals of how to sail and what techniques to use. It also makes petitions, defends practical knowledge over the abstract and theoretical, and urges its readers to pay no heed to Núñez's erroneous discourse. The *De nauigatione libri tres* is, in truth, all one exercise to show mathematical science's incapacity to supply accurate knowledge about the physical reality, and to this extent, its subordination to philosophy, which does show the reality with certainty, with Pedro Núñez's own lack of nautical practice being one of the most significant aspects of his attacks. On the other hand, although Jacobo de Saá was not the only one to criticise Pedro Núñez, the latter never replied, or at least we have to date no knowledge of any such counterattack.

16. de Albuquerque, Luis. "Pedro Nunes e Diogo de Sá", *As Navegações e sua projecção na Ciência e na Cultura*. Lisbon: Gradiva Publicações, 1987: 57-59; Leitão, Henrique. "Ars e Ratio: A náutica e a constituição da Ciência Moderna", *La ciencia y el mar*, María I. Vicente, Mariano Esteban, eds. Valladolid: Universidad de Valladolid, 2006: 188-189 and 198-201; Randles, William G. L. "Pedro Nunes and the discovery of the loxodromic curve or how, in the Early Sixteenth Century, navigating with a globe had failed to solve the difficulties encountered with the plane chart". *Revista da Universidade da Coimbra* (1990): 126-127.



one of the quintessential classics of Latin literature. It is also of great interest for the scholar of navigation to examine how the classical philosophical-logical aspects influenced a theme that is as heterodox and multidisciplinary as nautical science. This shows the importance that Jacobo de Saá, and all the mediaval writers of treatises on this theme in general, placed on philosophy as a key aspect for understanding nautical questions, otherwise so practical and immediate *in actu*.

The first passage, that begins to examine the *praefatio* of the *De navigatione*, already contains allusions to the very famous Marcus Tullius Cicero (but also Vitruvius to indicate the idea Saá took, but at the same level) when De Saá developed and organised his ideas,

*Prisci illi auctores, inuictissime Rex, prius quam ulla scientia aut ars esset inuenta, nullum alium praeterquam seipsos in iis quae scripsere citarunt.<sup>17</sup> quandoquidem a quo quicquam acciperent, erat nemo. Non tamen ideo id quod oculis ipsi uidebant, aut experimento admirantes reperiabant, scribere desierunt. Et sic philosophari coeperunt, ut Aristoteles innuit: Propter admirari coeperunt philosophari. His et aliis uicis atque expertis, tota illa tempestas scripturis prudentum exuberavit. Quorum lucubrationibus neoterici fruantes, ad ea quae non potuerunt, inuuantur. Et ita factum est, ut illorum quisque, tam ueterum quam neotericorum, quicquid intellectu attingere potuerint, in rationem ac ordinem redigerent. Hoc pacto ut lippis tonsoribusque patet, tam scientiae quam aliae res omnes, in ordinem atque rationem redactae sunt.<sup>18</sup> Antiquitus enim, ut Cicero et Vitruuius asserunt, sine ordine procedebant.<sup>19</sup>*

The *ordo*, thus, has to be set in any work, study or description to enable the knowledge to be distributed correctly and coherently. De Saá gives us a description of the origins of the sciences and arts. He also emphasises that science was born, in line with the Aristotilean words, at the moment when the ancient

17. This appeal, *inuictissime Rex*, as aimed at King John III of Portugal (1502-1557), as expressed in the preface, f. 2r: *Ad Ioannem Dei gratia inuictissimum Regem Lusitaniae, Algabiorum, ultra citraque mare, in Africa dominumque Guineae ac Indiae, eius nominis tertium, Iacobii a Saa, praefatio in libros de navigatione*.

18. In the clearly sarcastic way that Jacobo de Saá wants to express this it is clear how he wants to talk about the methods of the ancient philosophers, then applying this same idea sarcastically to the *opera integra* of Pedro Núñez, the person who De Saá attacks intellectually for basing all these phenomena generically on an almost absolute mathematical conception (*Ars / Ratio*). In this respect see note 15.

19. "Those early scholars, very incorruptible King, before there was any science or art, began to refer to no other issues than themselves in these matters, which were recorded in writing as there were no others from which to take any ideas. However, by no means did they cease to compose their works through what they themselves could check or review, marvelling at his action. This they proceeded to do philosophy, as Aristotle agreed, "because of wondering, they started doing philosophy". For these and other matters considered and experienced, all that mob of prudent people ended up with a plethora of works. The Neoterics who make use of those musings, sought help in such ideas, which did not progress. Also, it meant that each of those, either the old or the Neoterics, has been able to achieve something with the intellect, enabling them to evoke reason and order. In this situation, as it is accessible to those who are deprived of sight and those who cut human hair, they reverted to the order and reason of both the sciences and all other disciplines. In the antiquity, as Cicero and Vitruvius declared, they proceeded without order" (Iacobus a Saa. *De navigatione*, 1, f. 2r-3<sup>a</sup>).





