

# On the Time of the Intellect: The Interpretation of *De Anima* 3.6 (430b 7–20) in Renaissance and Early Modern Italian Philosophy

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## Abstract

This article argues that an original debate over the relationship between time and the intellect took place in Northern Italy in the second half of the sixteenth century, which was part of a broader reflection on the temporality of human mental acts. While human intellectual activity was said to be ‘above time’ during the Middle Ages, Renaissance scholars such as Marcantonio Genua (1491–1563), Giulio Castellani (1528–1586), Antonio Montecatini (1537–1599) and Francesco Piccolomini (1520–1604), greatly influenced by the Simplician and Alexandrist interpretations of Aristotle’s works, proposed alternative conceptions based on the interpretation of *De anima* 3.6 (430b 7–20) according to which intellectual acts happen in a both ‘undivided’ and ‘divisible time’. In order to explain Aristotle’s puzzling claim, they were led to conceive of intellectual activity as a process similar to sensation, corresponding to a certain lapse of time (Castellani), an instant (Montecatini), or a mix of instantaneousness and concrete duration (Piccolomini), depending on their theoretical options.

## Keywords

Alexandrianism – Aristotelian psychology – *De Anima* – Giulio Castellani – duration – immortality of the soul – eternity – Marcantonio Genua – instant – indivisibles – intellect – Antonio Montecatini – Neoplatonism – Francesco Piccolomini – time

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## 1 Introduction

The notion of an ‘intellectual time’ or a ‘time of the intellect’ seems problematic and in some respects self-contradictory within the Aristotelian framework of Renaissance philosophy. How could a notion that is inextricable from matter and physical motion be applied to intellectual acts? From the Middle Ages onwards, a radical view developed: like any other immaterial substance, the intellect must be said to be *supra tempus* – ‘above time,’ as Thomas Aquinas (1225–1274) states in accordance with the *Liber de causis*.<sup>1</sup> Christian theologians, however, typically ascribed a specific duration to the intellectual activity of angels, which characterised it as a discrete succession of thoughts with no relationship whatsoever to the continuous time of natural substances.<sup>2</sup> The thirteenth-century philosopher Giles of Rome (1247–1316) made the suggestion that, in some way, the operations of our intellect may be analogous to angelic thought: “From things we see in our mind, he observes, a way is wide open to investigate that angelic time.”<sup>3</sup> But this analogy did not result in a clear conception of human intellectual time, as Carlos Steel remarks: “The medieval authors never admit that the discrete time is also applicable to the cognitive activities of the human souls. In their view those souls share in their activities the same measure of duration as all the physical events in the sublunary realm.”<sup>4</sup> If Heavenly intellects are subsumed under *ævum* or eternity, the dependency on *phantasia*, which is typical of human life, connects our intelligence and its successive operations to the bodily motions of the outer world. As a result, the human intellect has an indirect relationship to time – ‘per accidens’ in Aquinas’ words –, namely through *phantasmata* derived from sensible things: angels, however, know a kind of duration that is *intrinsic* to their intellectual activity.<sup>5</sup>

1 See for instance Thomas Aquinas, *Summa theologiæ*, Ia, q. 85, art. 4, *Opera Omnia*, ed. Leon. 5 (Rome, 1889), 81, and I-IIæ, q. 113, art. 7, 00, ed. Leon. 7 (Rome, 1892), 339. On the *Liber de causis*, see *La Demeure de l'être: autour d'un anonyme. Étude et traduction du Liber de causis*, ed. Pierre Magnard, Olivier Boulnois, Bruno Pinchard and Jean-Luc Solère (Paris, 1990), 42.

2 On angelic time, see Richard Cross, “Angelic Time and Motion: Bonaventure to Duns Scotus,” in *A Companion to Angels in Medieval Philosophy*, ed. Tobias Hoffmann (Leiden 2011), 117–47, at 126–29.

3 Giles of Rome, *De Mensura Angelorum* (Venice, 1503), 74: “Per ea quæ videmus in mente nostra ... habemus magnam viam ad investigandum de tempore illo angelico.” Quoted by Carlos Steel, “The Neoplatonic Doctrine of Time and Eternity and Its Influence on Medieval Philosophy,” in *The Medieval Concept of Time: Studies on the Scholastic Debate and Its Reception in Early Modern Philosophy*, ed. Pasquale Porro (Boston 2001), 24.

