

**NICOLE ORESME ON THE MOVEMENTS OF JAVELIN
THROWERS: A PERIPATETIC READING OF *DE
CONFIGURATIONIBUS II, 37***

**NICOLE ORESME SOBRE LOS MOVIMIENTOS DE
LOS LANZADORES DE JABALINA: UNA LECTURA
PERIPATÉTICA DEL *DE CONFIGURATIONIBUS II, 37***

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Abstract

In this contribution, I analyze a text by Oresme which gives a rather original explanation of the process of throwing a javelin and, more generally, of the actions of people who seem to have a kind of natural ability to succeed in their actions (*De Configurationibus II, 37*). In highlighting some sources that appear to have been present on the author's mind although they were hitherto neglected in Oresmian studies, I would like to show that his presentation of this specific kind of motion is deeply rooted in the scholastic theological tradition and that this tradition makes this chapter seem much less strange and much more coherent than it might seem at first glance.

Keywords

Good Fortune; Oresme's Ballistic and Doctrine of Configuration; Aristoteles Latinus; *Liber de bona fortuna*; Peripatetic Tradition in the Middle Ages

Resumen

En esta contribución analizo un texto de Oresme que ofrece una explicación singular del proceso de lanzamiento de una jabalina y, más en general, de las acciones de personas que parecen poseer una especie de habilidad natural para tener éxito en sus acciones (*De configurationibus II, 37*). Poniendo de relieve algunas fuentes que parecen haber estado presentes en la mente del autor pero que hasta ahora han sido ignoradas en los estudios oresmianos, quisiera mostrar que la presentación de este tipo específico de movimiento está profundamente arraigada en la tradición teológica escolástica. Visto a la luz de esta tradición de ideas, el capítulo en cuestión resulta mucho menos extraño y mucho más coherente de lo que pueda parecer a primera vista.

Palabras clave

buena fortuna; balística y doctrina de la configuración en Oresme; Aristoteles Latinus; *Liber de bona fortuna*; tradición peripatética en la Edad Media

Introduction*

In this contribution, I analyze a late text by Oresme which gives a rather original explanation of the process of throwing a javelin and, more generally, of the actions of people who seem to have a kind of natural ability to succeed in their actions (*De Configurationibus* II, 37). In highlighting some sources that appear to have been present on the author's mind although they were hitherto neglected in Oresmian studies, I would like to show that his presentation of this specific kind of motion is deeply rooted in the scholastic theological tradition and that this tradition makes this chapter seem much less strange than it might seem at first glance. I will start the inquiry by presenting the chapter under consideration and giving a first outline of its argumentative structure (I). Then, I will show how some sections of this chapter are in line with a particular question found in Oresme's *Questions on Aristotle's Physics* (II). Third, on the basis of what was discussed in II, I will highlight the importance of some texts by Giles of Rome and by Thomas Aquinas to understand Oresme's *De Conf.* II, 37 as well as two questions of his *Problemata* (III). Finally, I will discuss Oresme's view on human success more generally in comparison with other authors from the long Peripatetic tradition and highlight some original aspects of the author's reading of Aristotle and theory of the particular notion of "impetus" (IV). An appendix provides two argumentative maps: first, of Oresme's *De Configurationibus* II, 37 and, second, of his commentary on *Physics* 197a 25-29.

I. A presentation of Oresme's *De Conf.* II, 37: on mental movements, on fortune and on throwing a javelin

Chapter 37 from Section II of Oresme's treatise known as *Tractatus de configurationibus qualitatium et motuum* is announced in the following way: "On the causes of certain effects arising in the subject itself, based on the prior statements."¹ In this chapter, Oresme

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¹ Nicole Oresme, *De Configurationibus* II, 36, in *Nicole Oresme and the Medieval Geometry of Qualities and Motions. A Treatise on the Uniformity and Difformity of Intensities known as Tractatus de configurationibus qualitatium et motuum*, edited with an Introduction, English Translation and

develops his own explanation of a series of phenomena by means of his doctrine of physical “configuration”, that was mainly explained in the preceding chapters of the work. This notion, that the author calls elsewhere “*ymaginatio*”, “*figuratio*”, or even “*dispositio*”, was developed by him to conceptualize the quantitative variation of qualities in space and time. The notion has been the object of an interesting doctoral dissertation by Philippe Debroise, who has shown the broad interest of this concept and its various applications in Oresme’s work.² In *De Conf.* II, 37 (376,1-380,43) the notion of configuration is applied to explain the effects that prove to be useful or harmful for the author of the action under consideration. The main idea of this chapter is to use the “difformity of accidents of the soul” discussed in the previous chapter (“*De difformitate accidentium anime*”³) to account for some phenomena caused by a given action in the agent himself, whereas the following chapter will do the same for the phenomena caused by the agent “in an alien body.”⁴ In what follows, I will start by presenting the entire chapter, before focusing on the passage on throwing the javelin.

Following the reasonable structure suggested by Clagett’s edition, one might divide *De Conf.* II, 37 into four main parts, corresponding to distinct argumentative steps. The first one (376,1-378,16) starts with a very general claim, namely that human imagination (*apprehensio aut cogitatio seu ymaginatio*) changes the body of the person who apprehends something, by reason of desire or passion (l. 3-4).⁵ Oresme supports this claim by recalling the case of anger, which implies not only an intense desire for revenge, but also a face change and a strong motion of the blood (l. 5-6).⁶ And he immediately extrapolates this famously (although tacitly) Aristotelian account of anger as an embodied phenomenon⁷

Commentary by M. Clagett (Madison, Milwaukee and London: The University of Wisconsin Press, 1968), 376,1-2: “*De causis quorundam effectuum in subiecto proprio ex predictis.*” In what follows, I will systematically refer to this edition of the Latin text. The text sections which I quote in an English translation are also taken from this book, except for one particular instance, where I will mention it (below notes 10 and 16). As for the composition date of this treatise, for which there is no definitive evidence, Clagett claims that it is to go back before 1364 and perhaps even before 1362 (ed. 1968, 122-25). According to another hypothesis, also advanced by Clagett, CQM could have been composed between 1351 and 1355.

² Philippe Debroise, *Mathématiques de l'intensité et Merveilles de la nature. Etude sur le Tractatus de configurationibus qualitatum et motuum de Nicole Oresme*, PhD defended on 16 December 2019 at the Université de Paris Diderot (Paris: Université Paris Diderot).

³ Nicole Oresme, *De Configurationibus* II, 36, 375,1-376,32.

⁴ Nicole Oresme, *De Configurationibus* II, 38, 380,1-386,65: “*De causis quorundam effectuum in corpore alieno secundum predicta.*”

⁵ Nicole Oresme, *De Configurationibus* II, 37, 376,3-4: “*Apprehensio aut cogitatio seu ymaginatio corpus hominis apprehendentis immutat, et potissime ratione appetitus concomitantis vel etiam passionis.*”

⁶ Nicole Oresme, *De Configurationibus* II, 37, 376,5-6: “*Nam si quis fortiter cogitet de vindicta cum affectione intensa, sanguis ipsius commovetur et facies immutatur, et eodem modo de timore et gaudio et aliis accidentibus anime.*”

⁷ See Aristotle description of anger in *De Anima* 403a29-b1, a description involving “boiling blood” and followed by the remark that a satisfactory theory of emotions would involve reference

to all other kinds of human passions: the same holds true, he says, for fear, joy, and other accidents of the soul (l. 6-7).⁸ And, he adds, “it is the same for dumb animals”: this was made clear by the biblical story of Jacob’s sheep in Gen. 30:32-43 as well as by many other examples found in Augustine, Avicenna, and other sources that all indicate the power of animal imagination (376,8-378,16).⁹ All these instances showing the powers of imagination, that are well known and commonly admitted at Oresme’s time, are presented only to prepare the following steps of his discussion, which are much more innovative.

In the second step of his discussion (378,16-29), Oresme gives a more detailed and personal explanation of the power of imagination, referring to his concept of configuration. The bodily movements, he says here, vary not only because of greater or lesser intensity of imagination or affection, but because of a “diversity as to difformity in the figuration of the aforesaid accidents in the soul” (l. 17-20). He illustrates this as follows: if someone thinks about revenge and (only) if the difformity of this cogitation is duly figured (*debite figurata*), this person will “execute some unprepared acts duly”, so that he “will be as one particularly fortunate in carrying out or executing his intention” (l. 22-23).¹⁰ And the contrary will happen, Oresme continues, when the same intention is executed in a “not duly figured way”: in this case, one will not succeed, “even though the imagination or affection is sufficiently intense” (l. 23-25).¹¹ And, he concludes, the same must be said of all the accidents of the soul, which have to be thought “in the same way

not only to the cognitive content of emotions but also to their material make up. This implicit source of Oresme’s discussion of passions in *De Conf.* II, 37 was not mentioned by Clagett nor by Debroise.

⁸ Nicole Oresme, *De Configurationibus* II, 37, 376,6-7: “Homines etiam secundum varietatem istorum aliter et aliter operantur ad extra.”

⁹ Nicole Oresme, *De Configurationibus* II, 37, 376,7-378,16: “Et similiter bruta ut patet in Genesi de ovibus Jacob[i]. Et ad istud propositum adducit Augustinus exemplum de cameleonta et probat istud et declarat multipliciter in libro De Trinitate. Et similiter Avicenna 6° Naturalium per multa experimenta declarat qualiter ymaginatio immutat corpus ymaginantis in complexione et qualitatibus, sanitate et egritudine, et ita de aliis. Unde et de passione timoris narrat Solinus unum effectum satis notabilem dicens quod ‘Athis filius regis Sardis, mutus ad id usque temporis, in vocem erupit vi timoris ; exclamasse enim dicitur ‘parce patrio meo, Cyre, et hominem te vel casibus disce nostris’.”

¹⁰ Nicole Oresme, *De Configurationibus* II, 37, 378,17-23: “Possibile est igitur ut non solum propter intensionem maiorem et minore ymaginationis vel affectionis varietur motus seu passio in corpore sed etiam propter diversitatem figurationis predictorum accidentium anime in difformitate. Verbi gratia, si quis cum affectione ymaginetur aut cogitet de vindicta et istius cogitationis vel ymaginationis difformitas fuerit debite figurata, tunc ipse actus imparatos exercebit debite et erit in prosecutione seu executione intentionis sue quasi bene fortunatus.” The present translation differs from the one by Clagett, who rendered “tunc ipse actus imparatos exercebit debite” by “the act will duly carry out the commands”, which is not only unprecise, but false. Indeed, *imparatus* (l. 22) means “unprepared”, and such a capacity to “execute some unprepared acts duly” is precisely a defining feature of the “well fortunate man”.

¹¹ Nicole Oresme, *De Configurationibus* II, 37, 378,23-25: “Si vero ymaginatio sive affectio indebite figuretur, ipse operabitur indebite, quamvis ymaginatio vel affectio fuerit sufficienter intensa.”

as we spoke of the motions of the body in chapter 10 of this part and of the beauty of figuration of velocities in chapter eleven” (l. 25-29).¹² In these chapters, Oresme had considered that a difformity of velocities must be considered in the same way as a difformity of qualities and that all this might explain “marvelous” facts such as the action of the torpedo fish who causes the fishermen’s numbing, the ability of the lion to separate the members of his prey, the power of certain substances to help or heal while others are poisons and, more generally, the fact that some kinds of movements seem to us to be “wonderful” or “marvelous”.¹³ In remembering all this in *De Conf.* II, 37, Oresme prepares a further step of the argumentation developed in this chapter, an explanation in which he systematizes the parallel between bodily and psychic figuration.

In this third section of *De Conf.* II, 37 (378,30-41), Oresme immediately comes to a discussion of the abilities of “one person who is hurling a javelin or spear”, saying that when this person “shakes” this object “properly”, he will fling it “more directly and in a more efficient way” (*directius and fortius*) than another who is stronger and throws the javelin with greater force, but “improperly” (*indebite*).¹⁴ Let us address three questions, the two first on each term of the phrase *directius et fortius*, and the third on their relation. First, one might wonder what “directly” (*directe*) means. It is possible to distinguish at least between two kinds of meanings, the one being general and the second being geometrical. In a general sense, *directe* might be understood as meaning “in being directed”, which could mean “in being mastered by the thrower to have the appropriate direction.” As for the geometrical meaning, it could mean the shortest line between two given points. Such a meaning appears, for example, in Pecham’s *Perspectiva communis* to say that “light departs powerfully from any point on a luminous body, and the more nearly perpendicular, the stronger it is.”¹⁵ Second, one might wonder what “*forte*” (*fortius*)

¹² Nicole Oresme, *De Configurationibus* II, 37, 378,25-29: “Et conformiter dicendum est de difformitate speciei amoris vel odii, et sic de aliis accidentibus anime. Nam de motibus anime quantum ad hoc dicendum est conformiter ad ea que de motibus corporis dicta fuerunt capitulo 10° huius et capitulo 11° de pulchritudine figurationis velocitatum.”

¹³ Nicole Oresme, *De Configurationibus* II, 10, 294,3-296,25 and II, 11, 296,1-14.

¹⁴ Nicole Oresme, *De Configurationibus* II, 37, 378,30-32: “Unde contingit quod unus proiciens telum vel lanceam si debite vibraverit eam, directius et fortius percutiet quam unus alter fortior qui iaceret eam indebite cum fortiori conatu.”

¹⁵ John Pecham, *Perspectiva communis*, Part I, Prop 6, in David C. Lindberg, *John Pecham and the Science of Optics, Perspectiva communis, edited with an introduction, English translation, and critical notes* (Madison, Milwaukee and London: The University of Wisconsin Press, 1970), 64,40-42: “A quolibet puncto luminosi radius lucis digreditur virtuose et quanto directius tanto fortius.” See also Robert Grosseteste, *De Lineis*, edited by L. Baur, in *Die philosophischen Werke des Robert Grosseteste, Bischofs von Lincoln, zum erstenmal vollständig in kritischer Ausgabe* (Münster: Aschendorff, 1912), 60,30-33: “Virtus igitur ab agente naturali aut veniet super lineam brevior, et tunc magis est activa, quia patiens minus distat ab agente, aut super lineam longior, et tunc minus est activa, quia patiens magis distat.” I owe this reference to the second revisor of my paper, whom I thank warmly for this.

means: although Clagett has rendered it as indicating a distance (“further”)¹⁶, I prefer to give it a relatively large meaning (“in a more efficient way”), although this could come to the same thing. Now, what is the relation between the two adverbs in *De Conf.* II, 37 (378,30-32)? If we opt for a geometrical meaning for *directe*, the texts on optics quoted above to illustrate this meaning strongly suggest that the conjunction of coordination “and” (*et*) between *directius* and *fortius* must be understood with some explanatory value: it is precisely because the javelin is thrown “directly” that it is thrown in an efficient way. In other terms, as in the texts on Optics quoted from Oresme’s predecessors, it seems to be assumed here by him that the most intensive action is exerted along direct lines, as they are the shortest. Thus, the most efficient direction of throwing the javelin is in alignment with its shape rather than direction: slantwise or obliquely.

Now, a series of questions arise, some of which must left open here. First, would this mean that Oresme was not aware that a projectile has a parabolic trajectory? This question is difficult to answer, but it seems difficult to hold that he has been unable to realize, as Aristotle himself already did, that this trajectory is not rectilinear but has at least two stages (one upwards and the other downwards).¹⁷ Second, is it necessary to take *directe* in this geometrical meaning to assume that Oresme establishes a strong link between the fact that a throw is made “directly” and the fact that it is made “efficiently”? In this case, I think that the answer is: no. Indeed, it cannot be excluded that Oresme claimed that the efficiency of a given throw results from its “directedness” (whatever the

¹⁶ Nicole Oresme, *De Configurationibus* II, 37, 379: “Whence it happens that when one person who is hurling a javelin or spear shakes it properly, he will fling it more directly and further than another who is stronger [but] throws it improperly with greater force.”