wise men reflected about the facts of the world and “were surprised” by these. The same circumstance provoked a desire for continuation and experimentation to go on studying natural events. He divided these wise men into two types, the old and new, the latter being the heirs to the knowledge of the former. On one hand, it is obvious that with this emphatic sintagm *prisci illi auctores*, De Saá was referring to the Presocratic philosophers and the Neoteric or new philosophers, or poets, like the ones our author deals with, and who he mentions as he develops his ideas in a number of later passages in his text.<sup>20</sup> In this respect, our author quotes Cicero to corroborate his idea that the ancients did not follow a particular pattern. However, the next passage from Cicero deals with order, but not alluding exactly to either the Presocratics or the new philosophers,

*Sed si quem magis delectant soluta, sequatur ea sane, modo sic ut, si quis Phidiae clipeum dissoluerit, conlocationis uniuersam speciem sustulerit, non singulorum operum uenustatem; ut in Thucydide orbem modo orationis desidero, ornamenta comparent. Isti autem cum dissoluunt orationem, in qua nec res nec uerbum ullum est nisi abiectum, non clipeum, sed, ut in prouerbio est—etsi humilior dictum est tamen simile est—, scopas (ut ita dicam) mihi uidentur dissoluere. Atque ut plane genus hoc, quod ego laudo, contempsisse uideantur, aut scribant aliquid uel Isocrateo more uel quo Aeschines aut Demosthenes utitur, tum illos existimabo non desperatione reformidauisse genus hoc, sed iudicio refugisse; aut reperiam ipse eadem condicione qui uti uelit, ut aut dicat aut scribat utra uoles lingua eo genere quo illi uolunt; facilius est enim apta dissoluere quam dissipata conectere. Res se autem sic habet, ut breuissime dicam quod sentio: composite et apte sine sententiis dicere insania est, sententiose autem sine uerborum et ordine et modo infantia, sed eius modi tamen infantia, ut ea qui utantur non stulti homines haberi possint, etiam plerumque prudentes; quo qui est contentus utatur. Eloquentis uero, qui non approbationes solum sed admirationes, clamores, plausus, si liceat, mouere debet, omnibus oportet ita rebus excellat, ut ei turpe sit quicquam aut exspectari aut audiri libentius.*<sup>21</sup>

20. Bear in mind that the term poet was used in ancient times to designate not only lyrical literary poets, but especially the philosophers, who also wrote their philosophy in verse.

21. “But if someone likes more expressions without measure, cultivate them in good time, only that, as if someone decompose the shield of Phidias, they will make the overall beauty of the composition disappear but not the grace of each of its parts; so Thucydides and I only miss the roundness of the sentence, because the ornaments are revealed. More these modern ones, when they cut up their discourse. In it there is no content nor word that is not insignificant, not a shield, but rather, as the proverb states, which expressed somewhat lowly is a good simile, I think they break a broom so to speak. And so that it certainly seems they have neglected this style that I praise or something in the manner of Isocrates, for which they for using Aeschines or Demosthenes, and then I will believe that they have not been afraid of this style out of desperation to reach it, but they have avoided it on principle; or I myself will find whoever wishes to accept the same condition that he speak or writes in which you want the two languages in the style they want, as it is easier to break down what you are making than to compose what is scattered. The reality, to say very briefly what I think is this: talk with ornament and rhythm without ideas is foolishness and talk with ideas without order or measure in the words, puerility, and puerility of such a nature, to those who make use of it may take themselves as men not foolish, even in the good sense, most times, of this use is content of who is content with it. But the eloquent speaker who merits applause, if it is possible, must excel in everything, so for him it is shameful to see or hear something with more pleasure” (Cicero. *De oratore*, 71, 234).



This first approach, shows how Jacobo de Saá used Cicero's ideas to demonstrate his own conception of things. While not making any exact reference to philosophical-nautical knowledge, he chooses to use the rhetoric that he has used other times; mention Cicero's references to other authors to defend his own positions. On the other hand, the following passage from Cicero's *Disputationes Tuscultanae* is a defence of Latin as the language of science and philosophy,

*Cum defensionum laboribus senatoriisque muneribus aut omnino aut magna ex parte essem aliquando liberatus, rettuli me, Brute, te hortante maxime ad ea studia, quae retenta animo, remissa temporibus, longo intervallo intermissa revocavi, et cum omnium artium, quae ad rectam vivendi viam pertinerent, ratio et disciplina studio sapientiae, quae philosophia dicitur, contineretur, hoc mihi Latinis litteris illustrandum putavi, non quia philosophia Graecis et litteris et doctoribus percipi non posset, sed meum semper iudicium fuit omnia nostros aut invenisse per se sapientius quam Graecos aut accepta ab illis fecisse meliora, quae quidem digna statuissent, in quibus elaborarent.*<sup>22</sup>

Latin's power to express abstract aspects is well-demonstrated. Apart from this, another aspect that draws our attention is how he proceeds to apologise for Latin philosophy and thought, although many of the ideas and aspects of thought, as is known, were taken by the Romans from Greece. Furthermore, that does not mean that Rome did not have its own initiative and essence in all these questions, which is the idea that Cicero wished to emphasise and Jacobo de Saá supports to highlight the order that Roman thinkers brought to any field, compared with those primitive Presocratics and Neoterics.