4 Steel, “The Neoplatonic Doctrine of Time,” 23–24.

5 Aquinas, *Opera Omnia*, ed. Leon. 7, 339: “Mens autem humana quæ justificatur, secundum se

The idea that a faculty can have a nature different to that of its operations – for instance, that the intellect can be atemporal while its operations, because of their link to material objects, are temporal – was challenged by followers of Pietro Pomponazzi (1462–1525), in the larger context of the revival of Alexandrist conceptions of the soul in Northern Italy. It is well known that the Pomponazzi affair produced an important shift in psychology and anthropology at the beginning of the sixteenth century. In his *De immortalitate animæ* of 1516, Pomponazzi infers from the human mind's dependency on phantasms that, even in the case of self-reflection, '*intelligere est cum continuo & tempore*'. He also contrasts human intellection with the atemporal activity of separated substantial forms.<sup>6</sup> Simone Porzio (1496–1554), an enthusiastic reader of Alexander of Aphrodisias and professor of philosophy and medicine in Pisa and Naples, went even further in his *De mente humana disputatio* of 1551 where he strongly opposed the idea that the intellect might be connected to phantasms without being itself corruptible and mortal.<sup>7</sup> Porzio's overall psychology was 'mortalist': he understood Aristotle's *entelecheia* as meaning "the perfection and final end reached through a motion" and assimilated intellection with "a natural motion, through which a form was moved from one subject to the other."<sup>8</sup> A direct consequence of this naturalistic conception of the soul was to

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quidem est supra tempus, sed per accidens subditur temporis: in quantum scilicet intelligit cum continuo et tempore secundum phantasmata, in quibus species intelligibiles considerat, ut in Primo dictum est. Et ideo iudicandum est, secundum hoc, de ejus mutatione secundum conditionem temporalium motuum". See also the *princeps thomistarum*, John Capreolus (1380–1444), *In II sent.* (Venice 1589), 106: "Sic intellectiones nostræ, quia sunt termini extrinseci fantasiationum, dependent quodammodo a motu & tempore primi mobilis, & mensurantur tali mensura exteriori." Even when Thomas Aquinas apparently deals with a purely psychical duration in his *De Instantibus*, he ultimately relies on its relationship to *phantasmata*. See Jean-Luc Solère, "Descartes et les discussions médiévales sur le temps," in *Descartes et le Moyen Age*, ed. Joël Biard and Roshdi Rashed (Paris, 1997), 329–48, at 338–39.

- 6 Pietro Pomponazzi, *De immortalitate animæ* (n.p., 1534), 59–60: "In omni namque quantumcunque abstracta cognitione idolum aliquod corporale sibi format, propter quod humanus intellectus primo & directe non intelligit se, componiturque & discurrit: quare suum intelligere est cum continuo & tempore, cuius totum oppositum contingit in intelligentiis quæ sunt penitus liberatæ a materia."
- 7 On Alexandrianism and Pomponazzi, see Craig Martin, *Subverting Aristotle. Religion, History, and Philosophy in Early Modern Science* (Baltimore, 2014), 62–64.
- 8 Eckhard Kessler, "Psychology: the Intellectual Soul," in *The Cambridge History of Renaissance Philosophy*, ed. Charles B. Schmitt, Quentin Skinner, Eckhard Kessler and Jill Kraye (Cambridge, 1988), 520. Kessler comments on Porzio's *De humana mente disputatio* (Florence, 1551), 9. For a larger investigation on Porzio's philosophy and career, see Eva del Soldato, *Simone Porzio: un aristotelico tra natura e grazia* (Rome, 2010).

undermine the idea that the human intellect was eternal or independent from time. Porzio indeed insists in his *Disputatio* that human activities are inevitably subject to birth and death, interruption and corruption, including the noblest of them.<sup>9</sup> According to him, all the immaterial aspects of thought are to be referred to an immaterial agent, God, while the human intellect, identified with the Aristotelian ‘possible intellect,’ is both passive and corruptible.<sup>10</sup>