¹⁷ On Aristotle’s ballistics, see among others Bernd Manuwald, “Die Wurftheorie im Corpus Aristotelicum”, in *Aristoteles Werk und Wirkung, Paul Moraux gewidmet, erster Band: Aristoteles und seine Schule*, edited by J. Wiesner (Berlin and New York: Walter de Gruyter, 1985), 151-167 and Michel Federspiel, “Sur le mouvement des projectiles (Aristote, *Du ciel*, 288a22)”, *Revue des Etudes Anciennes* 94, 3-4 (1992): 337-345. On Oresme’s ballistics, a comprehensive study remains to be done. For this, the passages from Oresme’s *Questions on the Physics* where he discusses projectile motion are almost of no use: the case of the arrow and that of projectiles more generally are mentioned there very incidentally (edited by S. Caroti, J. Celeyrette, S. Kirschner and E. Mazet, 2012, q. VI, 4, *Consequenter queritur utrum motus possit velocitari in infinitum*, 681,110-113 and q. VII, 3, *Consequenter queritur utrum in omni motu movens et motum sint simul*, 729,14-18 as well as 735,189-195). A more systematic discussion of this kind of violent motion is made in his *Livre du ciel et du monde*: see Nicole Oresme, *Le Livre du ciel et du monde*, edited by A. D. Menut and A. J. Denomy, translated with an introduction by A. D. Menut (Madison, Milwaukee and London: The University of Wisconsin Press, 1968), 414-420, partially discussed by Debroise, *Mathématiques de l’intensité et Merveilles de la nature*, 525-527. Finally, it would perhaps be interesting to take into account Oresme’s *Question Commentary on Aristotle’s On the Heaven* – for this work that I have not been able to study systematically, see Claudia Kren, *The Quaestiones super de Celo of Nicole Oresme*, Unpub. Ph. D. Dissertation, University of Wisconsin, 1965 (with English translation) and the table of contents provided on the basis of ms. Munich, BSB, Clm 4375 by Daniel A. Di Liscia and Aurora Panzica, “The Works of Nicole Oresme: a Systematic Inventory”, *Traditio* 77 (2022): to be published. I thank very much the authors for having left me read this unpublished inventory.

geometrical figure of this throw might be). In other terms, it seems to me that one might give to the conjunction “and” (*et*) coordinating *directius* and *fortius* an epexegetic value in all cases, whatever kind of reading one gives to each of the two terms. In sum, the conclusion of Oresme’s discussion of the person who is hurling a javelin or spear in *De Conf.* II, 37 (378,30-41), is that the ability of some people to “shake” the projectile “properly” (increasing the lift exerted by the air) comes from nature, but might be trained as all kinds of human virtues and technical abilities. This allows Oresme to basically make two claims. First, that some people are naturally “adept at hurling things properly” while nature has denied this to some others. Second, that such diversity does not come from increasing the intensity of the velocity, but rather from its varying figuration.¹⁸ And, he continues, one ought to think in this way of motions of the soul:

And perhaps this is the cause of a common occurrence: namely, that one person easily carries out his intention, desire, or hope, while another person who hopes for something more intensely and acts with greater zeal, yet never, or scarcely ever, is able to achieve his goal. Accordingly, it can be said not unfittingly that a good and due configuration of the difformity of such accidents of the soul, a configuration to which someone is naturally inclined, is the good fortune of the man so inclined. And the contrary would be [his] bad fortune.¹⁹

Bad fortune, or a very particular instance of it, is the object of fourth and last section of *De Conf.* II, 37 (378,42-380,43). There, Oresme combines the conclusions just made with what was shown previously in *De Conf.* I, 22, to account for the negative influence exerted on human life by “certain movements of the mind” such as what he calls an “excessive zeal in foreknowing the future” (*ardor nimius prenoscendi futura*). This kind of superstition, he says, precedes or accompanies misery “just as itching precedes the scab” (378,44: *quemadmodum pruritus antecedit scabiem*)²⁰ – a claim that is made also in a crucial chapter of Oresme’s *Livre de divinacions*, a pamphlet against all forms of superstition written in

¹⁸ Nicole Oresme, *De Configurationibus* II, 37, 378,32-34: “Unde contingit quod unus proiciens telum vel lanceam si debite vibraverit eam, directius et fortius percutiet quam unus alter fortior qui iaceret eam indebite cum fortiori conatu, et sunt aliqui apti naturaliter ad debite prociendum et alii sunt quibus hoc natura negavit. Talis autem diversitas non venit ex intensione velocitatis sed ex eia varia figuratione.”

¹⁹ Nicole Oresme, *De Configurationibus* II, 37, 378,34-41: “Et ita ymaginandum est de motibus anime. Et forsitan ista est causa eius, quod communiter accidit, scilicet quod unus facilliter consequitur illud quod intendit, affectat aut sperat; alius autem quamvis intensius speret et diligentius agat nunquam tamen aut vix poterit propositum adipisci. Propter quod non inconvenienter potest dici quod bona et debita configuratio difformitatis talium accidentium anime ad quam aliquis naturaliter inclinatur est hominis sic inclinati bona fortuna, et contrarium esset mala fortuna.”

²⁰ Nicole Oresme, *De Configurationibus* II, 37, 378,42-380,47: “Et sicut dictum fuit 22° prime partis huius [see 226-227] aliquotiens futuram infelicitatem precedunt quidam animi motus quorum unus est ardor nimius prenoscendi futura. Quemadmodum pruritus antecedit scabiem, ita superstitio aut preventit aut concomitatur miseriam. Unde Seneca hoc inquit: ‘humana conditio pessimum habet ut quos fortuna miseros fecit etiam superstitiosos facit.’” See below note 94.

French, probably going back to 1356.²¹ In *De Conf.* II, 37, Oresme continues and summarizes: “Further, this searching after fate is not only a sign of future misfortune, but it is also its cause, since one is catapulted into evil eventualities by the very fact that the mind is moved to act with unfitting difformity. When, moreover, deformed superstition is assumed, the mind, as by an obstacle, is accordingly damaged; it stumbles, becomes slippery, and takes a devious path.”²² And even more: “Freely adopted superstition pushes down into evil those, therefore, whom nature has so inclined. And the foolish hope or fear, born from the response of the divinator, produces a harmful effect that is greater than [the] helpful effect of the precaution which must always be more carefully employed after such things have been given up.”²³ All this, Oresme concludes, justifies the many condemnations of divination that one might read in the Holy Scripture.²⁴

To summarize the content of *De Conf.* II, 37, one might now recall the argumentative map of this text, which contains the following four steps. First, we have an outline of rather general views on the powers of imagination, made on the basis of some ancient philosophical and theological authorities. Second, Oresme gives a more personal interpretation of these views, in terms of his notion of configuration and of the Aristotelian term of fortune. Third, he applies the concept to the action of throwing of a javelin “duly” and more generally to the ability of some people to see their project “succeed”. Fourth, he discusses the contrary situation, which is bad fortune and, more particularly, the negative influence of human superstition on future events. When faced

²¹ This book was the object of a doctoral dissertation held in Paris in 1992 by Sylvie Lefèvre, who edited the text on the basis of the ms. Brussels, BR, 11203-204 and who considered that this work dates back to 1356. Lefèvre’s edition was published alongside an Italian translation of the text in Stefano Rapisarda, *Nicole Oresme, Contro la divinazione: consigli antiastrologici al re di Francia (1356)* (Roma: Carocci editore, 2009). See also Stefano Rapisarda, “From the *Tractatus contra astronomos judicarios* (1349) to the (1356): Nicole Oresme lost in translation”, in *El saber i les llengües vernacles a l’època de Llull i Eiximenis. Estudis ICREA sobre vernacularització*, edited by A. Alberni, L. Badia, L. Cifuentes and A. Fidora (Barcelona: Publicacions de l’Abadia de Montserrat, 2012), 231-255. For the passage which has to be compared with *De Conf.*, 378, 44, see here below note 94.

²² Nicole Oresme, *De Configurationibus* II, 37, 380,47-53: “Hec etiam inquisitio fati non solum est signum futuri infortunii sed etiam causa, quoniam in malos eventus eo ipso inciditur quod mens ad agenda inconvenienti difformitate movetur, ut in presenti capitulo iam dictum est. Cum autem superstitio prava premititur, ex hoc animus tanquam quodam offendiculo leditur cespitat, lubricat, exorbitat, et malis auspiciis exinde quasi claudicando procedit difformitate peiore, sicut est de illis quibus imprecatus psumista dicens: ‘Fiat via illorum tenebre et lubricum’.”

²³ Nicole Oresme, *De Configurationibus* II, 37, 380,53-56: “Illos igitur voluntaria superstitio detrudit in malum, quos ad hoc inclinavit natura. Et plus nocet spes fatua aut timor ex divinatoris responso conceptus quam iuvel cautela que talibus omissis semper est diligentius adhibenda.”

²⁴ Nicole Oresme, *De Configurationibus* II, 37, 380,56-63: “Sic igitur et lege nature et suis demeritis precipitantur a Deo, qui contra eius monita sortilegis et divinationibus invituntur. Unde in Deuteronomio precipit Dominus suo populo dicens ‘cave ne (...) inveniatur in te (...) ui ariolos sciscitet, et observet sompnia atque auguria, ne sic sit maleficus neque incantator neque phytones (l pythones) consulat nec divinos’, et cetera, et sequitur: ‘omnia enim hec abhominabitur Dominus, et propter istiusmodi sclerera delebit eos’, scilicet populos qui tales admittunt.”

with such a discussion, a reader who is aware of some general aspects of late Aristotelian theories of motion might perhaps find remarkable that *De Conf.* II, 37 contains no mention of the concept of *impetus* – a concept that was brought to the fore by John Philoponus to account for all cases where a body keeps on moving even after having left contact with its mover.²⁵ And the modern reader, more generally, might be surprised by the variety of subjects implied and be interested to know more about their mutual relations. If the relation between the issue of fortune and human success in general is rather clear, one might indeed be curious to grasp the relations between these topics and the very act of throwing a javelin or projectiles more generally. In the section that follows, I will highlight some elements of the background of Oresme’s approach to such questions, that will make their relations clearer.

II. A new concept of good fortune: Oresme’s reading of Aristotle’s *Physics* 197a 25-29 in light of the *Liber de bona fortuna*

In order to shed light on some key assumptions implied in *De Conf.* II, 37, I will first focus on the third section of this chapter, in which Oresme applies the concept of “configuration” to the action of throwing of a javelin “duly” and more generally to the ability of some people to see their project “succeed”. As was already indicated by Debroise,²⁶ the paradoxical model of human success claimed by Oresme in this section is largely indebted to a passage of a previous work by Oresme, which is his *Questions on the Physics*. In the present state of research, there is only one witness of this work, a manuscript discovered by G. Beaujouan in 1964 and used by the authors of the 2013

²⁵ On the Late Greek and Arabic history of this concept, see Ahmad Hasnaoui, “Aspects de la synthèse avicennienne”, in *Penser avec Aristote*, edited by M. A. Sinaceur (Toulouse: Eres, 1991), 227-244 (esp. 233-235); Ahmad Hasnawi, “Alexandre d’Aphrodise vs Jean Philopon: notes sur quelques traités d’Alexandre ‘perdus’ en grec, conservés en arabe”, *Arabic Sciences and Philosophy* 4 (1994): 53-109 and Ahmad Hasnawi, “La théorie avicennienne de l’impetus Ibn Sīnā entre Jean Philopon et Jean Buridan”, in *Views on the Philosophy of Ibn Sīnā and Mullā Ṣadrā Shīrāzī*, edited by M. Arfa Mensia (Tunis: The Tunisian Academy of Sciences and Letters and Arts Beīt al-Hikma, 2014). On its Latin reception, see the fundamental work by Anneliese Maier, *Zwei Grundprobleme der scholastischen Naturphilosophie. Das Problem der intensiven Grösse. Die Impetustheorie* (Rome: Edizioni di storia e letteratura, 1968), 113-314 (esp. 236-258) and, recently, Daniel A. Di Liscia, “Breakings and Continuities: The Fourteenth Century and Galileo’s Impetus Theory as a Complex Case of Conceptual and Historical Transmission”, in *Spreading Knowledge in a Changing World*, edited by C. Burnett and P. Mantas España (London and Córdoba: UCO Press, 2018), 175-201.

²⁶ See Debroise, *Mathématiques de l’intensité et Merveilles de la nature*, 106: “(...) l’explication proposée par Oresme (...) est un développement de la thèse aristotélicienne de la fortune naturelle déjà amorcé dans le commentaire sur la *Physique*. (...) L’idée générale va donc être qu’une action est heureuse ou malheureuse selon la nature de la configuration psychique qui l’anime. (...) (1) l’intensité d’une appréhension psychique détermine un effet variable sur le corps et son mouvement; (2) sur le plan mécanique, un mouvement est plus ou moins *efficient* selon non son intensité, mais sa *difformité*.”

edition of this text, the ms. Sevilla, Bibl. Capitulare y Colombina, 7.6.30, ff. 2ra-78vb.²⁷ The set of questions contained in this manuscript cover only books I to VII of Aristotle's *Physics*, and they go back to the mid-1340s, when Oresme was a student at the Faculty of Arts in Paris, where he likely obtained his Master of Arts before 1342.²⁸ The most probable period for the dating of Oresme's questions on Aristotle's *Physics* has to be situated between 1342 (the year of his *inception* as a Master of Arts), and John of Mirecourt's condemnation of 1347.²⁹ This work by Oresme is relevant to our subject because it gives us some elements that will help us, first, to better understand the parallel systematically stressed by him between bodily and psychic figuration and, second, to locate the sources on the basis of which this author has developed his particular view on good fortune and his understanding of the act of throwing a javelin as an example of this kind of success.

²⁷ See Guy Beaujouan, "Manuscrits scientifiques médiévaux de la Bibliothèque de Séville", in *Actes du dixième Congrès International d'Histoire des Sciences*. Ithaca 26 VIII 1962-2 IX 1962, edited by H. Guerlac (Paris: Hermann, 1964), 631-634, esp. 633. There was a partial edition of questions III, 1-17, IV, 1-21 and V, 6-9 by S. Kirschner and of questions III, 1-8 by S. Caroti: Stefan Kirschner, *Nicolaus Oresmes Kommentar zur Physik des Aristoteles. Kommentar mit Edition der Quaestiones zu Buch 3 und 4 der Aristotelischen Physik sowie von vier Quaestiones zu Buch 5* (Stuttgart: Franz Steiner Verlag, 1997), 197-417 and Stefano Caroti, "La position de Nicole Oresme sur la nature du mouvement (*Quaestiones super Physicam* III, 1-8). Problèmes gnoséologiques, ontologiques et sémantiques", *Archives d'histoire doctrinale et littéraire du moyen âge* 51 (1994): 335-385. The entire set of questions was edited by S. Caroti, J. Celeyrette, S. Kirschner and E. Mazet in 2013: Nicole Oresme, *Questiones super Physicam* (books I-VII), edited by S. Caroti, J. Celeyrette, S. Kirschner and E. Mazet (Leiden and Boston: Brill, 2013).

²⁸ See William J. Courtenay, "The Early Career of Nicole Oresme", *Isis* 91 (2000): 542-548. As most of Oresme's commentaries in Latin, they result in his teaching activity in this institution. To this group of Latin commentary works on Aristotle belong Oresme's commentaries on Aristotle's *Physics*, *De generatione et corruptione*, *De celo*, *Meteorologica*, and *De anima*. If we admit Olga Weijers' view on the literary form of the late scholastic commentaries, we have to range Oresme's *Questions on the Physics* among the ones that were discussed by the author himself as a regent university master delivering the so-called *lectio ordinaria*. Indeed, on the basis of the university statutes, Weijers hold that the two main literary genres of the late medieval commentaries on Aristotle were the result of two different kinds of lectures offered at the university in the Faculty of Arts: on one side, the literal commentary, named *expositio* or *sententia*, was the result of the *lectio cursoria* delivered by bachelors to give students a general overview of the Aristotelian text; on the other side, the question commentaries, entitled *questiones*, were the result of the *lectio ordinaria*, delivered by regent masters to discuss specific problems suggested by the text. See Olga Weijers, *Terminologie des universités au XIIIe siècle* (Rome: Edizioni dell'Ateneo, 1987), 306-308; 324-335; Olga Weijers, *Le maniement du savoir. Pratiques intellectuelles à l'époque des premières universités (XIIIe-XIVe siècles)* (Turnhout: Brepols, 1996), 45-47. As a matter of fact, in his *Questiones* Oresme refers to a literal commentary on Aristotle's *Physics*, which, however, has not yet been identified. See Di Liscia and Panzica, "The Works of Nicole Oresme", (to be published).

²⁹ See Nicole Oresme, *Questiones super Physicam*, Introduction, 24*-25* and Stefano Caroti, "Modi rerum and Materialism: a Note on a Quotation of a Condemned Articulus in Some Fourteenth-century Parisian *De anima* commentaries", *Traditio* 55 (2000): 211-234.