The next passage from the *De navigatione* develops dialogically. This way of fragmenting the ideas through a series of interventions between people, in this case between two disciplines, mathematics and philosophy set for all the work, is aimed at highlighting even more the delimitations of each of them as a discipline. As we have argued, both disciplines are key aspects of navigation in its most abstract and, at the same time, didactic field. By applying them, the erudite attempts to explain the *quaestiones naturales* of a scientific nature, in their meaning of exactitude, in contrast with their chance nature which is hence more typical of nature and that the philosophical science attempts to explain through observation, reflection and development of the ideas both disciplines taking nature as an inalterable base,

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22. "Having finally freed myself, although not completely, at least to a large extent, from the fatigues of legal practice and my duties as a senator, I have returned, Brutus, attending to your insistent exhortations, to these studies that, postponed by circumstances but always present in my mind, I returned to resume now, after having been interrupted for a long period of time, and, since the system and the teaching of all disciplines relating to the righteous path of life are part of the study of wisdom called philosophy, I thought I should shed light on this question in Latin, not because I think that philosophy cannot be learned in Greek league and with Greek teachers, but because I have always been convinced that our fellow citizens, have either shown themselves wiser through their original creations or have improved what they have inherited from the Greeks, naturally I mean those fields they have been considered worthy of devoting their efforts to" (Cicero. *Tusculanae*, 1, 1).





*Mathematica: Ad hoc omnes illae mitigationes pertinent, quibus excludimus suspicionem uel arrogantiae, uel odii, uel saeuitiae, uel cuiuscumque rei quae offensura uidebatur. Et ut ingenue dicam quod sentio, non ausim dicere inconsulta haec Astronomia, ni ego essem, intelligi uix possit. Inficiari etenim non poteris, quod cum de quaestionibus loqueris naturalibus, me ipsam adducas testem. Et etiam Seneca uir doctissimus dixit, cum uentum est ad naturales quaestiones, Geometriae testimonio statueretur. Itaque quod in talibus questionibus dicis aut dicere uis me ipsam in testem uocas. Cumque hoc ita manifestum sit, non possum non tibi esse particeps, quoniam sine me quod uis explicare non potes, et tibi ualde necessaria sum. Philosophia: Festinare te nolo, ne nauseae molestiam, ut ait Cicero, suscipias aegra. Sed ad illud Senecae, quem citasti, tibi possem respondere, multa quidem adiuvant nos, neque partes nostri ideo sunt, nam cibus adiutorum corporis est, neque tamen pars est.*<sup>23</sup>

Referring, then, to the passage from Cicero,

*Modo fac, id quod est humanitatis tuae, ne quid aliud cures hoc tempore, nisi ut quam commodissime conualescas. Non ignoro, quantum ex desiderio labores; sed erunt omnia facilia, si ualebis: festinare te nolo, ne nauseae molestiam suscipias aeger et periculose hieme nauiges.*<sup>24</sup>

In this second comparison, Jacobo de Saá refers to Cicero almost literally by copying a short quote from the *Epistulae ad Familiares*: *Festinare te nolo, ne nauseae molestiam suscipias aeger*. If we compare it with the version proposed in the *De nauigatione*, *Festinare te nolo, ne nauseae molestiam, ut ait Cicero, suscipias aegra, expuesta*, on starting his turn in the dialogue of the philosophy in response to that of the mathematics, we deduce that our treatise writer adapts the Ciceronian idea, with the corresponding morphological-syntactic modifications, in developing his textual scheme. As with the text mentioned above, there is an ambiguous allusion. While Cicero explains an annoying circumstance of the ship keeling over when navigating during winter, De Saá uses this quote adapted to contradict the explanation that the mathematical discipline offers philosophy. This example of the disruption or non-

23. “- Mathematics: all those mitigations for which we reject the distrust of arrogance, hatred, malice or any other matter, to be able to deal with it, is examined, are extended to this point. Even I do not say in any way what I consider or what I have not dared to say, as thoughtless, what astronomy is, and I were not in this position, it can plausibly become known. Certainly you will not have been able to deny that, dealing with natural issues, you use me, myself as a witness. Also, a man so learned as Seneca said: “Since it came to natural questions one depends on the proof of the geometry.” I mean, you summon me myself, witness against, given what you say, or want to say on such matters. So, it not having said it so, I cannot be in favour of you because without me you can not explain what you want, because I’m very necessary for you. -Philosophy: I do not want to constrict you so, as Cicero says, you not see the painful discomfort of nausea. More to what Seneca said, to which you have referred, I will be able to answer you: “Certainly many things help us, but are not thus part of us.” So food is of the body of the supporters? food, and so there is no party” (Iacobus a Saa. *De nauigatione*, 2, f. 23).

24. “Now seek according to your good nature, do not worry right now for nothing more than recovering strength in the best possible circumstances. I am aware how much you suffer for nostalgia, but everything will be easier when you are well. I do not want to be hasty to expose yourself unwell to the dangers of seasickness and the risk of sailing in winter” (Cicero. *Ad familiares*, 16, 11).



acceptance of the other party's ideas, with a common denominator, navigation, is of great interest, on one hand, when checking the limits of each of these disciplines, and, on the other, to see how they could converge at some points some time during his work.