Whereas Porzio does not give a detailed treatment of the relationship between time, duration and the human mind, other Italian scholars did tackle this issue. They asked whether the human intellect operates within time and to what extent intellection can be regarded as an inherently temporal process. The rejection of the immortality of the soul had suddenly opened a new perspective on Aristotelian accounts of time, since the soul was no longer considered as a separated substance but instead as a form deeply involved in matter and subject to change. Michael Edwards has recently suggested that the reading and interpretation of a somewhat obscure passage of *De Anima*, namely chapter 6 of book 3, played an important role in early modern debates over intellectual time.<sup>11</sup> But this passage seems to have received careful attention as early as the 1550s when, under the influence of Porzio or in reaction to his materialistic psychology, an effort was made to clarify Aristotle’s assertions. Among the most significant positions developed were those of Marcantonio Genua (1491–1563), Giulio Castellani (1528–1586), Antonio Montecatini (1537–1599) and Francesco Piccolomini (1520–1604). Genua, Montecatini and Piccolomini were professors of natural philosophy: Genua and Piccolomini at the University of Padua. Montecatini, who was also an important political figure, taught at the University of Ferrara.<sup>12</sup> A former student of the universities of Ferrara, Bologna and Padua, Castellani was appointed professor of philosophy

9 Porzio, *De humana mente*, 24: “Licet mihi mentis humanæ æternitatem investigare: proculdubio nulla est quæ æternitatem eius probet, quoniam si mentem humanam, ut formam & ut motorem accipimus, cum formæ conditiones ex functionibus & actionibus cognoscantur; nulla prorsus est in homine motio aut operatio quæ continua & perennis sit, sed omnes quiete intercipiuntur & abolentur. Intellectio, si quidem marefcit, pereunt scientiæ, opiniones, appetitiones, progressiones, sensus & nutricationes.”

10 Porzio, *De humana mente*, 36. See also the whole chapter 7, 34–47.

11 Michael Edwards, “Time, Duration and the Soul in Late Aristotelian Natural Philosophy and Psychology,” in *Psychology and the Other Disciplines: A Case of Cross-Disciplinary Interaction (1250–1750)*, ed. Paul J. J. M. Bakker, Sander W. de Boer and Cees Leijenhorst (Leiden, 2012), 117. See also Michael Edwards, *Time and the Science of the Soul in Early Modern Philosophy* (Leiden, 2013), 78–79.

12 See Paul F. Grendler, *The Universities of the Italian Renaissance* (Baltimore, 2002).

at the Sapienza at the end of his career.<sup>13</sup> As we shall see, he played a crucial role in the development of the whole debate.

## 2 The Aristotelian Concept of 'Indivisible Time'

The Aristotelian definition of time focuses on physical motion: time is conceived in the *Physics* as the quantifiable aspect of motion with respect to before and after. It is well known that this conception was strongly criticized by Renaissance authors as diverse as Marsilio Ficino (1433–1499), Bernardino Telesio (1509–1588), Giordano Bruno (1548–1600) and Francesco Patrizi (1529–1597), but little is known about discussions regarding other aspects of the Aristotelian conception of time, particularly its relationship to the human mind.<sup>14</sup> In a famous passage of the fourth book of the *Physics*, Aristotle not only says that the intellect numbers time, but he also seems to attribute an ontological significance to that operation:

And if nothing can count except consciousness, and consciousness only as intellect (not a sensation merely), it is impossible that time should exist if consciousness did not; unless the 'objective thing' which is subjectively time to us, if we may suppose that movement could thus objectively exist without there being any consciousness (*Physics* 4.14, 223a 15–28).

Unfortunately, except for those sketchy indications, Aristotle does not say anything about the temporal nature of the intellective operations. His circumspection renders the treatment of intellectual time in *De Anima* 3.6 all the more significant. The text of this passage is as follows:

Since the term indivisible (*adiairéton*) has two senses – potential or actual – there is nothing to prevent the mind from thinking of the indivisible when it thinks of length (which is in actuality undivided), and that in indivisible time (*en chronô adiairétô*).<sup>15</sup> Time is also both divisible and indivisible in the same sense as length. So it is impossible to say what it

13 See Charles B. Schmitt, "Castellani, Giulio," in *Dizionario Biografico degli Italiani*, 80 vols. (Rome 1925–2014), 21 (1978), 624–25.

14 For a general survey of renaissance theories of time in relation to Aristotle's philosophy, see Sarah Hutton, "Some Renaissance Critiques of Aristotle's Theory of Time," *Annals of Science*, 34 (1977), 345–63.