The passage from Oresme's *Questions on the Physics* which is directly interesting to us is the fourteenth question of Book II, where he faces the question "whether the distinction – posited by Aristotle in *Physics* 197a 25-29 – between good fortune and bad fortune is convenient or not." (*Consequenter queritur utrum illa divisio sit bona, in qua dicitur quod quedam est fortuna bona et quedam mala*).³⁰ To the question posed, the author gives a positive answer and, to elaborate his answer, he gives no less than eleven references to the *Liber de bona fortuna* (hereafter: "LdBF"), a Latin compilation of two chapters on good fortune taken from the *Magna Moralia* (1206b30-1207b19) and the *Eudemian Ethics* (1246b37-1248b11), made around 1265 and then included for many years in the Aristotelian corpus.³¹ Of course, Oresme is not the first author to discuss this Aristotelian opusculum, but he seems to be the first to offer an interpretation of this text that is entirely and systematically connected to the content of *Physics II*. To my knowledge, this text by the young Oresme is the first known *Commentary on the Physics* where LdBF is discussed.³²

³⁰ Nicole Oresme, *Questiones super Physicam* II, 14 (197a 25-29), 268,5-276,232.

³¹ These two chapters seem to have been combined after the translator had rendered into Latin a larger extract from the *Eudemian Ethics* that also included the last chapter on *kalokagathia* (1248b11-1249b25). On the history of this book, see among others Valérie Cordonier, "Sauver le Dieu du Philosophe: Albert le Grand, Thomas d'Aquin, Guillaume de Moerbeke et l'invention du 'Liber de bona fortuna' comme alternative autorisée à l'interprétation averroïste de la doctrine aristotélicienne de la providence divine", in *Christian Readings of Aristotle from the Middle Ages to the Renaissance*, edited by L. Bianchi (Turnhout: Brepols, 2011), 65-114, with the critical notes by Iacopo Costa, "L'Éthique à Eudème et la Grande morale dans l'oeuvre de Thomas d'Aquin", *Documenti e Studi sulla Tradizione Filosofica Medievale* 32 (2021): 73-133. For an overall (and provisory) account on the reception of the opusculum, see Valérie Cordonier, "Réussir sans raison(s). Autour du texte et des gloses du 'Liber De bona fortuna Aristotilis' dans le manuscrit de Melk 796 (1308)", in 1308, *Eine Topographie historischer Gleichzeitigkeit*, edited by A. Speer and D. Wirmer (Berlin and New York: De Gruyter, 2010), 704-770.

³² There is no catalogue of all commentaries on Aristotle's *Physics*. In the list made by Albert Zimmermann, *Verzeichnis ungedruckter Kommentare zur Metaphysik und Physik des Aristoteles aus der Zeit von etwa 1250-1350* (Leiden and Köln: Brill, 1971), two items had drawn my attention, which are the commentaries contained, first, in ms. Oxford, Merton College, 272 and, second, in ms. Cambridge, Gonv. and Caius Coll. 509 and ms. Siena, Bibl. Com. degli Intronati L.III.2. See Silvia Donati, "Per lo studio dei commenti alla Fisica del XIII secolo. Commenti di probabile origine inglese degli anni 1250-1270 ca. Parte I", *Documenti e studi sulla tradizione filosofica medievale* 2, 2 (1991): 361-441, esp. 396-409; Silvia Donati, "Per lo studio dei commenti alla Fisica del XIII secolo. Commenti di probabile origine inglese degli anni 1250-1270 ca. Parte II", *Documenti e studi sulla tradizione filosofica medievale* 4 (1993): 25-133; Silvia Donati, "Commenti parigini alla Fisica degli anni 1270-1300 ca.", in *Die Bibliotheca Amploniana im Spannungsfeld von Aristotelismus, Nominalismus und Humanismus*, edited by A. Speer (Berlin and New York: De Gruyter, 1995), 136-256. According to Silvia Donati, who has transcribed these two anonymous works, they do not contain any explicit mentions of LdBF. The same is true of the *Questions on Aristotle's Physics* by Geoffrey of Aspill, who was a Master of Arts at Oxford between around 1250 and 1263: see Geoffrey of Aspill, *Questions on Aristotle's Physics*, edited by S. Donati, C. Trifogli and E. J. Ashworth (Oxford: Oxford University Press, 2017), Part I, Liber II, q. 21, 462: "Et quaeritur primo quid sit et quid significatur per hoc nomen 'casus'." As for the 14th century, the first author to be mentioned is Thomas Wylton, whose *Physics* commentary was written most probably before the *Quodlibet* at the very beginning of the 14th century: see Cecilia Trifogli, "Thomas Wylton on Final Causality", in *Erfahrung und Beweis. Die Wissenschaften von der Natur im 13. und 14.*

This fact has certain importance because, as we shall see, this opuscle provides the elements on which Oresme bases a radically new account of fortune: some elements are to be found directly in Oresme's *Questions on the Physics*, while some others will have to be found in some other texts related to the reception history of *LdBF*. Before entering Oresme's discussion of this concept in commenting on Aristotle's *Physics*, it might be useful to give some preliminary explanations concerning the vocabulary chosen to render some Latin terms present therein.

First of all, what I translate by "chance" is the Latin *casus*, which corresponds to the Greek ἀυτόματον, sometimes rendered by "self-moving" or "the spontaneous" or "the accidental".³³ Second, one must make further distinctions, in the first instance between *casus* and *fortuna*. In different parts of his works, Aristotle introduces a concept that I render by "fortune": *fortuna* (*tuchè*, τύχη). In *Physics*, it is made clear that this concept means a kind of "chance" (*casus*) that follows some *intentional* action made by a given rational agent which brings unexpected results. Fortune is exemplified through the famous image of the man who finds some treasure while digging a grave: finding treasure, in this case, is the unexpected result that happens while the man is digging *for another purpose*.³⁴ So here "fortune", *without qualification*, means just the kind of unpredictable events that occur following an intentional action.³⁵ Now, "fortune" might be described

Jahrhundert; Experience and Demonstration. The Sciences of Nature in the 13th and 14th Centuries, edited by A. Fidora and M. Lutz-Bachmann (München: Oldenbourg Verlag, 2009), 249, note 5. As this commentary, which is a complete set of questions on the eight books of the *Physics*, is still unedited, I have read one of the four manuscripts containing it, ms. BAV, Vat. lat. 4709, ff. 1r-143r (for the relevant questions on *Physics* II, see fol. 25r-28v) and have found no mention of *LdBF*. The same negative result holds for the works on Aristotle's *Physics* by John of Jandun; see his *Quaestiones in libros physicorum Aristotelis* II, 41-42 (Venezia, 1488), 41v-43r: "Utrum in corporibus celestibus contingant aliqua casualia et fortuita" and "Utrum casus et fortuna sint causae per accidens"; by William of Ockham (which have been all edited for a long period of time) and by Walter Burley, *In Physicam Aristotelis Expositio et Quaestiones* (Venice, 1501; repr. Hildesheim; New York: Olms, G. Olms, 1972), 43-59. On the different *Physics*-Commentaries by Burley see Rega Wood, "Walter Burley's *Physics Commentaries*", *Franciscan Studies* 44 (1984): 275-327. Finally, I have found no mention of the opuscle either in John Buridan, *Quaestiones super octo libros Physicorum Aristotelis (secundum ultimam lecturam)*, Vol. i: libri i-ii, with an introduction by J.M.M.H. Thijssen and a guide to the text by E. Sylla (Leiden: Brill, 2015), II, 5, 197a5-7, 33-36 and 308-315: "Utrum definitio fortunae sit bona in qua dicitur 'fortuna est causa per accidens secundum propositum extra semper et frequenter eorum quae propter hoc sunt.'" This list of commentaries is in no way exhaustive.

³³ Instead, I prefer to render *casus* by the term "chance". Of course, this kind of chance has merely physical causes, so that this concept does not correspond to that of "moral luck" used in some modern approaches to ancient ethics (such as, e.g. Bernard Williams's theory of "moral luck").

³⁴ See *Metaphysics* V, 30, 1025a14-19 (where this image exemplifies the first definition of "accident") and *Rhetoric* I, 5, 1362a9 and *Eth. Nic.* III, 1112a27 (where this example illustrates one of the effects of τύχη). The Commentators of Aristotle have often referred to this example of the digging man to comment on *Physics*.

³⁵ Indeed, the concept of "fortune" that appears in the Aristotelian writings that were the most famous in the late-antique and modern traditions is thought of as a subcategory of the Greek concept that was translated as "the spontaneous" (ἀυτόματον) used by Aristotle both to *explain*

more precisely in indicating the value of the outcome for the agent: if the man who digs a grave finds some treasure, he is certainly “well-fortuned”, but if he finds a snake, he is “ill-fortuned”.³⁶ In the Latin translations, such a man is not only said to “have” good or bad “fortune”, but also, and more frequently to “to be well-fortuned” or “to be ill-fortuned” (*bene vs. male fortunatus esse*).³⁷ However, *LdBF* brings additional considerations. Indeed, this text contains, alongside the notions of “chance” (*casus*, ἀτύματον), “fortune” (*fortuna*, τύχη) and “good fortune” vs. “bad fortune” (εὐτυχία vs. δυστυχία) seen above, another notion of good fortune, which differs in the fact that the “well-fortuned” individual in this sense is lucky *in general* and successful in his life. So, to be “well-fortuned” (εὐτυχής) in this sense is also distinct from simply having good “fortune” (*tuchè*, τύχη): someone might benefit from such “fortune” (*fortuna*) only once, without being “well-fortuned” in the sense of *LdBF*. To specify this *long-term kind of fortune* that is under consideration in *LdBF*, the medieval commentators speak of a man who is well-fortuned “universally” or they speak of “continuous fortune”.³⁸

some unpredictable events and to merely *designate* them, thus contributing to the ambiguity of this concept still to be found in modern languages, where “fortune” often overlaps with the terms “chance”, “coincidence”, “randomness”, or even “contingency” and “accident”. On this concept of “spontaneous”, see *Physics* II, 5, 196b10-16 and 196b29-197a32 (two passages that were used by Scholastic readers to claim that *fortuna* is a specific case, or a species, of *casus*); *Metaphysics* VII, 15, 1032a27-32 and XII, 3, 1070a4-7 (where “fortune” and “the spontaneous” are mentioned together) and IX, 1049a3-5 (where “fortune”, although it appears alone, has a similar meaning), *Eth. Nic.* III, 1112a20-29 (where “fortune” is listed among those things that do not depend on us and is therefore implicitly understood as a specific kind of “the spontaneous” and *Rhetoric* I, 5, 1361b39-1362a12 (where “good fortune” is thought of as the individual possession of all or most of the goods of “fortune”) – in this last case, “good fortune” is a little closer to the concept under consideration in *Eudemian Ethics* and *Magna Moralia*. However, it is not certain that a man who possesses the exterior goods is equal to the “well-fortuned” in the sense expressed in *LdBF*. Indeed, in the two extracts forming the opusculum, Aristotle gives very scant information on the kinds of goods involved in this condition – although he regularly refers to particular cases as *examples* of “well-fortuned” men. And at any rate, it remains that one might possess the goods of fortune by mere “spontaneity” in the Aristotelian sense – not by the possession of the internal impetus which is specifically described in *LdBF*.

³⁶ Although the case of the snake is to be found only in medieval commentaries on Aristotle, the Aristotelian corpus itself presents a clear-cut distinction between “fortune” that is positively qualified and fortune that is negatively qualified (εὐτυχία vs. δυστυχία, see 197a15).

³⁷ *Fortuitus* (that I translate by “fortuitous”): as fortune, this term would cover good, neutral, and bad fortune.

³⁸ The adverb “universally” was used by Thomas Aquinas when quoting from *Magna Moralia* and *Eudemian Ethics* in his *Summa contra Gentiles*. At the end of his chapter on good fortune (book iii, chapter 92), after having quoted separately from the two chapters making up *LdBF*, Aquinas rephrases the main argument by asking how a man can be well-fortuned “universally” (*universaliter*) and “in all things” (*ad omnia*). As for the idea of a *continuous* fortune, it is present in *LdBF*, in the passage where Aristotle distinguishes between two kinds of fortune, which are equally irrational, but have a different origin: the first is “divine, continuous, and following a directive impetus”, while the second is neither divine, nor continuous, and “beyond the impetus”: Aristotle (2016: 1248b4-7):

What is relevant to our purpose here is that the concept of fortune presented in *LdBF* departs dramatically both from Boethius' concept of fate as well as from the concept of fortune which dominates Aristotle's *Physics* and *Metaphysics*. First, this concept departs from the standard view of fortune as it is depicted in the famous image of a wheel going back to Boethius' *Consolation*³⁹: rather than portraying *Fortuna* as an unpredictable force causing human destinies to rise or fall according to her capricious will, the *Liber de bona fortuna* focuses on some *constant* aspects of fortune (its "continuity"). Second, it differs from the concept present in Aristotle's *Physics* and *Metaphysics* in as far as it means not only a kind of "chance", but some disposition that is present in the agent itself and makes him to be regularly fortunate. Instead of conceiving of fortune as an external force affecting men's destinies and maybe producing a fleeting moment of prosperity (whether moral or material) in their lives, *LdBF* describes fortune as a fixed gift enabling those who possess it to achieve success beyond any reasonable expectation. Oresme, who was perfectly aware of this particular meaning of fortune in *LdBF*, has precisely used this concept to make sense of a mention of good and bad fortune in *Physics* 197a25-29. This has led him to develop a concept of fortune that allowed for a parallel treatment of physical and psychical processes, and that has larger explanatory power as the concepts put forward by Aristotle. Let us now examine Oresme's reading of this passage of Aristotle's *Physics* more closely to isolate its more important results.

To argue in favor of the view that Aristotle's distinction between good and bad fortune in *Phys.* 197a25-29 is satisfactory, Oresme first lists the arguments against this view.⁴⁰ The third and the fourth of these opposite arguments (0.3 and 0.4) are themselves

"Iste autem est qui secundum impetum directivus, alius autem qui preter impetum; sine ratione autem ambo. Et hec quidem continua bona fortuna magis, hec autem non continua." The idea that the fortune that is "divine" and "according to the impetus" is also "continuous" seems to be another way to express the fact that the man who benefits from this kind of fortune sees his actions followed by good and unexpected effects. See Aristotle (2016: 1247b15-18): "deinceps (...) multotiens." A generation after Aquinas, a clear-cut distinction would be made by Giles in his commentary on *LdBF*: Aegidius Romanus, *Sententia LdBF*, edited in Valérie Cordonier, "Une lecture critique de la théologie d'Aristote: le 'Quodlibet VI, 10' d'Henri de Gand comme réponse à Gilles de Rome", in *L'aristotélisme exposé: aspects du débat philosophique entre Henri de Gand et Gilles de Rome*, edited by V. Cordonier and T. Suarez-Nani (Fribourg: Academic Press, 2014), 145,38-44: "Possumus autem et tertio respondere quod licet sit duplex bona fortuna et una sit magis continua quam altera, nulla tamen est adeo continua nec habet esse sic in pluribus ut natura. Quare licet una bona fortuna possit dici quasi continua respectu alterius, nulla tamen est continua nec est ut in pluribus respectu nature. Propter quod bene dictum est (1248b4-7) fortunam a natura differe propter hoc quod natura est similiter et ut in pluribus."

³⁹ See Boethius, *De Consolatione Philosophiae*, Livre II, prosa 1 [19], edited by C. Moreschini, translation and notes by E. Vanpeteghem, introduction by J.-Y. Tilliette (Paris: Livre de Poche, 2008), 88: "Tu vero volventis rotæ impetum retinere conaris? At, omnium mortalium stolidissime, si manere incipit, fors esse desistit"; prosa 2 [9], 90: "Haec nostra vis est, hunc continuum ludum ludimus: rotam volubili orbe versamus, infima summis, summa infimis mutare gaudemus."