As we can see, the following passage from Jacobo de Saá is a defence of God as the supreme being in all cases, and is especially used to give validity to all the disciplines, in this case, referring to philosophy. The presentation of the ideas referring to Cicero in the text is structured around two different allusions, that we attempt to break down successively, first presented integrally the text proposed from the *De nauigatione*,

*Quis enim tam indoctus est ut nesciat, quis tam imprudens ut non sentiat, aliquid inesse in Philosophia diuini? Quandoquidem, si Ciceroni credimus, Philosophia omnium mater artium est, et inuentum deorum. Haec nos primum ad illorum cultum, deinde ad ius hominum quod situm est in generis humani societate: tum ad modestiam magnitudinemque animi erudiuit: eademque ab animo tanquam ab oculis caliginem dispulit, ut omnia supera, infera, prima, ultima, media, uideremus. Prorsus haec mihi diuina uidetur uis, quae tot res efficiat et tantas. Quid enim est memoria rerum et uerborum? Quid porro inuentio? Profecto id, inquit Cicero, quo nec in Deo quicquam maius intellegi potest. Duo haec maxima Cicero in me affirmat esse, iudicium scilicet ueri, et finem bonorum. Qua in re Seneca declarat, sapientem causas naturalium et quaerere et nosse, ac horum numeros mensurasque Geometras persequi et supputare. Hinc est quod sapienti attribuit huius cognitionem, qua scilicet ratione constant caelestia, quae illis sit uis, quae natura. Cursus uero et recursus et obseruationes per quas descendunt, et eleuatur, cum peculiare ac tractatu faciles nobis sint, quod simul cum illis minime descendamus et eleuemur, colligit mathematicus. Non te fugisse puto quod Cicero inquit: quod si uelis sapere, des operam Philosophiae tibi conuenit. Hinc te monet Seneca, Deorum immortalium munus esse, quod uiuimus: meum uero, quod bene uiuimus. Ac diuus Augustinus asserit, homini nullam esse causam philosophandi, nisi ut beatus sit. Laertius etiam me solam esse et certam et ueram possessionem affirmat. Ac non longo ab his, Cicero rerum diuinarum et humanarum scientiam cognitionemque qua causa cuiusque rei sit, me dixit. Non latuit ob id praesentem cum dixit, Sapientia ubi inuenitur? Et quis est locus intelligentiae? Nescit homo precium eius, nec inuenitur in terra suauiter uiuentium.<sup>25</sup>*

25. "For who is so ignorant that you can not get to know something? Who so insensitive as not to feel that there is something divine in the Philosophy? Certainly, if we are faithful to Cicero, Philosophy is the mother of all arts and invention of the gods. It is with us first for the worship of those, then for the law of men, which is in the coexistence of mankind. It then taught us modesty and magnanimity. It drove this same darkness from the spirit and the eyes, so that we can examine everything: the highest, the deepest, the first, the last, the central. This is shown fully to me as a divine force that reveals all important things and many others. Indeed, what is the memory of facts and word, and what is even invective? "Certainly this is so, (Cicero maintained), so not even God can conceive something that will surpass it" that is, the judgment of truth and the purpose of the good. In this case, Seneca declares that "wisdom seeks the causes of natural things and that the numbers and measures and these require and recalculate those of the geometers". Here is what assigns the knowledge of this to the wise through a reason with which it is evident what the celestial phenomena consist of, that those are the same force, which is nature. More the mathematician takes the course and the resource, but also the comments, through which they descend and ascend as they are not peculiar and easily treated for us. Since at the same time, together with them, so little felt, we descend and ascend. I think you have not moved (in your explanations), as Cicero argues: "If you know, you should study philosophy". At this point, Seneca warns you that there is a gift of the immortal gods, and that is living. And the Divine Augustus states that, if this is not being



In a first approach to the first allusion, comparing it with the following text by Cicero, the extensive copying from the work by the Roman orator is evident,

*Mihi uero ne haec quidem notiora et inlustriora carere ui diuina uidentur, ut ego aut poetam graue plenumque carmen sine caelesti aliquo mentis instinctu putem fundere, aut eloquentiam sine maiore quadam ui fluere abundantem sonantibus uerbis uberibusque sententiis. philosophia uero, omnium mater artium, quid est aliud nisi, ut Plato, donum, ut ego, inuentum deorum? Haec nos primum ad illorum cultum, deinde ad ius hominum, quod situm est in generis humani societate, tum ad modestiam magnitudinemque animi erudiuit, eademque ab animo tamquam ab oculis caliginem dispulit, ut omnia supera, infera, prima, ultima, media uideremus. Prorsus haec diuina mihi uidetur uis, quae tot res efficiat et tantas. Quid est enim memoria rerum et uerborum? Quid porro inuentio? Profecto id, quo ne in deo quidem quicquam maius intellegi potest.<sup>26</sup>*

One must emphasise the semantic transposition of the syntagma *uis diuina*. While Cicero used the adjective *diuinus* to refer to everything that has the power to provoke change or alteration and vary, that is not *humanus*, Jacobo de Saá aims this qualificative directly at God.<sup>27</sup> Thus, the Ciceronian text, *Profecto id, quo ne in deo quidem quicquam maius intellegi potest*, and De Saá's own, respectively, *Profecto id, inquit Cicero, quo nec in Deo quicquam maius intellegi potest*. Thus, he is showing God's supremacy in all aspects of the world. In the same way, the religiosity of the Portuguese author must be noted, as there are frequent allusions scattered through his work to the *Deus Christianus* with that value of the validity of his knowledge and disciplines such disciplines themselves, supported by the words of Cicero, excepting the anachronies in all cases. Also, at no time does Jacobo de Saa invoke the name of God directly to explain the phenomena, but it is used to provide validity and solidity to his text.