15 The translation of the Greek *adiairéton* is problematic. Latin writers often translate *adiairéton* as *individuum*. Ross translates it as 'unitary': Aristotle, *De anima*, ed. David Ross (Oxford, 1961), 299–300. Walter S. Hett and Robert D. Hicks use both 'indivisible' and

was thinking in each half of the time; for the half has no existence, except potentially, unless the whole is divided. But by thinking each half separately, mind divides the time as well; in which case the halves are treated as separate units of length. But if the line is thought of as the sum of two halves, it is also thought of in a time that covers both half periods.

But when the object of thought is not quantitatively but qualitatively indivisible, the mind thinks of it in indivisible time, and by an indivisible activity of the soul; *but incidentally (kata symbébèkôs) this whole is divisible*, not in the sense in which the activity and the time are divisible, but in the sense in which they are indivisible; for there is an indivisible element even in these, though perhaps incapable of separate existence, which makes the time and the length one (*De Anima* 3.6, 430b 7–20).<sup>16</sup>

Aristotle is dealing here with a basic operation of the soul, namely the intellection of indivisibles as opposed to complex notions and judgments that are made out of those indivisibles (*De Anima* 3.6, 430a 26–430b 7).<sup>17</sup> Aristotle's claim is that intellectual acts can bear on either divisible or indivisible objects but that in all cases the intellect grasps objects *as indivisibles*: sometimes they are 'undivided' (for instance, a line thought of as a whole, but still divisible), sometimes 'indivisible' in the strict sense of the word (for instance, a mathematical point that no operation of the mind can divide).<sup>18</sup> From the unity of the object considered, it follows that the very act of grasping that object is unitary and that it happens in one time, namely in 'undivided time'. If a length is apprehended by an intellectual act, Aristotle says, one cannot divide the duration of that intellectual act and distinguish two intervals of time within it corresponding to two different parts of that magnitude. The length indeed is taken *all at once*, and no division occurs within the very intellection apprehending it. But Aristotle adds something puzzling: although undivided, the time of

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'undivided' depending on the context. See Aristotle, *De anima*, transl. R. D. Hicks (Amsterdam, 1965), 137.

16 Aristotle, *De anima*, transl. William S. Hett (London, 1986), 173. For a detailed survey of this passage, see Ronald Polansky, *Aristotle's De Anima: A Critical Commentary* (Cambridge, 2007), 475–77.

17 See Enrico Berti, "The Intellection of Indivisibles According to Aristotle's *De Anima* III.6," in *Aristotle on Mind and the Senses*, ed. Geoffrey E. R. Lloyd and G. E. L. Owen (Cambridge, 1978), 141–63; Thomas de Koninck, "La noësis et l'indivisible selon Aristote," in *La Naissance de la raison en Grèce*, ed. J.-F. Mattéi (Paris, 1990), 215–28. See also Michel Fattal, "L'intellection des indivisibles dans le *De Anima* (3, 6) d'Aristote: lectures arabes et modernes," in *Corps et âme: sur le De Anima d'Aristote*, ed. Gilbert Romeyer-Dherbey and Cristina Viano (Paris, 1996), 423–40.

18 See Aristotle, *Metaphysics*, 5.6, 1016b 25–26.

intellecion is, in the case of the length, ‘potentially’ divided, which means that a division *can* occur within it. Such a claim is consistent with the declaration that time and length are ‘both divisible and indivisible in the same sense’. A similar difficulty appears in the second paragraph of the text above: Aristotle says that ‘the indivisible activity of the soul,’ although its object is not a quantity but a quality or a form, is ‘incidentally’ divisible or divisible ‘by accident (*kata symbébkos*)’. Why is there still divisibility in the undivided time of thinking? Is there any contradiction in Aristotle’s exposition?

Most ancient and medieval commentators agreed that the expression ‘indivisible time’ implied an ‘instant’ or a ‘now’, in accordance with the fourth and sixth books of *Physics*. Whereas “time must be continuous,” that is to say “capable of being divided into parts that can in their turn be divided again, and so on without limit,” (6.2, 232b 25–26) Aristotle says that “there is something pertaining to time which is indivisible” (6.3, 234a 23–24) and is not a duration but a ‘limit’ (4.10, 218a 23–24), namely what he calls a ‘now.’<sup>19</sup> The late-antique commentator John Philoponus consequently complained that Aristotle’s vocabulary in *De Anima* 3.6 was inadequate:<sup>20</sup>