⁴⁰ Nicole Oresme, *Questiones super Physicam* II, 14 (197a25-29), 268,5-269,32, whereas these arguments are solved on 275,204-276,32.

taken from *LdBF*, but the opusculum also provides the unique argument in favor of Oresme's thesis (0.6).⁴¹ Subsequently, *LdBF* mainly serves to defend Oresme's own doctrine, that confirms and expands *Physic*'s distinction between good and bad fortune on the basis of *LdBF*. To this purpose, Oresme distinguishes between the following questions to be answered step by step: I] What are good and bad fortune in general?⁴²; II] Which are the causes of fortune?⁴³; III] Which are the effects of fortune?⁴⁴; IV] Which are the conditions of fortune?⁴⁵ Question I is answered by means of three preliminary notes, a conclusion and two corollaries. To answer II, Oresme starts from the distinction, explicitly taken from *LdBF*, between divine and natural fortune and lists three differences between the two, before limiting his discussion to mere natural fortune and, finally, positing two conclusions, the second of which consists of three points. To answer III and indicate the effects of fortune, the author first distinguishes different kinds of goods (the apparent and the true good, the interior and external goods), he then concludes that fortune concerns all of them and finally gives five proofs for such a conclusion. To answer IV and discuss the conditions of fortune, he claims five propositions before concluding that fortune is certain and predictable, although we do ignore its causes. Finally (V), Oresme answers the arguments, in basically the same order as the one in which they had appeared. Except for section V, which contains the response to the arguments, there is no single section of this question that contains no quote from *LdBF*. The total amount of quotes is thirteen (if we include the last one, which is not explicit). These references to *LdBF* have a decisive input on the results of Oresme's inquiry.⁴⁶

⁴¹ Indeed, three quotes from *LdBF* are made in the lists of the arguments. Two quotes are found in the arguments *quod non*: by the first quote (0.3, 268,15-17), Oresme recalls the definition according to which fortune is "nature without reason" in *LdBF* 1207a36 and by the second (0.4, 268,18-23), he seems to allude to *LdBF* 1207a15-16 in saying that "sometimes bad fortune is found in <good> human beings, as is made clear in the book *De bona fortuna*." Then, the opusculum, alongside *Phys.* II, 5, 197a25-29, is a crucial reference to the unique argument *quod sic* when Oresme claims that Aristotle "makes a distinction between *infortunium* and *eufortunium*, that are said in respect to those events that are manifestly good or bad" and that "this is even made clear <in> *De bona fortuna*" (0.6, 269,27-29, see *LdBF* 1247a1-8).

⁴² Nicole Oresme, *Questiones super Physicam* II, 14 (197a 25-29), 269,34-270,72.

⁴³ Nicole Oresme, *Questiones super Physicam* II, 14 (197a 25-29), 270,73-272,128.

⁴⁴ Nicole Oresme, *Questiones super Physicam* II, 14 (197a 25-29), 272,129-274,167.

⁴⁵ Nicole Oresme, *Questiones super Physicam* II, 14 (197a 25-29), 274,168-275,203.

⁴⁶ 3 quotes are made in part 0, 3 are made in part I, 2 are made in part II, 1 is made in part III and, finally, 3 explicit quotes and 1 implicit one are made in part IV. In addition to the quotes made in the preliminary arguments (see above note 41) three quotes are made in the section devoted to the discussion of fortune in general (Section I). The first two are to be found in the first subpart of the section containing "three notes on fortune and subsequently on chance (I.1): in the first of them (I.1.i, 269,33-39, see *LdBF* 1207b10 and 1247b18-21), Oresme uses the passages of the opusculum containing the term *impetus* to elaborate his second meaning of the term "fortune" as "a certain disposition or condition of it [*i.e.* the soul] by which it is inclined to good or bad events, which happen by a convergence of unforeseen causes", whereas in the second of these quotes (I.1.ii, 269,40-49, see *LdBF* 1207a36), he elaborates this meaning even further, to explain that when Aristotle

A more detailed presentation of all this reflection might be found in the argumentative map given as a second Appendix. Here are the most remarkable results of this reading of *Physics II* 197a25-29 made by Oresme in the light of *LdBF*. First of all, the author insists that fortune is not an absolute quality but that, because as a matter of fact all men are well-fortuned to greater or lesser degrees, and “ill-fortuned” just means “less fortunate”: this claim, made for the first time in I.2.ii and then recalled in V.3, reflects Oresme’s tendency of quantifying some Aristotelian concepts that were qualitative in nature, and it is also consistent with the author’s strategy of demystifying the processes that were supposed “marvelous” (such as fortune).⁴⁷ As a second important result of Oresme’s reading of *Physics II*, 197a 25-29 in the light of *LdBF*, one might mention the fact that he adds that claim I.2.ii, reached for fortune, also applies to the category of “chance”: this extrapolation, which is justified on the basis of claim I.1.iii, is in line with the author’s kind of mechanistic account of fortune and all other processes that imply some

defines fortune as “a kind of nature”, he refers not to a distinct quality of the fortunate soul, but to the soul being in such a state. The third one appears in the subpart containing the “conclusions and corollaries”: there (I.2.i, 270,56-62, see *LdBF* 1247b20-29) the opusculum brings to Oresme the major premise to claim that “bad fortune is nothing but a privation of good fortune” and that “no <-fortune> inclines to evil.” The following section (Section II) contains two important quotes from the opusculum. In the first one (II.1, 270,73-75, see *LdBF* 1247b16-1248a15 and 1247a15-1248b11), Oresme mentions the opusculum as the place where Aristotle “distinguishes between a certain good fortune that comes from God and another that comes from nature.” In the second one (II.1.ii, 270,78-82, see *LdBF* 1247a36-37), Oresme refers to the passage where “Aristotle says that, as some have blue and others have dark eyes, in the same way this applies to fortune, namely that some are well- and some other ill-fortuned.” In the following section too (Section III), dealing with the effects of fortune, the opusculum is quoted. In this section where Oresme claims that there is fortune in all kinds of goods, the opusculum helps to support the first proof given in favor of this claim: to this purpose, Oresme recalls the passage where Aristotle says that fortune is the master of external goods (III.3.i, 273,139-145, see *LdBF* 1206b33-34). Finally, Section IV contains three explicit quotes from the opusculum. First (IV.2, 274,175-181, see *LdBF* 1207a4-5) in the passage where Oresme opposes fortune to deliberation and free will, and recalls the famous passage where it is said that “<where> there is the intellect’s free will, there is no fortune, and vice versa.” Second in the subsequent proposition (IV.3, 274,182-189, see *LdBF* 1248b7) where Oresme recalls the distinction between two kinds of fortune and says that “This is stated by Aristotle in the same text”, in clear reference to passage already quoted in II.3 (270,83-271,85). Third (IV.4, 274,190-275,195, see *LdBF* 1247a36-37), where Oresme explains that “some people are fortunated in one thing and other people in another” and supports this view in quoting the passage where Aristotle says: “as, for example some have clear eyes and some others dark eyes.” Finally, in addition to these explicit quotes, one finds the following case of an implicit use of the opusculum: this is in IV.6, 275,198-203, where Oresme recalls that “the Ancients said that fortune is something divine coming from God, and some of them even considered it to be blind; and the cause of this is that this judge would be said <spatium album> blind, who would so do good to good men as to the bad indifferently, and fortune is of this kind.” Although Oresme gives no explicit reference here, he probably alludes to the beginning of the opusculum, where it is said: “At the same time, if we attribute such <behavior> to God, we shall be making him a bad judge or unjust” (*LdBF* 1, 1207a10-12).

⁴⁷ Nicole Oresme, *Questiones super Physicam II*, 14 (197a 25-29), 270,63-65 and 276,220-221.

psychological states.⁴⁸ Third, Oresme says that this kind of fortune is sometimes augmented and diminished by the imagination of the soul and that this might be the case either of the imagination of the individual, or of the imagination or someone else: this claim, expressed in II.3.ii, is the most original aspect of Oresme's reading of Aristotle's concept of fortune.⁴⁹ It is precisely this aspect of the author's theory that gives the basis of *De Conf.* II, 37 when Oresme claims that good and bad fortune are only a good or bad configuration of a man who is, thus, inclined to be more or less successful (378,38-41).⁵⁰

In the present section, Oresme's *Questions on the Physics* have helped us to understand better some aspects of *De Conf.* II, 37. Following a suggestion made by Debroise, I have shown that the account of fortune in *De Conf.* II, 37 is a further development of the views developed by Oresme at the occasion of his commentary of a passage from *Physics II* where Aristotle, in the course of his discussion of chance, mentions not only fortune, but also good fortune and bad fortune (197a25-29). These *Questions*, despite their scholarly character and their early position in Oresme's philosophical production, have a deep originality in comparison with the other texts discussing the opusculum even contemporarily to Oresme. Indeed, by means of a careful conceptual analysis of the main claims of this particular text, the author gives a radically new account of the Aristotelian notion of "chance" (*casus*) in general and, in connection to this discussion, he holds a new theory of human imagination that is recalled and reused in *De Conf.* II, 37 (378,31-48). Now, some aspects of *De Conf.* II, 37 remain unclear, most particularly in the third section of *De Conf.* II, 37 (378,30-41), where Oresme discusses the action of throwing a javelin. Concerning this passage, one might first wonder if Oresme has a particular experience in mind here.⁵¹ Second, I think that it is important to ask the following question: is the act of *throwing a projectile* chosen by Oresme for some particular reason, or is it just a general case of physical performance chosen "just as an example", as if he could have mentioned any other kind of human activity? To address these two remaining questions, we have to consider a source that was particularly important to the reception of *LdBF*, as well as to Oresme's doctrine: this is the object of the following section.

⁴⁸ Nicole Oresme, *Questiones super Physicam II*, 14 (197a 25-29), 269,34-270,63-65 and 269,50-270,55.

⁴⁹ Nicole Oresme, *Questiones super Physicam II*, 14 (197a 25-29), 271,104-272,121.

⁵⁰ Indeed, the switch made in this passage from a merely physical analysis to an explanation of the "motions of the soul", is indebted to the "second conclusion" of Oresme's discussion of *Physics* 197a25-29, namely that II.3.ii natural fortune is sometimes augmented and diminished by the imagination of the soul.

⁵¹ According to Philippe Debroise, it rather seems that the author proposes an *ad hoc* explanation, see Debroise, *Mathématiques de l'intensité et Merveilles de la nature*, 790: "Le lanceur doit 'faire vibrer comme il faut' sa lance, c'est-à-dire imprimer à son mouvement les variations de vitesse adéquates (...). Il est difficile de savoir si Oresme pense à une expérience balistique particulière. Il semble plutôt proposer une explication *ad hoc* du fait que certains projettent naturellement mieux ou avec plus de force une lance sans que leur corps ne soit visiblement plus fort."

III. The projectile thrower as a fortunate man: Giles of Rome and Thomas Aquinas in the background of Oresme's *De Conf. II, 37* and *Problemata 31-32*

Oresme's reading of Aristotle's *Physics* 197a25-29, just presented in the previous section, is important not only because this question of fortune was the occasion for the author to develop his views on the role of imagination in good fortune, but also because it reveals to us another source that has remained unnoticed and that helps to understand *De Conf. II, 37* more precisely: this is the first known commentary on the opusculum, namely *Sententia de bona fortuna* written by Giles of Rome around 1275-1278.⁵² Oresme's familiarity with this text by Giles is evidenced at an early stage of his philosophical career by a passage from his *Questions on the Physics* in the beginning of the section of this question "on the causes of fortune" (II.1), where he says that "Aristotle, in the third chapter of *De bona fortuna*, distinguishes between a certain good fortune that comes from God and another that comes from nature."⁵³ To explain this reference, the editors of Oresme mention "*Eth. ad Eud. 1247a23-31*" and "*Magna moralia 1207a6*." But although these passages do allude to the distinction between natural and divine fortune, they cannot be meant precisely by Oresme in the text under consideration, because there he mentions the "third chapter" of the opusculum, whereas *LdBF* only has two chapters. Oresme seems to refer to the division made by Giles, according to which the first part of the treatise corresponds to the chapter taken from *Magna moralia* (1206b30-1207b19) whereas the second part covers a first section of the second chapter, taken from *Eudemian Ethics* (1246b37-1247b16) and the third part covers the second section of this chapter (1247b16-1248b11).⁵⁴ This so-called third part of the opusculum frequently refers to the multiplicity of the meanings of "fortune" and stresses the necessity of distinguishing between them.⁵⁵ As has now been made clear that Oresme was familiar with Giles' *Sententia* in the beginning of his scholarly career when commenting on *Physics* 197a25-29, this text by Giles might be assumed to rank among the sources behind *De Conf. II, 37*. In what follows, I will examine the parts of this work that might lie at the background of Oresme's discussion of fortune as well as his analysis of the javelin throw.

⁵² For a first study of this work, see Cordonier, "Une lecture critique de la théologie d'Aristote", 143-180, which gives a partial edition of the text.

⁵³ Nicole Oresme, *Questiones super Physicam*, 270,73-75: "Quantum ad secundum, scilicet de causis fortune, sciendum quod Aristoteles in *De bona fortuna* capitulo tertio distinguit quod quedam bona fortuna est a Deo, et alia a natura."

⁵⁴ This division of the Aristotelian text is made clear, among others, in Aegidius Romanus, *Sententia LdBF*, 1206b36-7a2, 144,1-10: "Primum quidem igitur super hoc utique quis ueniens etc." (1206b36-1207a2). Premisso prohemio, in parte ista ponitur pars executiua siue tractatus, in quo philosophus tria facit, secundum quod tria in prohemio promisit se detractaturum. Nam primo determinat de ipsa bona fortuna, secundo ostendit qui sunt bene fortunati, tertio declarat circa quid et in quibus habet esse fortuna bona. Secunda ibi: 'quoniam autem non solum' (1246b 37), tertia ibi: 'Quid igitur prohibet accidere' (1247b15). Circa primum duo facit, quia primo exsequitur de bona fortuna dubitando, secundo ueritatem determinando, ibi: 'Sed extra quidem hoc' (1207a12)."

⁵⁵ To be more precise, natural fortune is discussed in 1247b16-1248a15 whereas divine fortune is discussed afterwards in 1247a15-1248b11.

A source that certainly sheds light on Oresme's *De Conf.* II, 37 is Giles' commentary on the passage in *LdBF* where Aristotle compares the well-fortuned men to dice throwers (1247a21-27). In discussing this text, Giles goes indeed further than the Philosopher: rather than comparing the fortunated man to the winner of a game, he focuses on the physical process that occurs when the dice fall. By his description of this process, Giles aims to make the mechanism of "good fortune" clearer.⁵⁶ By drawing a rigid parallel between the trajectory of a die towards a "good number" and that of an individual towards a fortunate effect, he distinguishes between the factors affecting either trajectory. Beginning with the die, he claims that its final lie is determined by three factors that are the following: (a) the so-called "disposition" of the dice, (b) its position in the thrower's hand and (c) "the impulse according to which it is pushed by the hand."⁵⁷ Concerning (a), which is the physical configuration of the dice, Giles' idea is that no cube is ever equilateral, but it always presents one side that is larger / heavier than the others. Indeed, this configuration makes us obtain there this number rather than another given that the dice is, on one side, larger or longer than the other, or when it has (because of some lead or incurvation) some disposition on one part but not on another.⁵⁸ Concerning (b), the dice's position, he explains it in reference to the technique used by some expert dice players who can foresee the result just by adjusting the dice's position in their hands.⁵⁹ As for factor (c), it is described in a more ambiguous way, for Giles says: "when a die is thrown more or less, or in this or that way, one rolls one or another number."⁶⁰ The first mention (*ut magis et minus*) indicates the strength of the throwing, whereas the second mention (*ut aliter et aliter*) might indicate either simply the direction of the trajectory given to the die by the hand, or more specifically, the subtle way by which the thrower makes this object *spin*.

So, it seems that, according to Giles' description of the throw of dice, the impulse (*impulsus*) mentioned as the third relevant factor to explain the result of this throwing

⁵⁶ Aegidius Romanus, *Sententia LdBF*, 1247a22-23, 149,190-150,214.

⁵⁷ Aegidius Romanus, *Sententia LdBF*, 1247a22-23, 149,190-150,214: "Dubitaret ergo aliquis quomodo fortuna de qua hic intenditur assimilatur casu taxillorum. Dicendum quod ad hoc quod taxillus cadat in hoc puncto magis quam in alio, ex triplici de causa, quantum ad presens spectat, potest contingere. Primo ex dispositione taxilli, secundo ex situ quem habet in manu, tertio ex impulsu secundum quem a manu impellitur."

⁵⁸ Aegidius Romanus, *Sententia LdBF*, 1247a22-23, 149,194-200: "Ex dispositione quidem taxilli uenit ibi plus unus punctus quam alius, si taxillus in una superficie sit amplior uel longior quam in alia uel si propter plumbum et limationem habet aliquam dispositionem in una parte quam non habet in alia. Vnde et lusores taxillorum dicere consueuerunt aliquos taxillos esse de uno puncto, aliquos de alio, considerantes eos esse sic dispositos ut magis sint apti nati cubare in uno puncto quam in alio."

⁵⁹ Aegidius Romanus, *Sententia LdBF*, 1247a22-23, 149,200-150,204: "Secundo, hoc contingit ex situ quem habent in manu, quia secundum quod aliter et aliter situantur in manu, sic sunt apti nati ut cubent in alio et alio puncto. Vnde et lusores docti non permittunt ut ludentes cum eis aspiciant taxillos existentes in manu, ne cognoscentes eorum situm facilius proiciant optatum punctum."