In a second approach, we find a well-known philosophical motto,

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lucky, there is nothing in man so that he can do philosophy. Certainly, says Laertius, like me, there is a unique possession not only right, but also true. And not very distant from these questions, Cicero took knowledge and belief of the divine and human issues for which a cause is specific to each of these issues. He did not because of this bring the present when he said, "Where is Wisdom? and "what is the place for intelligence?" Man knows no appeal of this and is not in the land of those who live pleasantly" (Iacobus a Saa. *De nauigatione*, 2, f. 34r-35r).

26. "My personal opinion is that not even the most famous and illustrious arts are exempt from a divine power, so I cannot believe that a poet composes a solemn and courteous poem without either divine inspiration in his mind, or that the eloquence flows with an abundance of sonorous words and fruitful thoughts without the intervention of a higher power. As for philosophy, mother of all arts, what else is it but, as Plato says, a gift, or as I contend, a finding of the gods? She is the one who instructed us, first, in the worship of the gods, then, human right, which is based on the coexistence of mankind and, finally, in moderation and magnanimity, and has been she who has dispersed the fog of the soul, as if snatched from our eyes, so we can see all things: those above, those below, the first, middle and last ones. This force that produces so many important effects seems to me a divine truth. What in reality is the memory of the things and the words? What is also invective? Certainly not even in divinity can a faculty that exceeds it be conceivable" (Cicero. *Tusculanae*, 1, 26).

27. Bear in mind that even in Saá's manuscript, the syntagma *in Deo* appears, in capital letters, as we have been able to see in the passage from Jacobo de Saá.



*Quae perspicuam omnibus ueritatem continet assumptio, nihil indiget approbationis. Ea est huiusmodi: "Si oportet uelle sapere, dare operam philosophiae conuenit". Hic propositio indiget approbationis; non enim perspicua est neque constat inter omnes, propterea quod multi nihil prodesse philosophiam, plerique etiam obesse arbitrantur; assumptio perspicua est enim haec: "Oportet autem uelle sapere". Hoc quia ipsum ex se perspicitur et uerum esse intellegitur, nihil attinet approbari. Quare statim concludenda est argumentatio. Est ergo assumptio quaedam, quae approbationis non indiget; nam quandam indigere perspicuum est. Separata est igitur ab adsumptione approbatio. Falsum ergo est non esse plus quam tripartitam argumentationem.*<sup>28</sup>

Although the medieval text presents no apparent contradiction between *Deus* and *Philosophia* it leaves it Cicero's maximum clear *Si oportet uelle sapere, dare operam philosophiae conuenit* which the second person adapts to be able to maintain the literary figure of the dialogue directed at mathematics. Philosophy, the discipline that is impressed on all thought and science, is necessary for the evolution of all disciplines, also for navigation.

In the following passage, De Saá returns to the allusion to the earliest philosophers and thinkers, now giving direct references through *Tusculanae* by Cicero and with Aristoteles as the accuser. While the first text in this study he criticised these with the phrase *Antiquitus enim sine ordine procedebant*, now he praised the wisdom that they showed, thus both questions not being incompatible. Following Aristotle, Cicero and De Saa Both both denounce the methods of the ancient thinkers, while proclaiming the importance of their discovery: Philosophy.

*Diodorus in priuatione doloris summum bonum posuit. Peripatetici autem, in bonis animi et corporis et fortunae. Herilli summum bonum est scientia: Zenonis, cum natura congruenter uiuere. Aristoteles in honestate ac uirtute summum bonum collocauit. Et idem, ut inquit Cicero, uereteres Philosophos accusans, ait eos aut stultissimos aut gloriosissimos fuisse, qui existimassent suis ingeniis Philosophiam perfectam esse. Thales Milesius, qui unus e septem sapientum numero fuit, aquam esse dixit a qua omnia nata sunt: Deum autem mentem esse, qui ex aqua cuncta formauerit.*<sup>29</sup>

28. "A minor premise containing a truism for everyone need not be demonstrated. One such argument is: "If one should aspire to wisdom, one should study philosophy". This major premise requires demonstration, since neither is it clear to everyone and nor does everyone agree with it as many people consider philosophy useless and most even think it is harmful. The following minor premise, however, is clear: "It is desirable to become wise". Since this statement is self-evident and true, there is no need to prove it. So, you can go straight to the conclusion of the argument. There are therefore minor premises that need no demonstration and it is equally clear that others do. The demonstration is ultimately a different element of the minor premise. So it is false that an argument has only three parts" (Cicero. *De inventione*, 1, 65).