By an ‘indivisible time’ he means a now, speaking ill. For a now is not a time but a beginning of time. By a ‘now’ I mean an instant. But if you take the now that has duration, that has a beginning and a limit and is a time. But now we are speaking of the instantaneous now.<sup>21</sup>

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- 19 Averroes and Thomas Aquinas expressly use the word ‘instant’ in their commentaries on *De Anima*. Thomas Aquinas, *Sentencia libri de anima*, ed. Leon. 45/1 (Rome-Paris, 1984), 226: “Si autem intelligat lineam sicut unum quid constitutum ex duabus partibus, etiam intelliget in tempore non diviso, set secundum aliquid *quod est in utrisque* partibus temporis, scilicet in instanti, et si continetur consideratio per aliquod aliud tempus, non dividetur tempus ut aliud intelligat in una parte temporis et aliud in alia, set idem in utraque”; Averroes, *Long Commentary on the De Anima of Aristotle*, ed. Richard C. Taylor and Thérèse-Anne Druart (New Haven, 2009), 368: “Because the time in which it understands and the things which it understands are indivisible in their own right, but they are nevertheless in divisible things, namely, the instant in which it understands and the form which it understands. For an instant is indivisible and is in time which is divisible.”
- 20 Or more probably Stephanus of Alexandria. On the authorship of the Commentary on Book 3 of *De Anima*, see ‘Philoponus’, *On Aristotle On the Soul 3.1–8*, transl. William Charlton (London-New York, 2013), 1–17; Henry Blumenthal, “John Philoponus and Stephanus of Alexandria: Two Neoplatonic Christian Commentators on Aristotle?,” in *Neoplatonism and Christian Thought*, vol. 2, ed. Dominic J. O’Meara (Albany, 1982), 54–63.
- 21 ‘Philoponus’, *On Aristotle On the Soul 3.1–8*, 129.

The beginning of a time indeed is not a time: it is a limit of an interval of time and an indivisible moment, as Aristotle explains in *Physics* 6.5 (235b 30–236a 7).<sup>22</sup> What makes Philoponus so unsatisfied with the expression ‘indivisible time’ is that the word ‘time’ should not be used at all in that context: in the Aristotelian framework time is divisible by essence.<sup>23</sup> An instant is something indivisible in time, but it cannot be an indivisible time.

The idea that time and indivisibility are incompatible was further developed by Renaissance Neoplatonists. At the beginning of the sixteenth century, Jacques Lefèvre d’Étaples (circa 1450–1537) declared in his *Paraphrasis of De Anima*:

The intellection and the time of intellection are indivisible, if we may call ‘time’ the duration of intellection. Indeed, truly speaking, the intellect understands neither in time nor in a moment or indivisible part of time, but either in eveternity or an atom of it.<sup>24</sup>

This interpretation echoes Marsilio Ficino’s commentary on the *Enneads* 3.7, where he declares that “as the sense acts within time, the intellect acts in eveternity,” rehearsing the Platonic correspondence between eternity and the intelligible realm. According to Ficino, ‘touch’ is a common feature of knowledge, whether sensitive or intellectual; but the intellect is a better ‘touch’ since “while it touches, it is touched in return,” which means that it develops into a separate dimension. The activity of the intellect is indeed supposed to develop outside the continuous time of human life, while reason, which is a different faculty, is viewed as a medium between eternal and sensible things. Ficino claims that rational souls are “in eveternity by their essence, and in time by their action and motion.”<sup>25</sup> Intellection as such pertains to a supernatural kind of duration,

22 See *Physics* 4.10, 218a 7–8 and 24–25. See also John Philoponus, *Against Proclus On the Eternity of the World* 1–5, transl. Michael J. Share (London-New York, 2014), 81.

23 In his *De Intellectu*, Philoponus underlines the same idea. See *On Aristotle On the Intellect (de Anima 3.4–8)*, transl. William Charlton (London-New York, 2014), 88: “As it is then with the generation of Forms, so it falls out with understanding: intellect understands them without taking time, in an instant, by its first intuition. When I understand that the three angles of the triangle are equal to two right angles, I do so in an indivisible intuition.”

24 Jacques Lefèvre d’Étaples, *Totius philosophiae naturalis Paraphrases* (Paris, 1501), 347: “Et intellectio et intellectionis tempus indivisibile est: si modo intellectionis moram tempus appellare liceat. Nam revera nec in tempore nec temporis momento aut impartibili intellectus intelligit: sed aut in ævo aut ejus Atomo.”