⁶⁰ Aegidius Romanus, *Sententia LdBF*, 1247a22-23, 150,205-206: "Tertio, hoc contingit ex impulsu, quia ut magis et minus uel ut aliter et aliter impellitur taxillus, iacit alium et alium punctum."

means a kind of subtle combination between the “force” with which the dice is thrown and the direction in which it is cast by the thrower’s hand. Let us remember that an ambivalence similar to the one that marks Giles’ description of the “impulse according to which” the projectile “is pushed by the hand” was also present in Oresme’s description of the “efficient” javelin thrower, who was said to fling it “more directly and in a more efficient way” (*directius et fortius*) than another although the latter flings with greater force – in this passage was the one on which I have opted for a translation that differs from Clagett’s one.⁶¹ In both texts, it seems to be clear at least that the authors are not satisfied with an explanation that would only mention the *quantitative* aspect of the thrower’s gesture – the “force” or “strength” by which he is throwing – and that it is precisely for this reason that they add a second factor that is more *qualitative* and that seems to imply the action of making the object spin in one way or in another. However, it is no less interesting to realize that in Giles’ text, this qualitative dimension of the thrower’s gesture, that was first mentioned when presenting the third factor at stake in the dice throw (150,205-206), finally disappears when the author summarizes his enumeration of the factors determining the fall of some dice. In this summary, he reduces the third factor to the mere fact that one throws the object “not more and not less than it is required for the desired number” (150,208-209: *neque plus neque minus impellitur, nisi quam requirit optatus punctus*). In the following translation of this passage from Giles’ *LdBF*, this complicated Latin phrasing is rendered with the rather anachronistic phrase “with the force that is required for the desired number”:

Therefore, <because> the convergence of these factors (that is the fact that the die is positioned in that way in the hand, the fact that it has such a configuration and the fact that it is thrown exactly with the force required for the desired number) is by accident and at random, the dice play, unless there is some fraud and cheating, is contingent and fortuitus. For this reason, things are similar in the case of the roll of dice and in that of fortune because, as it is by fortune that all the factors converge to get the desired number, similarly it is by fortune that all these converge, so that one has the impetuses, that one perceives them and that one acts according to them, so that one achieves good outcomes.⁶²

The passage of the *LdBF* just analyzed, which provides one of the most extensive explanations of contingency given by Giles, also gives us a convincing background to

⁶¹ Nicole Oresme, *De Configurationibus* II, 37, 378,30-32, quoted here above with a discussion about its translation, in note 16.

⁶² Aegidius Romanus, *Sententia LdBF*, 1247a 22-23, 150,207-210: “Quare quod ista concurrant (ut quod sic sit situatus taxillus in manu, et quod sic sit dispositus et quod neque plus neque minus impellitur, nisi quam requirit optatus punctus), sit per accidens et a casu, ludus taxillorum, nisi adhibeatur uersutia et malitia, est casualis et fortuitus. Simile est itaque de casu taxillorum et de fortuna, quia sicut ex fortuna est quod illa ibi concurrant et ueniat optatus punctus, sic ex fortuna est quod omnia hec concurrant ut quod habemus impetus et quod eos percipiamus et agamus secundum eos, secundum quos agendo consequamur bona.”

Oresme's discussion of the javelin throwing.⁶³ However, it might be, at first sight, surprising that Oresme replaces Giles' dice with a javelin. To understand this switch, it will be useful to take into account another set of texts where Oresme discusses the throw of projectiles in a similar way: this is the "forty-four determined questions", a series of "problems" (in the Greek meaning of the term) that is transmitted in close connection with the texts traditionally labelled as *Questio contra divinatores horoscopios*, *De causis mirabilium*, *Tabula problematum*.⁶⁴ Assuming that all these "problems"⁶⁵ go back to the same

⁶³ The importance of Giles' commentary work on Aristotle to subsequent intellectual history has long been acknowledged. See Ernst Moody, "Ockham and Aegidius of Rome", *Franciscan studies* 9, 4 (1949): 417-442, reprinted in *Studies in medieval philosophy, science, and logic, collected papers* (Berkeley: University of California Press, 1975 [19671]), 161-188, here 420 and 427-430 and Annaliese Maier, *An der Grenze von Scholastik und Naturwissenschaft*, 2, Auflage (Rome: Edizioni di Storia e Letteratura, 1952), 90 s.

⁶⁴ I am following here the characterization of the works given by Di Liscia and Panzica, "The Works of Nicole Oresme" (to be published), but this characterization will be challenged by the new Latin edition with French translation prepared by Alain Boureau, Joël Chandelier, Sophie Serra, Maria Sorokina, Julien Véronèse and Nicolas Weill-Parot and to be published under the direction of Beatrice De Laurenti and Alain Boureau. In this new edition, the text quoted until now as "*De causis mirabilium*" (see below note 65) will be labelled "*De effectibus singularibus*" and vol. VI will contain four treatises: the *Tractatus contra astrologos iudicarios*, the *Livre de divinations*, the *Editio* (a retroversion of the latter text into Latin) and the *Questio contra divinatores*; vol. VII will be devoted to the so-called *Tabula Problematum* (see below note 65) and to the so-called *De causa mirabilium*, newly intitled by Alain Boureau *De effectibus singularibus*; vol. VIII will include the *Problemata* (that were sometimes falsely named *Quodlibeta*). From this latter work, Questions 43 and 44 have been published with a French translation in Béatrice Delaurenti, "Contre la magie démoniaque et les incantations: les questions 43 et 44 des *Quodlibeta*", in *Nicole Oresme philosophe. Philosophie de la nature et philosophie de la connaissance à Paris au XIV^e siècle*, edited by J. Celeyrette and Ch. Grellard (Turnhout: Brepols, 2014), 279-297. An edition with French translation of these Questions is forthcoming in Nicole Oresme, *Écrits métaphysiques, politiques et théologiques*, section 2: *Anthropologie des erreurs humaines*, vol. VIII: *Problemata*, directed by A. Boureau and B. Delaurenti (Paris: Belles Lettres, to be published). The text of Questions 43 and 44 will be slightly different from the text published by De Laurenti in 2014 quoted above. The following references that I will make to this text by Oresme are made on the basis of this edition. I thank very much Beatrice Delaurenti and Alain Boureau for having let me read some parts of their forthcoming edition of this important set of texts by Oresme.

⁶⁵ A list of these questions is extant in the *Tabula Problematum* edited as an "Appendix A" by Bert Hansen, *Nicole Oresme and The Marvels of Nature: A Study of his De causis mirabilium with Critical Edition, Translation, and Commentary* (Toronto: Pontifical Institute for Mediaeval Studies, 1985), 366-393. However, the edition of selected questions announced by Hansen, *Nicole Oresme and the Marvels of Nature*, 27 n. 3 has never appeared. A new edition of this Table will soon be published in De Laurenti's and Boureau's edition: Oresme, *Tabula questionum tractandarum*, edited and translated by A. Boureau, in Nicole Oresme, *Écrits métaphysiques, politiques et théologiques*, section 2: *Anthropologie des erreurs humaines*, vol. VII (Paris: Belles Lettres, to be published). As De Laurenti and Boureau say in their introduction to the volume, this "*tabula*" is not to be understood as a table of contents, but rather as a sort of programmatic sketch of the topics to be discussed and, therefore, as a first redactional stage of Oresme's "*Problemata*", that would go back to the early 1370s.

relatively late period of Oresme's production,⁶⁶ we can first mention question 25 as a good indication that, in his advanced age, Oresme maintained his early view about the complementarity between *Physics II* and *LdBF*. For in this question, where he discusses good fortune according to the doctrine read in the opusculum, he insists on the importance of this short treatise to supplement doctrine of Aristotle's *Physics* which he declares insufficient in many respects.⁶⁷ But all the more interesting are questions 31 and 32. The first of the two asks why a man aiming at a target can reach it more than the target at which he had not aimed? Or: Why is this so, despite of the fact that he is equally able to reach each of the two targets and that, besides, his soul seems to intend the first target more than the other?⁶⁸ The second asks: "Why does it sometimes occur that a dice player proves lucky in the dice throw many times in the course of one or more hours while another, equally strong and expert and prudent in this art, cannot do so and, rather, cannot himself in one hour do and throw the pitch as he did previously. Does this come from heaven?"⁶⁹ Let us enter these two texts that shed light on *De Conf.* II, 37.

In *Problema 31*, the difficulty of throwing one pitch towards a target is explained by five remarks. First, a very little difference in the starting conditions might cause a huge

⁶⁶The date composition of the whole work in four parts was discussed by Hansen, *Nicole Oresme and the Marvels of Nature*, 43-48. At the end of *Questio contra divinatores horoscopios* in Ms. Naples, BN, XI C 84 (ff. 1r-33v), one reads the date of 1370, which however is considered as non-reliable data by Clagett, *Nicole Oresme and the Medieval Geometry*, 128-13. On all this see Di Liscia and Panzica, "The Works of Nicole Oresme", XX and A. Boureau and B. Delaurenti, "Introduction aux tomes VI, VII and VIII", in Nicole Oresme, *Écrits métaphysiques, politiques et théologiques*, section 2: *Anthropologie des erreurs humaines*.

⁶⁷Nicole Oresme, *Problema*, q. 25, in Nicole Oresme, *Écrits métaphysiques, politiques et théologiques*, section 2: *Anthropologie des erreurs humaines*, vol. VIII: *Problemata*, directed by A. Boureau and B. Delaurenti (Paris: Belles Lettres, to be published): "Et omnia ista sunt in questione principali reprobata. Et pro nunc dico simpliciter loquendo: fortuna est causa ignota esse, causa rerum pertinentium ad divitias vel paupertatem, etc. Et ideo, ut dicit Linconiensis supra secundum *Phisicorum*, nichil simpliciter a fortuna, quia nichil est cuius causa non sit ab aliquo esse scita causa et intenta. Aristoteles secundo *Phisicorum* et alii actores satis tractant istam materiam et etiam differentiam inter casum et fortunam. Tamen, ut dixi, multis non sufficiunt sua dicta. Ideo specialius tractavit in *De bona fortuna*."

⁶⁸Nicole Oresme, *Problema*, q. 31, "Propter quid enim [corr., Boureau non] potest homo proiciens ad aliquod signum id attingere sicut illud ad quod non proicit? Unde cum eque sit potens ad unum sicut ad aliud et cum hoc anima ad illud intendit videtur quod magis e contrario, etc." The Latin text seems to be problematic, but nevertheless the general meaning of the question seems to be clear.

⁶⁹Nicole Oresme, *Problema*, q. 32, "Propter quid taxillator quandoque per unam horam vel plures proiciet in taxillis suam canciam pluries? Et alter eque fortis et prudens et cautus in hoc non potest illud facere, ymmo ipsemet in alia hora non poterit facere et proicere sicut prius. Utrum tunc a celo proveniat." Concerning the term *cancia* (an old French term meaning "chance"), Hansen hesitates and suggests as a possible alternative "[! caniculam ?]", but the reading *cancia* is much more convincing. Besides, what I have translated by "it occurs that" is just the adverb *quandoque*. And what I have rendered by "to prove lucky in the dice throw" is the phrase "*proicere in taxillis suam canciam*."

difference in the results.⁷⁰ Second, some people might become experts in throwing things towards definite targets by training their memory, their imagination, and the faculties of their bodily members, as some others do for the art of writing or of playing the guitar.⁷¹ Third, Oresme insists that there are much more ways to deviate than to reach the target, and fourth that many of such activities are much influenced by imagination and memory.⁷² The fifth and last remark is the most interesting to us. It describes the technique by which the thrower uses his imagination and memory to evaluate the distance to the target and to remember how, during his previous throws at a given distance, he had “disposed himself” accordingly. Sometimes he does this calculation in a right way and sometimes, on the contrary, he does not measure correctly “all things, that is the intermediate space, the weight of the stone that he throws, the force of his own arm, the impetus or movement that he causes nor his hand’s disposition when he lets the stone loose, because it might be that this stone deviates too much on this side.”⁷³ And, Oresme adds, the difficulty of this technique is principally due to the multiplicity of the factors implied in this process: even a slight deficiency in one of them inevitably causes a deviation of this throwing of a stone.⁷⁴ In the two notes that follow this passage immediately, he replaces the stone by the examples of “a die or a coin” thrown “on a fix object such as a table.”⁷⁵ In the very beginning of Problem 32, of which the main subject is the success in throwing dice, Oresme establishes

⁷⁰ Nicole Oresme, *Problema*, q. 31 (to be published): “Dico tamen quod in multis effectibus pauca et valde modica differentia in causis maximam causat diversitatem et in aliquibus effectibus et etiam causis non est sic.”

⁷¹ Nicole Oresme, *Problema*, q. 31 (to be published): “Nota secundo quod aliqui ex usu et memoria et ymaginatione et habilitate membrorum, ut manuum, vel etc., citius et melius faciunt aliqua quam aliqui alii, forte quam mille alii. Hoc patet in scriptura et guitaratione aut pulsatione cithare, vel etc.”

⁷² Nicole Oresme, *Problema*, q. 31 (to be published): “Dico tertio quod pluribus modis deviare contingit quam recte assignare. Ista est per se nota. Dico quarto quod multa sunt cum ymaginatione et memoria. Hoc patet per Alacen in primo et precise in secundo *De cognitione et visione sensibilium*.”

⁷³ Nicole Oresme, *Problema*, q. 31 (to be published): “Dico quinto quod, quando homo proicit ad aliquod signum, tunc ymaginatur quanta est ibi via, secundo recolit et memoratur quod alias proiciebat ad tantum spatium et tunc sic nitebatur proicere et sic se disponebat. Quandoque autem ista facit recte, quandoque deficit ita quod non recte mensurat omnia, scilicet spatium, pondus lapidis quem proicit, fortitudinem brachii et impetum seu motum quem facit nec etiam dispositionem manus in dimittendo lapidem, quia forte nimis declinat ad hanc vel illam partem.” One might notice that this passage from Oresme’s *Problemata*, q. 31 refers to the concept of *impetus*, a concept that was absent from Oresme’s *De Conf.* II, 37 (discussed above in note 25). For a general discussion of this topic, see here below at the end of Section IV.

⁷⁴ Nicole Oresme, *Problema*, q. 31 (to be published): “Unde multa requiruntur ad hoc quod proiciat recte in tali loco, scilicet quod manus sic se habeat et digiti et brachium et pectus et corpus, ymmo et pedes et ymaginatio et advertentia et quod inter lapidem et modum sit talis proportio et etiam inter ista et spatium. Sed ad hoc quod deviat sufficit defectus et error in altero istorum, ut notum est. De hoc autem apparet realiter quare facilius est deficere quam assignare, quia ad deficere pauciora requiruntur quam ad assignare recte.”

⁷⁵ Nicole Oresme, *Problema*, q. 31 (to be published): “Et nota quod aliqui sunt effectus ad quos plura requiruntur et ad quos pluribus modis contingit deviare et in talibus rara fit assignatio, sicut ad proiciendum taxillum vel denarium super rem erectam similiter tamquam super mensam.”

an explicit link between this case and the one discussed in Problem 31, when he says “By this [*i.e.* by the answer given to Problem 31] the answer to the question on the dice throw is solved, neither more nor less.” And he subsequently explains the different results in referring again to the answer to Problem 31.⁷⁶

This short look at Oresme’s *Problems* on projectiles and fortune allows one to understand why in *De Conf.* II, 37 he could so easily switch from Giles’ description of throwing dice to his own presentation of throwing a javelin: to him, the throw of a stone, of a dice or of a coin on a table might be analyzed in the very same way.⁷⁷ For in all these cases, it is assumed that fortune is a mere label used by those who see the effects of a multifactorial process of which they ignore all the causes. This assumption also echoes Giles’ approach. Of course, such a view was not assumed *explicitly* by Giles, but the conclusion that Giles’ account of “fortune” actually leads to a deterministic view was reached by his colleague Henry of Ghent, whose *Quodlibet* VI, 10 was meant to attack this aspect of Giles’ doctrine. Following Henry’s polemical but convincing rephrasing of Giles’ reading of *LdBF*, the action of the First Principle assumed by Giles to be the origin of fortune is limited and necessitated by the natural conditions of the beings to which it is applied; a true account of contingency is only possible if one takes into account the idea of a God who acts in a voluntary way and whose action is not limited by the world’s conditions.⁷⁸ In other terms, it seems that Oresme’s analysis of the so-called fortune meets the conclusions reached by Henry in reading Giles: “fortune” is nothing real, but it is the face of our ignorance, for this ignorance of the causes of a given effect leads us to attribute such an effect to fortune. Following this account of fortune, where this process is assumed to be, *as such*, completely predictable by a mind which is able to apprehend all the factors at stake, it is “natural” to discuss the dice throw, as Oresme does, in the same way as the

⁷⁶ Nicole Oresme, *Problema*, q. 31 (to be published): “Per hoc nec plus nec minus solvitur 32^a questio de proiectione taxillorum, etc. Et cum queris quare iste non ita bene proicit, ymmo idem in una hora bene et in alia male, etc., respondeo quod pro tunc talis proicit ut oportet ad hoc talis cancia veniat, sicut ille qui percutit signum, ut dixi.” The phrase “percutit signum” refers to “proicit ad aliquod signum” in q. 31.