29. "Diodorus placed the supreme good over the deprivation of pain, while the Peripatetics [placed it] over the goods not only of the mind and body, but also of fortune. The highest good of Herillus is science, that of Zeno is living in harmony with nature. Aristotle placed the supreme good between honesty and virtue. And even, as Cicero says, that it, by going against the ancient philosophers said that they were very wise and very glorious, who would have to consider that philosophy was achieved through their ideas. Thales of Miletus, who was unique among the amount of seven sages, said water is the element from which all things are born, then intelligence is God who has shaped everything from water" (Iacobus a Saa. *De nauigatione*, 2, f. 37r).



And in Cicero,

*Itaque Aristoteles ueteres philosophos accusans, qui existumauissent philosophiam suis ingeniis esse perfectam, ait eos aut stultissimos aut gloriosissimos fuisse; sed se uidere, quod paucis annis magna accessio facta esset, breui tempore philosophiam plane absolutam fore.*<sup>30</sup>

The use that Saá makes of God in this passage from the *De nauigatione* is again striking as, *Thales Milesius, qui unus e septem sapientum numero fuit, aquam esse dixit a qua omnia nata sunt: Deum autem mentem esse, qui ex aqua cuncta formauerit*. The fact that everything that is known has come *ex aqua* and thus everything is this *aqua*, there is no reason to be without God's modelling. Thus, God is presented as "power of life", but "not of material".<sup>31</sup> Under Jacobo de Saá's perspective, this idea of the origin of the world by Tales de Mileto, appears incomplete, because, as he admitted in earlier texts, *materia ac mens est Deus*. This same idea that "everything is God", and "God is everything", is patent in the following text referring to the origin of God, contrasting Him with human life, so ephemeral and fragile. Thus, everything the human being can do is limited and prevenient, everything done by God is imperishable and comes from God Himself,

*Sed non quaero ex quibus ista materiis tam magna tam mirifica opera Deus fecerit: omnia enim fecit ex nihilo. Nec audiendi sunt Poetae, qui in principio Chaos aiunt fuisse, id est, confusionem rerum atque elementorum: quia credunt nihil fieri posse nisi ex materia subiacente ac parata. In quo errore, etiam Philosophi fuerunt. Nam Cicero de natura Deorum hoc disputauit. Quibus facile est respondere, potestatem Dei non intelligentibus. Deus uero sibi ipse materiam facit, quia potest: posse enim Dei est. Nam si non potest, Deus non est. Homo facit ex eo quod est: quia per mortalitatem imbecillis est ac modicae potestatis. Deus autem facit ex eo quod non est: quia per aeternitatem fortis est.*<sup>32</sup>

In order not to contradict the Christian doctrine contained in the Holy Scriptures Jacobo de Saá explains that the error by those Poets, referring to both the Presocratics

30. "For this reason Aristotle, censoring the ancient philosophers, who had thought that through ingenuity, philosophy had reached perfection, says they are either of an extreme need or the height of vanity; however, since in few years great progress had been made, he saw that in a short time, philosophy would reach its perfection" (Cicero. *Tusculanae*, 3, 69).

31. This idea brings up a comparison with the classical myth of Prometheus, in which he is presented as carrying the power of human life, but always with a third person like Zeus intervening.

32. "But do not try to obtain what materials God has made this such excellent and wonderful creation. In truth, he created all from nothing. And the Poets, who maintain that at first there was Chaos, that is confusion of bodies and elements, have to be taken into account, as they believe that nothing can settle unless it is from existing and prepared matter. Even philosophers fell into this error. For, Cicero defended it about the nature of the gods. For them, it is easy to respond that the power of God is not among the understandable things. But God himself formed the material for himself because he has the ability. Indeed, the power to create is proper to God. If that were not possible, it therefore he would not be God. Man creates from what exists, because, given his mortality, he exists from a weak and modest power. God, on the other hand, creates from what does not exist, because, given his eternity, this remains solid" (Iacobus a Saa. *De nauigatione*, 2, f. 44r-45<sup>a</sup>).



and Neoterics<sup>33</sup> was not to follow the moral precepts of Christian faith (although this arose later, in the Hellenistic epoch), and to consider that *in principio Chaos fuit* seems to contradict the divine order with which Genesis narrates the birth of the world at God's hand. To support his opinion against atheism and give validity to his discourse, he paraphrases passages from Cicero's *De natura deorum*,

*Quid Diagoras, Atheos qui dictus est, posteaque Theodorus nonne aperte deorum naturam sustulerunt? Nam Abderites quidem Protagoras, cuius a te modo mentio facta est, sophistes temporibus illis uel maximus, cum in principio libri sic posuisset "De diuis neque, ut sint neque ut non sint, habeo dicere", Atheniensium iussu urbe atque agro est exterminatus librique eius in contione combusti; ex quo equidem existimo tardioris ad hanc sententiam profitendam multos esse factos, quippe cum poenam ne dubitatio quidem effugere potuisset. Quid de sacrilegis, quid de impiis periurisque dicemus?*<sup>34</sup>

Indeed, Cicero's text accuses the atheists of his time, but not those of Jacobo De Saá's medieval epoch, thus producing the phenomenon of the apology for ideas done anachronically.