25 Marsilio Ficino, *De rebus philosophicis libri LIII in enneades sex distributi* (Cologne, 1540), 182: “Cognatio igitur intellectus ad propria et æterna eius obiecta maior est quam



which is similar to the eternity that qualifies the time of Heavenly beings. It is interesting to note that Giles of Rome had provided a similar interpretation of *De anima* 3.6: Giles' interpretation was also echoed by Averroist philosophers who wanted to defend the dogma of the immortality of the human soul. Agostino Nifo, for instance, quotes Giles in his *Expositio subtilissima in tres libros Aristotelis de anima*: "The intellect as intellect neither understands in time nor in an instant of time, since it stands neither in time nor in an instant of time, but it certainly understands in eternity, as other intelligences do."<sup>26</sup>

It seems natural that a Neoplatonic interpretation of Aristotle would insist on the atemporality of the intellect and link it to the soul only insofar as it is affected by sensitive things. But it is highly questionable whether such a reading can resolve the philological and philosophical difficulties raised by *De anima* 3.6, or whether it can clarify Aristotle's enigmatic claim that the human intellect acts 'in indivisible time.'

### 3 The Simplician Trend and Its Criticism in Castellani's *De Humano Intellectu* (1568)

During the Renaissance, a number of scholars tried hard to solve the difficulties outlined above and give an account of Aristotelian 'indivisible time.' Most of them, despite being Neoplatonists, were influenced by the revival of the ancient commentators (Philoponus, but also Simplicius, Themistius, along with Alexander of Aphrodisias) that took place during the Italian *cinquecento* and

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cognatio sensus ad sentienda: cognatio inquam intelligentiæ mutua, quatenus enim tangit, tangit atque vicissim: sicut igitur sensus est, agitque in tempore, sic intellectus in ævo. Ratio vero tanquam media est in utroque, nam & æterna tangit & temporalia: medium quidem eiusmodi esse potest, nam & cælum est introque: per substantiam in ævo, per motum actionemque in tempore. Debet quinetiam universo eiusmodi medium non deesse, ut inter res supernas quæ tam actionem quam essentia sunt æternæ: atque inferiores, quæ utrinque sunt temporales, sint rationales animæ: per essentiam quidem in ævo, per actionem vero motumque in tempore."

26 Agostino Nifo, *Expositio subtilissima nec non et collectanea commentariaque in tres libros Aristotelis de anima* (Venice, 1559), 735: "Intellectus ut intellectus nec intelligit in tempore, nec in instanti temporis, quia cum non sit in tempore, nec in instanti temporis, sed forsate intelligit in ævo, ut ceteræ intelligentiæ." The rest of the text confirms the conception of the intellect as atemporal: "At si intellectus sumatur, ut conversus ad nos, hoc est intellectus intelligens mediantibus phantasmatis aliqua intelligit in instanti, ut cum intelligit simplicia, vel indivisibilia, aliqua intelligit in tempore, cum componit & dividit, saltem *per accidens* ratione sensuum, ratione quorum ipse est in tempore" (emphasis mine).

contributed to developing conflicting trends in Aristotelian scholarship. Marcantonio Genua, a representative of Simplician Averroism, expressly rejects the Philoponian exegesis of Aristotle's time of the intellect.<sup>27</sup> We have seen in the previous section that, for John Philoponus, the term 'indivisible time' does not mean anything other than 'instant' or 'now'. All things, either continuous or not, either quantities or forms, must be grasped in "a now of time (*nunc temporis*)" as Gentian Hervet's Latin translation says.<sup>28</sup> From the Philoponian perspective, the distinction between potential and actual divisibility exists only to indicate that nothing hinders the human intellect from apprehending extended things as actually undivided and "laying hold of composites as simples."<sup>29</sup> But that interpretation, Genua objects, "is not consistent with Aristotle, since an instant is not a time". For that reason, the intellection of quantities cannot be said to be instantaneous:

Moreover, the intellection would not be in conformity with its object and measure. Yet the Philosopher expressly states that as the mind apprehends the absolutely indivisible in an instant, the *dianoia* does likewise with the actually indivisible, that is to say the continuum, and in an actually indivisible time. But nevertheless such a time is potentially divisible in the same way as the continuum, as Simplicius rightly explains, being given that the now of time is both potentially and actually indivisible. That is confirmed by the Philosopher when saying that time is divisible and indivisible in the same sense as magnitude.<sup>30</sup>