⁷⁷ It is not clear if Oresme was aware that the dice – given his physical shape and the *discrete* numbering of its sides – gives rise to a much more unpredictable result than a stone or a javelin. Indeed, the physical particularity of the dice as a cubic object numbered on each of its six sides implies that even practically small differences in the starting conditions happen to finally cause very *distinct* results (that must be represented not on a continuous series, but on a graduated scale). Hence the fact that the fall of a die might seem to be a highly contingent fact.

⁷⁸ See Valérie Cordonier, “Aristotle theologized: the importance of Giles of Rome’s *Sententia de bona fortuna* to the Late Medieval and Renaissance peripatetism”, in *Doctor Fundatissimus. Giles of Rome: His Thought and Influence*, edited by M. Benedetto, F. Marrone and P. Porro, *Quaestio: annuario di storia della metafisica / Quaestio: The Yearbook of the History of Metaphysics* 20 (2020): 150, and Valérie Cordonier, “Giles of Rome on the reduction of fortune to divine benevolence: the creative error of a Parisian theologian in the 1270s”, in *Irrtum-Error-Erreur. Irrtum und Fortschritt – Mittelalterhistoriographie im Wandel*, 40. *Kölner Mediaevistentagung*, edited by A. Speer and M. Mauriège (Berlin and New York: Walter de Gruyter, 2018), 231-256.

throw of any kind of object.⁷⁹ In the case of the throwing of dice as in the throwing of any other kind of object, throwing might be approached and understood as a perfectly teachable technique, in which every human being might be trained. Now, it remains to be seen how the very idea of such a training, in itself, follows another line of the medieval reception of *LdBF*.

Although Oresme's general understanding of fortune and precise description of the dice throw are directly indebted to Giles' *Sententia LdBF*, things are different in the case of his idea that every individual might learn the art of being good at throwing different objects and at fortune, and that different men have different abilities in this respect. These views are in line with the content of a chapter from the *Book on the Truth of the Catholic Faith* ("Summa contra Gentiles"), written by Thomas Aquinas during his sojourn at the Papal Curia in Italy at the beginning of the 1260s. This work has marked the first appearance, in the Latin West of the two chapters respectively taken from the *Magna Moralia* (1206b30-1207b19) and the *Eudemian Ethics* (1246b37-1248b11) and that would be put together to form *LdBF*.⁸⁰ The passage from Aquinas' *Summa* that is relevant here comes from the chapter in which he discusses the original question: "How one is said to be well-fortuned and how man is assisted by superior causes."⁸¹ For in the course of this chapter that is full of lexical distinctions and subtle conceptual precisions, the author explains that a man may be helped by "higher causes" not only to choose successful actions and to carry out what he has chosen, but that he may at times be assisted in regard to the outcome of his actions (*quantum ad exitus suarum actionum*), in receiving the physical efficacy needed to accomplish what he has chosen.⁸² This help, Aquinas says, results from the influence of celestial bodies, and he adds that "nothing prevents a man, too, from getting (...) a certain efficiency in doing bodily actions that another man does not possess, for instance a physician in regard to healing, a farmer in regard to planting, and a soldier in regard to fighting."⁸³ In the light of this passage

⁷⁹ In this respect, the ordering of the subjects in Problems 31 and 32 is completely consistent. The issue of the organization of Oresme's Problems (if any) remains an open question.

⁸⁰ On the importance of this text, see Cordonier, "Sauver le Dieu du Philosophe", 84-95.

⁸¹ Thomas de Aquino, *Summa Contra Gentiles* III, 92, in *Sancti Thomae Aquinatis Opera omnia iussu impensaue Leonis XIII. P. M. edita*, t. 14: *Summa contra gentiles ad codices manuscriptos, praesertim S. Doctoris autographum exacta. Liber III. cum Commentariis Franc. de Sylvestris Ferrariensis* (Romae: Ex Typographia Polyglotta S. C. de Propaganda Fide, 1926), 279: "Quomodo dicitur aliquis bene fortunatus, et quomodo adiuuatur homo ex superioribus causis." My translation of this title differs from that by V. J. Bourke, *Saint Thomas Aquinas, Summa contra Gentiles, Book III: Providence, Part II* (Notre Dame: University of Notre Dame Press, 1975 [1956]), 42, n° 4: "Next, we can show how a person might be said to be favored by fortune."

⁸² Thomas de Aquino, *Summa Contra Gentiles* III, 92, 280b,44-46: "Consequitur autem homo ex superioribus causis et aliud auxilium, quantum ad exitus suarum actionum."

⁸³ Thomas de Aquino, *Summa Contra Gentiles* III, 92, 280,47-281,17, and in particular 281, 4-17: "Manifestum est enim quod etiam inanimata corpora quasdam vires et efficacias a caelestibus corporibus consequuntur, etiam praeter eas quae ad qualitates activas et passivas elementorum consequuntur, quas etiam non est dubium caelestibus corporibus esse subiectas: sicut quod magnes attrahat ferrum, habet ex virtute caelestis corporis, et lapides quidam et herbae alias occultas virtutes. Unde nihil prohibet quod etiam aliquis homo habeat ex impressione caelestis corporis

from a chapter by Aquinas, Oresme seems to build on the different examples of human activities where natural dispositions cause different abilities to be trained in given disciplines and to achieve some goals in particular.⁸⁴ Of course, contrary to his predecessor, he denies that these abilities come from the stars, but still, he connects them to the more general quality of being “well fortunate”, considering that fortune might be the result of technical training. And instead of the different kinds of abilities mentioned by Aquinas, he chooses to illustrate fortune by the much more paradigmatic example present in Giles’ *Sententia*, which is the dice throwing.

IV. Oresme’s naturalization of fortune and divinatory practices: its originality in the Peripatetic tradition

Let us now come back to Oresme’s *De Conf.* II, 37, to compare it first with Giles’ text on dice throwing. In Giles’ *Sententia*, the analysis of the trajectory of a die towards a desired number is a way to reflect – analogically – on the trajectory of an individual towards a fortunate effect. To this purpose, Giles considers God’s influence on human will: this corresponds to what he calls “the disposition of the dice” (*dispositio taxilli*). This divine influence is not God’s *grace* because Giles, in commenting on *LdBF*, aims to write a commentary that does not contain any reference to Christian doctrines, and regularly claims to analyze fortune “according the order that we see.”⁸⁵ So, in this text by Giles that has been considered as a true philosophical manifesto,⁸⁶ God’s influence has to be understood in a restricted sense: God is mentioned as the ultimate creator and governor of all nature – its first Mover (cf. *Phys* VIII and *Metaphysics* XII).⁸⁷ In Oresme’s analysis of

aliquam efficaciam in aliquibus corporalibus faciendis, quas alius non habet: puta medicus in sanando, et agricola in plantando, et miles in pugnando.”

⁸⁴ One might wonder whether the direct influence of Aquinas’ *Summa Contra Gentiles* on Oresme is textually justifiable (as is his use of Giles’ *Sententia de bona fortuna*). The only argument is a doctrinal parallel: the claim, endorsed both by Aquinas and Oresme, that one can become more “fortunate” in some actions through technical training. Of course, it is in no way excluded that such views came to Oresme through textual intermediaries, or even that Oresme did not need any source to consider that technical training might help us to become more fortunate! However, Aquinas’ texts were an important authority in Oresme’s day, and this was even more the case for the topic of good fortune (understood in the particular sense explained above on p. 169), which was rather new in the Latin Aristotelian tradition. For these reasons, in this essay I assume Oresme’s direct drawing on Aquinas.

⁸⁵ Cordonier, “Giles of Rome on the reduction of fortune to divine benevolence”, 239-249.

⁸⁶ Cordonier, “Giles of Rome on the reduction of fortune to divine benevolence”, 249: “such a focus on secondary causes represents to him [Giles] an important feature of what has now appeared as his manifesto, the manifesto for a typically philosophical method that aims at accounting for contingency on the basis of the secondary causes and in making abstraction of the Christian faith.”

⁸⁷ For further explanations on the way in which Giles justifies his philosophical project in the *Sententia LdBF*, see Cordonier, “Giles of Rome on the reduction of fortune to divine benevolence”, 240-241.

fortune, similarly, there is no mention of divine grace.⁸⁸ But in Oresme, contrary to what happen in Giles' *Sententia LdBF*, even the first Mover is completely absent, and there is also no divine impetus (or "divine" influence) anymore. Instead, he allows for the influence of the celestial bodies on our actions, "as far as the first non-deliberate movements are concerned"⁸⁹ and, above all, he introduces a factor that was absent from Aquinas' and Giles' explanations of being fortunate, namely: imagination. This power of human and animal imagination might now appear as the "immanent" counterpart to the "transcendent" factors mentioned by the 13th century readers of *LdBF* and, in this way, it seems to be an important piece in the process of the naturalization of fortune in Oresme.

The process of naturalizing fortune found in Oresme's works is not entirely original. One finds similar approaches in other authors from the beginning of the 14th century. The most telling example in this respect is Peter Auriol (ca 1280-1322). In the specific version of the first book of his *Commentary on the Sentences* preserved in the ms. BAV, Vat. Lat. Borghese 329 called the "*Scriptum*", that was prepared at Cahors by a professional copyist hired by Auriol and finished on May 19, 1317,⁹⁰ there is an entire article devoted to "the opinion of the Philosopher on good and bad fortune and divination by dreams in the Book on good fortune", where the author discusses *LdBF* at length.⁹¹ As was judiciously pointed out by Mikko Posti, one of the most original aspects of Auriol's account of good fortune is the fact that, to explain what Giles of Rome and Henry of Ghent called "continuous fortune", he connects this phenomenon to some human faculties that are described in Aristotle's *Nicomachean Ethics*, and in particular εὐβουλία (an excellence in deliberation) and εὐστοχία (an excellence in making conjectures).⁹² Auriol bases himself on these truly Aristotelian concepts to argue, against Henry, that the Philosopher's doctrine allows for particular providence (by which God takes care of all individuals and human beings individually). This providence works because human beings do possess these specific virtues that Auriol describes following the very same chapter from Aquinas' *Book on the*

⁸⁸ This is already the case in the *Questiones super Physicam*: "divine" fortune, he says, the one that is more stable (and that was called "continuous fortune" by Giles), corresponds to what the theologians call "God's grace" (II.2.iii) and must be left aside in this commentary (II.2.iv).

⁸⁹ Nicole Oresme, *Questiones super Physicam* II, 14 (197a 25-29), 271,98-103. See here below "Appendix II", II.3.1.b.

⁹⁰ For a presentation of this major work produced by Auriol, of his importance of the history of late medieval thought and of its transmission, see William O. Duba, "Aristotle's 'Metaphysics' in Peter Auriol's 'Commentary in the Sentences'", *Documenti e Studi sulla Tradizione Filosofica Medievale* 12 (2001): 550-551.

⁹¹ Peter Auriol, *Scriptum*, Liber I, dist. 40, a. 3, ms. Vat. Lat. Borghese 329, fol. 430r: "*De eufortunio et infortunio et veritate sompniorum, opinio Philosophi in libro de bona fortuna*". I thank Bill Duba for having sent me a transcription of this article, which would deserve an extensive study, made on the basis of all its late scholastic and Aristotelian sources. I hope to be able to do it in a separate essay.

⁹² See Mikko Posti, *Medieval Theories of Divine providence 1250-1350*, Studien und Texte zur Gesteigeschichte des Mittelalters 128 (Leiden and Boston: Brill, 2020), 253-265 for the presentation of this article and, in particular, 261 for the importance of εὐβουλία and εὐστοχία in Auriol's interpretation of Aristotle's doctrine of good fortune.

Truth of the Catholic Faith that we have mentioned above to comment on Oresme's description of the javellin throw.⁹³ Auriol's discussion and use of the notion of εὐστοχία appears to have many similarities to Oresme's understanding of divination as it is expressed in particular in his *Livre de divinacions*. Let us have a short look in these passages.

In Chapter X of Oresme's *Livre de divinacions*, one finds many claims that are in line with some of the texts analyzed below. First, the comparison between the negative effect of superstition and some medical symptoms, already found in *De Conf.* II, 37.⁹⁴ A bit later one finds a claim that goes back to *LdBF*: "Or dit Aristote en Ethiques que se les autres choses sont pareille, la ou il a plus de passions il y a mains de raisons [sic] ; et il dit ou livre de Bonne Fortune que la ou il a mains de raison il a plus de fortune, et la ou il a plus de fortune, la ou raison deust estre, il y a plus de peril et de male fortune, sicomme il appert du gouvernement d'une nef."⁹⁵ As was rightly pointed out by Rapisarda,⁹⁶ this claim is a free rephrasing of the passage from *Magna moralia* where it is said that "where there is most intellect and reason, there is least fortune, whereas where there is most fortune, there is least intellect", a passage that was frequently quoted in the late Middle Ages.⁹⁷ In addition, Oresme seems to combine this general idea with the more practical example of the "unwieldy vessel" (*navis male regibilis*) that frequently "sails better" (*melius frequenter nauigat*), an example that happens to be given by Aristotle in the direct continuity of that of the fall of dice.⁹⁸ Finally, earlier in the same chapter from Oresme's *Livre de divinacions*, one reads the following argument against divination: "Item, je le prouve par raison de nature car second Aristote, fortune est une inclinacion naturelle a bonnes aventures qui aviennent sans conseil, se c'est bonne fortune, ou au contraire, se c'est male fortune. Et

⁹³ As was indicated by Posti, *Medieval Theories*, 257, his criticism of Aquinas' theory of good fortune focuses on Aquinas' view of angelic protection.

⁹⁴ Nicole Oresme, *Livre de divinacions*, ch. X, 126: "Item, tout aussi comme les frichons vont devant la fievre et la mangoison devant la rongne, et comme dit Claudius que plourer sans cause est presage, aussi parvoir trop grant desir de savoir sa destinee est signe, presage, et message, qu'il s'ensuivra malaventure." See Nicole Oresme, *De Conf.* II, 37, 378,44: "just as itching precedes the scab": *quemadmodum pruritus antecedit scabiem*, quoted above note 20.

⁹⁵ Nicole Oresme, *Livre de divinacions*, ch. X, 128.

⁹⁶ Rapisarda, *Nicole Oresme, Contro la divinazione*, 249-250, note 159.

⁹⁷ Aristoteles Latinus, *LdBF*, ch. I, 1207a2-5: "Propter quod et ubi plurimus intellectus et ratio, ibi [7a5] minima fortuna, ubi autem plurima fortuna, ibi minimus intellectus." οὗ πλεῖστος νοῦς καὶ λόγος, ἐνταῦθα ἐλάχιστη, τύχη, οὗ δὲ πλεῖστη τύχη, ἐνταῦθ' ἐλάχιστος νοῦς. Among the numerous examples of texts where his passage is used, one can mention Duns Scotus, *Quodlibet I*, 21 (1308), edited ny F. Alluntis, *Cuestiones cuodlibetales (Obras del Doctor Sutil Juan Duns Escoto, edicion bilingüe)* (Madrid: La Editorial Católica, 1968), xiv-xviii: "Quod autem non sit ratio, patet quia 'ubi plurimus intellectus et ratio, ibi minima fortuna; ubi autem plurima fortuna, ibi minimus intellectus', secundum Aristotelem."