However, if we compare the fragment immediately above from Cicero with the following from *De nauigatione*, we will appreciate that De Saa criticized Cicero because the later regarded Protagoras as the greatest philosopher of his time, despite being an atheist: *Quia autem non bene naturae secreta praeceptor ille Protagoras fuit rimatus, discipuli claudicauerunt: et sophistam illum Cicero appellauit temporibus illis máximum:*

*Coarguit etiam aestimationem Philosophorum, qui ingeniis suis putassent erutam esse atque inuentam ueritatem. Quod Arcesilas ueritate non cognita facere conatus, introduxit Philosophiae genus asusatou, quod Latine instabile seu inconstans dicere possumus. Vt enim nihil scire posse, sciendum sit, aliquid sciri necesse est. Hinc Academiae disciplina manauit, si tamen disciplina dici potest, in qua ignoratio discitur et docetur. Quia autem non bene naturae secreta praeceptor ille Protagoras fuit rimatus, discipuli claudicauerunt: et sophistam illum Cicero appellauit temporibus illis maximum: quia fictam quandam sapientiae speciem iactitauit, et apparens et non existens fuit sophos. Nam si ille perfectus fuisset, perfectius docuisset. Quia, ut ait Philosophus, signum sapientis est, scire docere. Pace tamen tua dixerim hoc, quia cum tibi plusquam oportebat deditus fuit, caecutiuit.*<sup>35</sup>

33. This regarding the first lines of *Genesis*: *In principio creauit Deus caelum et terram terra autem erat inanis et uacua et tenebrae super faciem abyssi et spiritus Dei ferebatur super aquas dixitque Deus fiat lux et facta est lux* (*Gen.*, 1-3).

34. "What about Diagoras, who was called 'the Atheist', or later with Theodore? Did they not unequivocally eliminate the existence of any divine nature? Well, Protagoras of Abdera, meanwhile, —who you mentioned recently— perhaps the greatest sophist of those times, for putting at the beginning of his book that of the "about deities I cannot say that they exist, or that cease to exist", was banished from the city and its region on orders from the Athenians, and his books were burned in public. I believe, indeed, that, because of that, many left professing that view for later, since not even a hesitant attitude could have escaped punishment. What shall we say about the sacrilege? What about the wicked and the perjurers?" (Cicero. *Natura deorum*, 1, 63).

35. "(Aristotle) also shows irrefutably the esteem of the philosophers who, through their ideas, have thought that the truth was invented and abstracted. Since Archelaus spent efforts in virtue of an unknown truth, he introduced the "asusatou" philosophical genre, which we can call hesitant or inconsistent in Latin language. Certainly, for nothing to have able to be known it is necessary for something to be





In a second approach, the Portuguese scholar refers to the concept of existence. For De Saá, the existential knowledge of the Ancients was mistaken. In fact, considering that what exists, exists through being in a physical form, and to contrast this with what does not exist, this idea, being obvious, does not enter into his Christian conception: God exists, thus, in an abstract form, but not physically. The contrastive dichotomy, according to the ancient philosophers, must be linked to knowledge of the truth. Thus, if one starts from the fact that “something” that is known is also assumed *a priori* to exist, and together with this, this knowledge has intrinsically to be true, in other words, obvious. De Saá bases such an idea on Cicero’s criticism in the *De natura deorum* of the contradictions of each of the philosophers. He also introduces a new type of philosophical quality, *asísatou*, that derives from those Greek thinkers, that he qualifies as *instabile* and *inconstans* given their erroneous conclusions. The inexistence of a universal tryth arises from the next two passages, an aspect that De Saá has been insisting on faced with the contradictions that arose in his epoch, with Christianity in an advanced stage of development, given that the Christian principles clashed head-on with those of those primitive philosophers,

*Qui autem admirantur nos hanc potissimum disciplinam secutos, his quattuor Academicis libris satis responsum uidetur. Nec uero desertarum relictarumque rerum patrocinium suscepimus; non enim hominum interitu sententiae quoque occidunt, sed lucem auctoris fortasse desiderant. Vt haec in philosophia ratio contra omnia disserendi nullamque rem aperte iudicandi profecta a Socrate, repetita ab Arcesila, confirmata a Carneade usque ad nostram uiguit aetatem; quam nunc prope modum orbam esse in ipsa Graecia intellego. Quod non Academiae uitio, sed tarditate hominum arbitror contigisse. Nam si singulas disciplinas percipere magnum est, quanto maius omnis; quod facere is necesse est, quibus propositum est ueri reperiendi causa et contra omnes philosophos et pro omnibus dicere. Cuius rei tantae tamque difficilis facultatem consecutum esse me non profiteor, secutum esse prae me fero. Nec tamen fieri potest, ut, qui hac ratione philosophentur, hi nihil habeant, quod sequantur. Dictum est omnino de hac re alio loco diligentius, sed quia nimis indociles quidam tardique sunt, admonendi uidentur saepius. Non enim sumus i, quibus nihil uerum esse uideatur, sed i, qui omnibus ueris falsa quaedam adiuncta esse dicamus tanta similitudine, ut in is nulla insit certa iudicandi et adsentienti nota. Ex quo existit et illud multa esse probabilia, quae, quamquam non perciperentur, tamen, quia uisum quendam haberent insignem et inlustrem, his sapientis uita regetur.*<sup>36</sup>