⁹⁸ Aristoteles Latinus, *LdBF* II, 1247a19-27: "Circa naucleriam enim non maxime industrii bene fortunati, sed quemadmodum in taxillorum casu hic quidem nichil, alius autem iacit <s>ex eo quod naturam habet bene fortunatam, aut eo quod ametur, ut aiunt, a deo, et extrinsecum aliquid sit dirigens (ut puta navis male regibilis melius frequenter nauigat, sed non propter se ipsam, sed quia habet gubernatorem bonum), sed sic quod bene fortunatum daimonem habet gubernatorem."

ceste inclinacion ne poons nous savoir avant les effees. Et posé que elle fut sceue, si ne peut l'en savoir les particulières effees avenir.”⁹⁹ Concerning this passage, Rapisarda’s remarks might be now completed: although it remains true that Oresme refers to *LdBF* in an imprecise way,¹⁰⁰ it might be interesting to add that this summary of Aristotle’s doctrine of fortune given in this passage of the *Livre de divinacions* is consistent with Oresme’s reading of Aristotle’s *Physics II* as it was explained here above.¹⁰¹

Oresme’s naturalization of fortune and of the practice of divination, as it was operated in his *Livre de divinacions* and in his commentary on *Physics* 197a25-29, has many similarities to Auriol’s discussion of these topics in his *Commentary on the Sentences*. Indeed, both authors consider that there is nothing supernatural there because this supposed “human divination” proves to be a merely natural ability. However, compared to Auriol’s, Oresme’s naturalization of fortune appears much less “psychologizing”.¹⁰² Or, to be more precise, it is so in another way. First and most obviously, because Oresme’s account of fortune is totally separated and independent from any theological view. While the framework of Auriol’s discussion is his *Commentary on the Sentences* in the section devoted to God’s providence, predestination and forethought, the framework of Oresme’s discussion is a commentary on Aristotle, in which any theological perspective is systematically avoided.¹⁰³ Second and less evidently, but perhaps more importantly, Oresme’s psychologization of fortune is more mechanistic: the powers of imagination are described in privileging quantitative over ontological aspects; they are considered to be possibly “trainable” exactly as is the art of throwing a javelin, a stone, a coin or... a die. In Auriol’s account of the ability to be well-fortuned, there is no indication of the way by which a given man might improve his talent for fortune, and at any rate, it is nowhere said that such an improvement, if any, would be possible by a physical or a bodily training. In Oresme, the gift for fortune that is already present in some men by nature (as an innate gift granted by the stars) might be developed as is the case for any physical or bodily force.

A modern reader – or, more precisely, a reader who has read the Aristotelian corpus with attention – might be surprised that Oresme’s naturalistic ideas on fortune seem to have no link to the few but important passages where Aristotle goes precisely in the same direction and/or even mentions ballistic examples. The first set of passages are read in the treatise *On Divination by Dreams*,¹⁰⁴ that offers a naturalistic discussion of the

⁹⁹ Nicole Oresme, *Livre de divinacions*, ch. X, 124.

¹⁰⁰ Rapisarda, *Nicole Oresme, Contro la divinazione*, 244-245, note 149.

¹⁰¹ See here above Section II.

¹⁰² See Posti, *Medieval Theories*, 254: “As will be shown below, Auriol mainly interprets *LdBF* in a naturalistic and psychologizing manner.”

¹⁰³ Nicole Oresme, *Questiones super Physicam*, 271,85-86, which corresponds to II.2.iv in the argumentative map given in Appendix.

¹⁰⁴ This title “*On Divination by Dreams*” is a translation of Περὶ τῆς καθ’ ὕπνον μαντικῆς (in Latin *De divinatione per somnum*). Other English titles are “*On Divination in Sleep*” or “*On Prophesying by Dreams*”. This is a text in which Aristotle discusses precognitive dreams and offers a rational inquiry into this phenomenon. In Medieval times, the treatise belonged to a set of very short works dealing with

phenomenon of precognitive dreams. After the very skeptical presentation of so-called prophetic or divinatory dreams made in Chapter 1,¹⁰⁵ Chapter 2 of this treatise is pervaded by ballistic models. There, Aristotle first refers to gamblers to explain the fact that the power of foreseeing the future is found in “inferior” persons, such as those who have “a melancholic temperament”: these people experience many movements of every kind, so that they just happen to have right visions, their luck in these matters being comparable to that of persons who play at dice.¹⁰⁶ Thus, he adds, the principle of the gambler’s maxim is valid in this case: “if you make many throws, your luck must change.”¹⁰⁷ A second reference to ballistic comes near the end of the treatise, where Aristotle gives the reason why certain persons “who are liable to derangement” have vivid dreams and the ability to foresee future events: the reason is, he explains, that “their normal mental movements do not impede the alien movements” so that “they have an especially keen perception of the alien movements” (464a25-31). In this way, “melancholic persons, owing to their impetuosity, are, when they shoot from a distance, expert at hitting, while, owing to their mutability, the series of movements deploys quickly before their minds.”¹⁰⁸ Another

“psychological” and “physiological” issues that were later canonized under the title *Parva naturalia*. This set included the works *On sense and sensible objects*, *On memory and recollection*, *On sleep and waking*, *On dreams*, *On prophecy in sleep*, *On length and shortness of life*, *On youth and old age*, *On respiration*, *On life and death*, but it also included a set of short treatises ascribed at the time to Aristotle and associated with the group of works just mentioned on the basis of their shortness and their ‘interdisciplinary’ content, such as, among others, the treatises *On the movement of animals* and *LdBF*. The three treatises related to sleep, *On sleep and waking*, *On dreams* and *On prophecy in sleep* were considered as a single work transmitted under the general title “*De somno et vigilia*”. On the Medieval *Parva naturalia*, see Pieter De Leemans and Pieter Beullens, “Aristote à Paris. Le système de la *pecia* et les traductions de Guillaume de Moerbeke”, *Recherches de théologie et philosophie médiévales* 75 (2008): 87-135; *Aristoteles Latinus, De progressu animalium, De motu animalium. Translatio Guillelmi de Morbeka*, *Aristoteles Latinus XVII 2.II-III*, edited by P. De Leemans (Turnhout: Brepols, 2011), lxxi-lxvii; Pieter De Leemans, “Parva Naturalia, Commentaries on Aristotle’s”, in *Encyclopedia of Medieval Philosophy. Philosophy Between 500 and 1500*, edited by H. Lagerlund (Dordrecht: Springer, 2011), 917-923; and Silvia Donati, “Albert the Great as a Commentator of Aristotle’s *De somno et vigilia*: The Influence of the Arabic Tradition”, in *The Parva Naturalia in Greek, Arabic and Latin Aristotelianism*, edited by B. Bydén and F. Radovic (Cham: Springer, 2018), 169-209. In what follows, where I discuss the Greek text independently from Latin translations, I quote the following edition: *Aristotelis Parva Naturalia graece et latine* (Collectio Philosophica Lateranensis), edited by P. Siwek S.J. (Rome: Desclée et C°, 1963).

¹⁰⁵ See in particular Aristotle (1963), i, 462b20-22, where Aristotle argues that, although “the senders of such dreams should be the gods” it is nonetheless the case that those to whom they are sent are not the best and wisest, but merely commonplace persons, and i, 463a31-b1 where he says that most so-called prophetic dreams are to be classed as mere coincidences that have natural causes.

¹⁰⁶ Aristotle (1963), 463b15-18: σημείον δέ· πάνυ γάρ εὐτελείς ἄνθρωποι προορατικοί εἰσι καὶ εὐθυόνηροι, ὡς οὐ θεοῦ πέμποντος, ἀλλ’ ὅσων ὥσπερ ἂν εἰ λάλος ἢ φύσις ἐστί καὶ μελαγχολικῆ, παντοδαπὰς ὄψεις ὁρῶσιν·

¹⁰⁷ Aristotle (1963), ii, 463b20-22: ὥσπερ γὰρ καὶ λέγεται “ἂν πολλὰ βάλλης, ἄλλοτ’ ἄλλοιον βαλεῖς” καὶ ἐπὶ τούτων τοῦτο συμβαίνει.

¹⁰⁸ Aristotle (1963), ii, 464a32-b5: οἱ δὲ μελαγχολικοὶ διὰ τὸ σφοδρόν, ὥσπερ βάλλοντες πόρρωθεν, εὐστοχοὶ εἰσιν, καὶ διὰ τὸ μεταβλητικὸν ταχὺ τὸ ἐχόμενον φαντάζεται αὐτοῖς. Interestingly, to describe the greater or lesser ability of the archers taking aim at their target,

passage where Aristotle mentions a ballistic example in a way that could have been of some interest to Oresme is *Rhetorics* I, 5, 1362a1-15 and, in particular, 1362a6-10, where the unexpected and unpredictable aspect of fortune is illustrated not only by the example of the one who “finds a treasure that everybody else has overlooked”, but also by the example of “a missile” that “hits the next man and misses you” (ἢ εἰ τοῦ πλησίον ἔτυχεν τὸ βέλος, τούτου δὲ μή).¹⁰⁹

As a matter of fact, it is difficult, not to say impossible, to determine if these texts were known by Oresme or not. But one might assume that he knew them and try to see his reasons to omit them. Concerning the passage from Aristotle’s *Rhetorics*, it is clear that, if Oresme had known it, he had good reasons to omit it: the particular use of the ballistic model made by Aristotle in this passage was not in line with Oresme’s thinking, because the aspect that was underlined there by the Philosopher is the fact that the throw of arrows escapes human calculations and proves, as such, to be fully unpredictable. As for the other ballistic examples, those that are read in the treatise *On Divination by Dreams*, the absence of any mention in Oresme’s discussion of the throw of the javelin is, at first sight, less understandable. Indeed, many ideas that are made explicit in this text seem to be in line with Oresme’s approach to the act of throwing objects successfully: first, the very idea of an expertise at hitting (464a32-b5), second and consequently the view that the repetition of such a gesture might increase the probability to make a successful hit (463b18-22) and, finally and more generally, the probabilistic model of such an art.¹¹⁰ The

Aristotle uses the adjective εὐστοχος (464a 33), a term that corresponds to the quality put forward by Auriol to explain good fortune (εὐστοχία) and meaning something like “well-aimed”, “making good shots”, or “guessing well”. See n. 92.

¹⁰⁹ Aristotle (1978), I, ch. 5, 1362a5-12, Anonymous version, edited by B. Schneider, *Aristoteles Latinus XXXI 1-2 Rhetorica Translatio Anonyma sive Vetus et Translatio Guillelmi de Moerbeke* (Leiden: E. J. Brill, 1978), 25,3-8: “Est autem et inrationabilium bonorum causa fortuna, ut puta si alii quidem mali fratres, hic bonus, et si alii non invenerunt thesaurum, hic vero invenit, aut si vicinum contingat sagitta, hunc vero non, aut si non venit solus, semper iens, hii vero venientes destructi sunt; omnia enim huiusmodi eutichimias esse videntur” and Moerbeke’s version, 178,29-179,5: “Est autem et eorum que extra rationem bonorum causa fortuna, ut puta si alii fratres turpes, unus autem pulcher, et si alii nesciverunt thesaurum, hic autem invenit, aut si propinquum tetigit sagitta, hunc autem non, aut si non venit solus, semper pertransiens, alii autem semel venientes interempti sunt; omnia enim talia eufortunia videntur esse.” The Greek term translated by Moerbeke by the Latin “eufortunium” is εὐτύχημα. This term was rendered in the same way in *LdBF* 1207a34 and 1207a35, whereas in 1247a9 Moerbeke rendered the genitive by another phrase: τῶν εὐτυχημάτων -> eorum que bone fortune. As for the term εὐτύχεια in 1247b15, Moerbeke rendered it as “eufortunatio”.

¹¹⁰ The passage was not unknown in the Arts Faculty, since it is discussed by Radulphus Brito in the 1290s, when he was Paris master. See Radulphus Brito, *Questions on Memory and Dreams*, q. II.6 (“Utrum somnia per quae contingit divinare imitantur a deo”), edited by S. Ebbesen, “Radulphus Brito on Memory and Dreams. An Edition”, *Cahiers de l’Institut du Moyen-Âge grec et latin* 85 (2016): 74-75: “Sed illa non fuit intentio Philosophi. Ideo secundum intentionem Philosophi breviter est dicendum de illis somniis quae habent originem a nobis quod illa non sunt a deo, nec de istis est quaestio, sed de illis quae habent originem ab extrinseco. Et dico quod talia somnia non sunt immediate a deo, ut somnia sunt sive cognitio futurorum per talia somnia, sed sunt illa somnia secundum modum quem ponit

only reason that might explain Oresme's (supposed) avoidance of this text in his own description of ballistic arts is a recurrent aspect of Aristotle's presentation of this art in this treatise, that goes against Oresme's view: this is the idea that the ability to make good shots is particularly present in people who have mental diseases, such as melancholic persons. The view that melancholic persons are particularly able to make fortunate choices is actually present in *LdBF* (1248a 38-b03), but in a passage that is clearly distinct from the one comparing fortunate men to dice throwers (1247a21-27) and much less insistent on the advantages of human melancholy. The fact that the treatise *On divination by Dreams* insists on these advantages and links them directly to the art of making good shots was clearly contrary to Oresme's endeavor to rationalize good fortune and to neutralize Aristotle's definition of fortune as "nature without reason" (*sine ratione natura*) that carries an individual towards good things "without reasoning" and in being unable to explain his behavior (1207a35-37). This remains speculation until we have evidence of Oresme's knowledge of Aristotle's treatise *On divination by Dreams*.

A last aspect of Oresme's discussion of throwing physical objects might strike the modern reader, which concerns the use of the Latin term "*impetus*". Indeed, at the beginning of the presentation of Oresme's *De Conf.* II, 37, I have highlighted the absence of any mention of the concept of *impetus* in this text.¹¹¹ But this concept of late Neoplatonic origin was present in Oresme's *Problem 31*, in the passage where Oresme describes in all its complexity the kind of calculation that a man must do to measure correctly all the factors implied in the throwing of any kind of object.¹¹² In this passage, "*impetus*" is used interchangeably with the more common term "*motus*" ("*impetum seu motum*"). It must be noted that the term "*impetus*" was already present in Boethius in his *Consolation* to mean "the impetus of the wheel [of Fortune]."¹¹³ The same term was used again by Moerbeke to render, in the chapters forming *LdBF*, the many occurrences of the substantive ὀρμή and of the verb

Philosophus in Littera, dicit enim quod sicut est in motu proiectorum, ita est in immissione illorum somniorum a corporibus caelestibus; modo sic est in motu proiectorum quod, primo et principali proiciente cesante, aer vel aqua in qua fit projectio recipit virtutem impellendi illud proiectum a primo proiciente et impellit ipsum proiectum usque ad aliam partem aeris, et illa usque ad aliam, et sic consequenter quamdiu virtus primi impellentis durat, sicut etiam virtus corporis caelestis per vehiculum sui in quo[d] est motus et lumen impellit sive movet corpus contiguum sibi, et illud aliud, et sic consequenter usque ad aerem contiguum corpori dormienti, et iste aer sibi contiguus intrat organum phantasiae, et illa phantasia sic mota virtute corporis caelestis format phantasma simile illi effectui cuius causa est motus corporis caelestis, et istud phantasma mittitur ad sensum communem, et tunc homo incipit somnare, et sic fiunt somnia de futuris."

¹¹¹ See here above note 25.

¹¹² See Nicole Oresme, *Problemata*, q. 31 (to be published): "Quandoque autem ista facit recte, quandoque deficit ita quod non recte mensurat omnia, scilicet spatium, pondus lapidis quem proicit, fortitudinem brachii et impetum seu motum quem facit nec etiam dispositionem manus in dimittendo lapidem (...)" quoted above note 73.

¹¹³ See Boethius, *De Consolatione Philosophiae*, Livre II, 88: "Tu vero volentis rotae impetum retinere conaris?" quoted above note 39.

ὄρμῳ.¹¹⁴ In the treatise, the term “*impetus*” was almost systematically linked to one of the two main concepts of fortune distinguished there by Aristotle, the first being “divine, continuous, and following a directive impetus”, while the second is neither divine, nor continuous, and “beyond the impetus”.¹¹⁵ The term reoccurs many times in Giles’ analysis with similar meaning and function.¹¹⁶ Oresme was perfectly aware of the content of the term from his very first contact with *LdBF*. For in commenting on Aristotle’s *Physics II* on fortune, he precisely distinguishes between two meanings of “fortune”, the first being fortune as dealt with principally in *Physics II* and as a *per accidens* cause, and the second being a certain disposition condition of the soul by which it is inclined to good or bad events, which happen by a convergence of unforeseen causes, before adding that “In *LdBF* Aristotle calls it an impetus.”¹¹⁷ In this section of Oresme’s *Questions on Aristotle’s Physics*, the term “*impetus*” is synonymous with “*inclinatio*” and, in this sense, Oresme also uses it to claim that the so-called “healthy people” are actually those who “have a natural impetus towards health.”¹¹⁸ In all these passages the term “*impetus*” has not the specifically ballistic meaning it had in Philoponus to mean the property of a body that keeps moving even when separated from its mover. It rather has a very general meaning, close to that of the terms “*motus*” and / or “*inclinatio*” – with no direct relation to the content of *Physics VII* and *VIII*. This particular use of the term “*impetus*” strongly suggests the importance of studying the history of the Peripatetic physics in considering *all kind of works* of the Latin Aristotelian corpus, including the works that are supposed to concern moral philosophy.