known. You need to know that something so as to know what cannot be known. Here started the doctrine of the Academy, although it can be termed a discipline in which ignorance is learned as much as taught. Since that preceptor, Protagoras, incorrectly considered the mysteries of nature, his disciples did not follow him. To that sophist who Cicero described as the greatest of the past. As he began to recite some kind of feigned wisdom, he was even wise appearing to be so, but not being so. For if that had been correct, he would have taught properly, because, as the Philosopher says, there is a motto for the wise: “learn to learn”. However, it could be said for your peace of mind that you could not give conclusions clearly, however much it suited you, when it was offered to you” (Iacobus a Saa. *De nauigatione*, 2, f. 46a-46r).

36. “Moreover, those who admire that we have preferred to follow the method of this school have been answered sufficiently, it seems to us, in the four academic Books. It is not true that we have assumed the guardianship of some abandoned and neglected issues because, when people die, opinions do not also succumb, but rather, these can lack the brilliance of an authority. This is true in philosophy, with this procedure, which consists of being able to lecture against all and not judge on any matter without



Or, we can pick up this idea clearly set out in the following passage from the same work by Cicero,

*Totum hoc "aut etiam aut non" negavit esse necessarium; quo quid dici potuit obtusius? Vrguebat Arcesilas Zenonem, cum ipse falsa omnia diceret, quae sensibus uiderentur, Zenon autem non nulla uisa esse falsa, non omnia; timuit Epicurus, ne, si unum uisum esset falsum, nullum esset uerum: omnes sensus ueri nuntios dixit esse. Nihil horum nisi ualde inconsiderate; grauiorem enim plagam accipiebat, ut leuiorem repelleret.*<sup>37</sup>

Indeed, the idea presented previously is covered in the Ciceronian phrase from this latter passage: *Totum hoc "aut etiam aut non" negavit esse necessarium*. The inexistence of a *ueritas absoluta* has been, and is, an aspect of philosophy, logic, any other sciences and disciplines, and the human being itself, that it is still opening new paths for study and for thought.

### 3. Conclusions

The Middle Ages appeared as a decadent and dark epoch. Coming between Classic Antiquity and the Renaissance was the main reason for this perception, given that they fell between two epochs of classical splendour. Christian faith dominated all aspects of medieval life. Science, education and other disciplines could not progress without being bound to religion.

In the field of navigation, this period is presented as one of innovation, with precise advances through influences from other parts of the world. Among other disciplines, mathematics, astronomy, arithmetic, philosophy and logic led to progress in navigation as a whole, generating mathematical-philosophical laws supported and studied through observation of the heavens. This way, the previous rudimentary methods and techniques of orientation, inherited from old Roman navigation, became obsolete. New high-seas routes were opened that allowed sailors to pass areas until then out of bounds for sailing. All these advances began to be compiled in *tractatus* that attempted to describe the new and developed nautical world.

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reservation: after being taken up by Socrates, retaken by Arcesilaus and consolidated by Carneades, it has remained valid until our time. I know that this procedure is now almost orphaned in Greece itself, which, as I believe, has not happened due to an imperfection of the Academy, but to the stupidity of people. As, if it were great to understand each school separately, how much greater will it be to understand them! Necessarily they have to do what, in order to find the truth, has been proposed to talk, sometimes against, and others in favour, of each and every one of the philosophers" (Cicero. *Natura deorum*, 1, 11). 37. "He said it was not necessary all that of 'yes or no'... Could anything more obtuse have been said? Arcesilaus pestering Zeno saying everything he saw through the senses was false, while Zeno, meanwhile, said that some visions were false, but not all. Epicurus feared that if a single vision turned out to be missing, none were: he said that all the senses were emissaries of truth. Had he acted with absolute thoughtlessness, he had not said anything, because, to repel a slight wound, he received one even more serious" (Cicero. *Natura deorum*, 1, 70).



The importance of philosophy in navigation was such that one of these extensive treatises, the *De nauigatione libri tres quibus Mathematicae disciplinae explicantur* by Jacobo de Saá, included it as an element essential for developing one's knowledge. Written in the form of a dialogue between two actors, the mathematical and philosophical disciplines, the author tried to give logical and coherent vision of the navigation systems through abstract statements, questions and negations, but, obviously, with practical means in mind.

To support his ideas, De Saá often resorted to citing and recalling classical authors from the Roman epoch, such as Cicero. Given that this orator represented Roman philosophy antonomastically, he went on to make constant references to his works and to copy almost literally his most representative and profound phrases for the evolution of the philosophy, emphasising in this regard that *uis diuina* that had the power to promote movements and natural forces in their relation with the movements of the stars. Jacobo de Saá, a Christian author, also had no doubts in quoting Cicero reiteratedly throughout his work to sustain his principles, not only the religious, but also the philosophical ones; although, anachronically, these did not converge with those of the orator.

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