V. Conclusion

In the history of Ancient philosophical or scientific texts, it frequently happens that obscure documents become much clearer when read in parallel with other texts dealing

¹¹⁴ Indeed, ὄρμῳ was rendered by “*impetum facere*” in 1207a38, 1247b20 and 1248a30 and ὄρμη was rendered by “*impetus*” in 1207a36, 1207b4, 1207b8, 1207b14, 1247b18, 1247b34, 1248b5, 1248b5.

¹¹⁵ See Aristotle (2016: 1248b4-7): “*Iste autem est qui secundum impetum directivus, alius autem qui preter impetum; sine ratione autem ambo. Et hec quidem continua bona fortuna magis, hec autem non continua.*” And Aristotle (2016: 1247b15-18), quoted here above in note 38.

¹¹⁶ See Aegidius Romanus, *Sententia LdBF*, 1247a22-23, 150,207-210: “*Simile est itaque de casu taxillorum et de fortuna, quia sicut ex fortuna est quod illa ibi concurrant et ueniat optatus punctus, sic ex fortuna est quod omnia hec concurrant ut quod habemus impetus et quod eos percipiamus et agamus secundum eos, secundum quos agendo consequamur bona*”, quoted above note 62.

¹¹⁷ Nicole Oresme, *Questiones super Physicam II*, 14 (197a 25-29), 269,33-39: “*Quantum ad primum, notandum quod fortuna uno modo accipitur pro ipsa anima agente que dicitur fortuna respectu effectui inopinati, et ita accipitur principaliter secundo huius cum dicitur quod est causa per accidens. Alio modo pro quadam dispositione seu conditione ipsius, per quam ipsa declinatur ad eventus bonos seu malos et contingentes ex concursu causarum inopinatarum. In De bona fortuna Aristoteles vocat eam impetum.*” See here below Appendix II, I.1.i and ii.

¹¹⁸ Nicole Oresme, *Questiones super Physicam II*, 14 (197a 25-29), 273,146-148: “*Secundo aliqua est bona fortuna corporis, sicut circa sanitatem et pulchritudinem, quia alimentamur per causam fortunatam; et aliqui habent impetum naturalem ad sanitatem qui dicuntur sanativi.*” See here below Appendix II, III.3.ii.

with similar or related topics. In this essay, I have used selected scholastic sources to make some key assumptions implied in Oresme's *De Conf.* II, 37 clearer and to shed light, by this means, on the content of this chapter. These scholastic sources used to reconstruct the background of Oresme's reflection on throwing a javelin were all linked to the Peripatetic tradition, but in diverse degrees and different respects. First, in presenting the argumentative map of this chapter, I have claimed that a passage from Aristotle's *De anima* is an important piece in the background of this chapter by Oresme. Second, to shed light on the last sections of *De Conf.* II, 37, I have shown the importance of a question discussed by Oresme in commenting on Aristotle's *Physics* in a passage where the author, as a young Parisian bachelor student of arts, found the occasion to write a short commentary on the *LdBF* (*Questiones super Physicam* II, 14, related to Aristotle's *Physics* 197a25-29). Third, I have highlighted the role of a singular chapter from Aquinas' work where this theologian discussed good fortune and even more particularly the concept of "good naturalness" attached to Aristotle's notion of good fortune (*Summa contra Gentiles* III, 92). Fourth and more importantly, I have brought to the fore a passage from Giles of Rome's commentary on the same opuscle (*Sententia de bona fortuna* II, 1247a22-23) which contains some elements that appear to have been decisive for Oresme. In what follows, I summarize the results of the reading of Oresme's *De Conf.* II, 37 that were made in the light of these documents.

The importance of the passage from *De Anima* 403a29-b1, which was neglected until now, is decisive but in a rather broad way: Aristotle's description of anger as implying a strong motion of the blood in this text is an important piece in the background of Oresme's view on the psychosomatic aspect of human imagination in general. The importance of Oresme's reading of Aristotle's *Physics* 197a25-29, which was still recognized by Philippe Debroise in his doctoral thesis on Oresme's *De Configurationibus*, is more precise. Following Debroise's suggestion, I have shown here that Oresme's commentary on this passage contains (i) a first development of the paradoxical model of human success that is put forward in *LdBF*, (ii) a reading of this model in which this concept of fortune is given a maximal extension as far as it is said to concern all men in almost all their actions or enterprises, (iii) a claim according to which fortune has to do with the power of imagination and that this power might explain human success not only at a psychic and / or social level, but also at a merely bodily level (physical strength, etc.). Point (iii) helps us to see, in turn, the main relevance of Aquinas' reading of the *LdBF* in his *Summa contra Gentiles* III, 92: in this text where Aquinas discussed Aristotle's description of the "well-fortuned man" for the first time, Oresme found the idea that some people, as a result of the action of celestial influence on their bodies, have a certain special efficiency in doing some bodily actions which other men do not possess. But while Aquinas gave the examples of the ability of a medical doctor in regard to healing, of a farmer in regard to planting, and of a soldier in regard to fighting, these were replaced by the author of *De Conf.* II, 37 by the unique example of the thrower of a javelin. And this example was then interpreted following Giles of Rome – which leads us to the third source to be discussed.

In addition to the texts by Oresme and by Aquinas just mentioned, I have highlighted a further element of the background of Oresme's *De Conf.* II, 37, which is Giles' discussion of

Aristotle's allusion to the throwing of dice in the *LdBF*. In this text, which was crucial for the reception of the opusculum in the Latin West and that was seemingly already known by the young Oresme when he commented on Aristotle's *Physics*, this author found (i) the claim that the specific concept of fortune explained in *LdBF* might be compared in a systematical way to the movement of a projectile (a die) thrown by some hand, (ii) the idea that such a comparison might be used as an analogy to isolate all the factors that make a given action result in a given effect (be it "successful" or not), (iii) the view that each factor actually has a definite and, hence, a predictable effect, although the convergence of all factors might remain unpredictable. While Giles had given no precision concerning the cause and the very limits of this unpredictability (is the convergence unpredictable *as such* or only *for our limited minds?*), Oresme seems to have clearly opted for the second interpretation: the result of any action in this lowly world is fully predictable as such, and the reason why some events remain nevertheless unpredictable to us is only that some of the factors implied vary in a way that remains *imperceptible* or *hidden*. As a matter of fact, the idea of imperceptible changes occurring in the process of the projectile's throw was itself suggested by Giles' presentation of the throwing of dice by some players, but without being commented on by this author in detail to explain good fortune. Oresme combines this description by Giles with the famous notion of "hidden quality" that he had also found in the 13th century and, above all, in Aquinas' account of the bodily forces in his *Summa contra Gentiles* III,92. But here again, Oresme has reworked an existing concept to give him a larger extension and a stronger explanatory power: while Aquinas had mentioned such qualities just in passing, Oresme considers that they are present in all kinds of physical processes, as was suggested by Giles' description of the falling of dice. Because Oresme admits that psychical powers must be treated as physical forces, such hidden qualities are necessarily present in all processes involving imagination.

Oresme's reading of the process of throwing objects is much more radical than Giles' reading, in that it does not entail any kind of contingency: Giles' dice have been replaced by the javelin, and the supposed "luck" encountered by the dice players has been replaced by the ability of the thrower of a javelin, which is clearly described by Oresme as a technical skill. As such, this skill might be trained – as every physical ability. Oresme's description of this ability includes imagination to construe it as a process that is highly complex as far as it is multifactorial and, at the same time purely deterministic and, in that respect, predictable. While it was important for Giles to maintain the idea present in *LdBF* that the object thrown is a die – as an example of the contingent side of fortune –, for Oresme, it comes to the same thing as a stone or any other object that might be thrown. While Giles' reading of *LdBF* reflects his endeavor to save a kind of contingency in the Aristotelian world, Oresme's reading corresponds to a radically other worldview, according to which so-called fortune is just a multifactorial process of which we ignore all the causes and their ponderation. According to this view, Oresme replaces the example of the dice found in Giles by that of the javelin and, in the *Problemata*, he even assimilates the throwing of dice to the throwing of other kinds of projectiles such as a stone or a coin. It might be worth situating this result against Oresme's position towards another kind of determinism, which is astral determinism. It is generally assumed that this author refuses

astral determinism; but his analysis of chance and fortune seems to lead to a version of physical determinism. The question of whether human free will can be preserved in such a view must be left open here, but it seems to be clear, in any case, that our freedom of choice must lie, in such a view, in our ability to make rational choices – as opposed to the mere physical actions implied in the training of our skills, and to the irrational acts influenced by the stars (see *Questiones super Physicam* II, 14, II.3.1.b.).

On the basis of the preceding pages, Oresme's *De Conf.* II, 37 appears to be, on one side, much more Aristotelian than it might seem at first sight and, on the other, much indebted to the previous scholastic tradition. It is more Aristotelian than expected because it might be considered a free extrapolation of some sources that have been neglected until now: not only Aristotle's texts on human passions and his description of anger in *De Anima* 403a29-b1, but also his texts on fortune and chance in *Physics* II and, more importantly, in *Magna Moralia* 1206b30-1207b19 and *Eudemian Ethics* 1246b37-1248b11. It is much indebted to the previous scholastic tradition because Oresme's description of the motion of the javelin is a transposition of Giles' analysis of the dice throwing in his *Sententia de bona fortuna*, that also integrates some elements of Aquinas' presentation of physical powers in his chapter on good fortune (SCG III,92). It is remarkable that these scholastic sources are theological in nature: these are texts written by theologians on theological subjects. At the same time, *De Conf.* II, 37 does not refer to any kind of divine cause in the process described: in this text, Oresme maintains the principles advocated in commenting on Aristotle's *Physics*, an option that implies a clear separation between revealed theology and philosophy, but also inside philosophy an explicit refusal to imply God as an explanatory factor of physical processes. In short: no element from Giles or Aquinas is taken by Oresme in a passive or neutral way, without being reworked and made fully consistent with the author's basic assumptions. From Giles' *Sententia* Oresme reuses principally the discussion of the example of the throwing of dice, that he transforms into a throw of javelin or of projectiles more generally. From Aquinas, he exploits the idea of some technical skills that are naturally more present in some individuals than in others, and that might nevertheless be trained.

I hope that the present study has made clear how crucial the example of the javelin thrower is to Oresme's account of fortune and of human abilities more generally. In *De Conf.* II, 37 the discussion of this example is the occasion for the author to draw important conclusions from the views of fortune that he had already expressed in commenting on Aristotle's *Physics* 197a25-29, and to make the role of human imagination in this process much more precise. Oresme's understanding of Aristotle's doctrine of good fortune in *LdBF*, when considered in the long-term reception of this opusculum in the Peripatetic tradition, appears to be particularly encompassing and radical. This understanding is encompassing as far as it is systematically connected to the doctrine of *Physics* II. On the basis of this connection, Oresme applies some conclusions reached in *LdBF* for fortune to the more general concept of "chance" (or "the spontaneous" αὐτόματον): these categories apply to all kinds of goods and the so-called "bad fortune" and "bad chance" are just diminished fortune and chance. This understanding is radical because, in so

doing, Oresme reuses and exploits the ideas of his scholastic predecessors in a way that is far from conciliatory, but that is highly selective. In combining views on fortune taken from the Latin Aristotle (in particular from *LdBF*) with elements taken from Giles and Aquinas, Oresme develops a new conception of contingency, a conception that is at the same time naturalistic and mechanistic: although the roots of a naturalistic account of fortune were already present in Aristotle and even developed by some previous Latin thinkers (such as, e.g. Peter Auriol), the mechanization of the process offered by Oresme seems to be much more original. In the present state of research, it appears to be deeply innovative. As for Oresme's reading of Aristotle's doctrine of contingency (understood as 'chance' and 'fortune'), it strikes by its constant strive for consistency.

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APPENDIX I

Argumentative map of Oresme's *De Conf.* II, 37

- p. 376,3-378,16: general views on the powers of imagination
- p. 378,17-378,29: interpretation by means of the concept of configuration and fortune
- p. 378,30-378,41: application to the javelin throw and to good / bad fortune generally
- p. 378,42-380,63: application to the acts of predicting future events

APPENDIX II

Argumentative map of Oresme's *Questiones super Physicam* II, 14

- 0. Arguments *quod non* and *Quod Sic*
 - 1. There is no such distinction for chance, hence it is not justified for fortune
 - 2. Every kind of fortune is bad as its effects are not intended
 - 3. Every kind of fortune is good as far as *LdBF* defines it as a nature
 - 4. There is no fortune that is good in any sense of this term
 - 5. The division is insufficient as it ignores the fortuitous events that are indifferent
 - 6. Unique argument *quod sic*: the authorities in *Physics* and in *LdBF*
 - I. On good fortune in general
 - 1. Three notes on fortune and subsequently on chance
 - i. One must distinguish between fortune meaning the soul itself and fortune meaning the soul's inclination to good or bad fortune

ii. In *LdBF*, it is in reference to the second meaning of fortune that Aristotle defines it as “nature without reason”

iii. A similar distinction as that between two meanings of fortune can be applied to chance, but in this case, the inclination is a hidden quality

2. Conclusions and corollaries

i. First conclusion: bad fortune is a mere privation of good fortune

ii. All men are well-fortuned to greater or lesser degrees, and “ill-fortuned” just means “less fortunated” (*cf.* V.3)

iii. If ii were not true, human individuals would often die very early on account of the numerous dangers that they encounter

iv. Second conclusion: the distinction between good and bad fortune is justified provided one understands “bad fortune” as meaning diminished good fortune

II. On the causes of fortune

1. In *LdBF*, Aristotle makes a distinction between divine and natural good fortune

2. The two kinds of good fortune distinguished in II.1 have many differences, which are:

i. Divine fortune comes from God immediately, whereas natural fortune comes from God mediately and from nature immediately

ii. Divine fortune is only present in “good” men, who receive special care from God, whereas natural fortune is present in good and bad men

iii. Divine fortune is much more stable than natural fortune and it corresponds to what the theologians call “God’s grace”

iv. Divine fortune, that is equal to “God’s grace” (*cf.* II.iii) must be left aside in what follows

3. Conclusions concerning natural fortune

i. First conclusion: natural fortune produces its effects by means of the influence of heaven

a. This conclusion is proved by sign following the doctrine of the authors who make judgements according to constellations

b. From this it follows that our soul is subject to celestial bodies as far as the first non-deliberate movements are concerned

ii. Second conclusion: this kind of fortune is sometimes augmented and diminished by the imagination of the soul

a. This can be the imagination of the fortunated individual

b. This can be the imagination of someone else

c. The power of the imagination is confirmed by the sayings of merchants

III. On the effects of fortune

1. Preliminary distinctions between different kinds of goods (*cf.* IV.1)

2. Conclusion: there is fortune in all kinds of goods

3. Proofs of the conclusion by induction

i. About external goods (wealth, honors, etc.)

ii. About the goods of the human body (health)

iii. About practical arts (military or literary art)

iv. About speculative sciences (or: how to find conclusions)

IV. On the conditions of fortune

1. Fortune is present in almost all human enterprises (*cf.* III.2)

2. Fortune is opposed to deliberation and free will
 3. There is a kind of fortune that is continuous, which comes from good birth
 4. Different men are fortunated in different kinds of enterprises
 5. Bad fortune can often affect good men
 6. The fortune's supposed instability is only apparent
- V. Response to the arguments
1. The absence of a distinction between good and bad chance does not indicate that the distinction is not justified for fortune: Aristotle does not mention it because it is not as manifest as the distinction between good and bad fortune
 - 2a. It is false to say that every kind of fortune is bad: although its effects are not intended by the particular nature, they are intended by universal nature
 - 2b. Although it is true to say that chance events are always less good than what was intended, this does not hold true for fortuitous events
 3. It is true to say that that every kind of fortune is good – but one must add that it is good to greater or lesser degrees (*cf.* I.2.ii)
 4. It is false to say that there is no good fortune: the distinction between different goods is not exhaustive
 5. It is true to say that the distinction between different goods is not exhaustive (*cf.* V. 4); but one must add that fortune is good to greater or lesser degrees (*cf.* I.2.ii and I.3) and that its situation is judged according to the events.

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