27 Simplicius was regarded as a major interpreter of Aristotelian philosophy along with Averroes. One of Genua's pupils, also a translator and editor of Simplicius's works, even planned to substitute Simplicius for Averroes in Italy. See Kessler, "The intellective soul," 525. See also Leen Spruit, *Species Intelligibilis: From Perception to Knowledge. II. Renaissance Controversies, Later Scholasticism and the Elimination of Intelligible Species in Modern Philosophy* (Leiden, 1995), 164–73; on Genua's influential position and his opponents, see 184–86.

28 John Philoponus, *Commentarius in Aristotelis libros tres de Anima* (Lyon, 1558), unpaginated.

29 See 'Philoponus', *On Aristotle On the Soul* 3.1–8, 129.

30 Marcantonio Genua, *In tres libros Aristotelis de anima exactissimi commentarii* (Venice, 1576), 164: "At expositio ista non stat cum Aristotele, quandoquidem instans tempus non sit: modo Philosophus dicit in tempore indivisibili. Præterea intellectio conformis non esset ex parte objecti, & mensuræ: quod tamen expresse habetur a Philosopho, ut mens de omnino indivisibili, & in instanti; sic & dianoea de actu indivisibili, continuo scilicet, & tempore indivisibili actu; & ipso potentia tamen divisibili, ut continuum est, ut recte exponit Simplicius quia nunc temporis est potentia, & actu indivisibile. Confirmatur per Philosophus, cum dicat: Similiter & tempus divisibile, ac indivisibile magnitudini est."

Here, Genua introduces the Platonic distinction between *nous* and *dianoia* in order to justify the idea that the intellect can take extended things into view. While the term *nous* is used for the immediate apprehension of intelligible notions, *dianoia* usually designates the faculty for dealing with intelligible notions as they are captured by images existing in space and time. Accordingly, since the '*dianoetica intellectio*'<sup>31</sup> is an act of the intellect that bears on sense data and extended objects, the indivisible time of the intellectual operation is potentially divisible and hence is not an 'instantaneous now', but rather a certain lapse of time. In other words, the indivisible time needed to grasp something that has extension is in fact continuous time, although it is actually not divided because it comes with one intellectual act. Genua relies on Simplicius, who considers that, compared to contemplating pure and indivisible Forms, apprehending continuous things or the limits of continuous things amounts to "coming down together with them" or "being co-divided with objects."<sup>32</sup> While the thinker totally "remains in himself" and reaches the oneness of eternity when apprehending forms, he is bound to decline and operate within time, "although an actually undivided time," when considering quantities.<sup>33</sup> Such a time, which is likely to become divided, has nothing in common with the "superior now" of contemplation.<sup>34</sup> According to Simplicius, the temporal status of intellection is "co-ordinate" with its content: "*eadem est ratio temporis et ratio intellectæ*" as Giulio Pace declared a few decades later.<sup>35</sup> The only important modification that Genua brings to the Simplician reading is in apparently re-

31 Genua, *In tres libros Aristotelis de anima*, 164v.

32 'Simplicius', *On Aristotle On the Soul 3.6–13*, ed. Carlos Steel (London, 2013), 252, 13–23. The authorship of the commentary is doubtful; it probably is Priscian of Lydia's work. See Carlos Steel, "The Author of the Commentary On the Soul," in Priscian, *On Theophrastus on Sense-Perception*, with 'Simplicius', *On Aristotle On the Soul 2.5–12*, transl. Pamela Huby and Carlos Steel (London, 1997), 105–40. For a different analysis see Ilsetraut Hadot, "Simplicius or Priscianus? On the Author of the Commentary on Aristotle's *De anima* (CAG XI): A Methodological Study," *Mnemosyne*, 55 (2002), 159–99.

33 On the influence of Simplicius's commentary on *De Anima* during the 15th and 16th centuries, see Bruno Nardi, "Il commento di Simplicio a *De anima* nelle controversie della fine del secolo XV e del secolo XVI," in Bruno Nardi, *Saggi sull'aristotelismo padovano dal secolo XIV al XVI* (Florence, 1958), 365–443.

34 'Simplicius', *On Aristotle On the Soul 3.6–13*, 253, 1–15: "But when it thinks it as undivided, then it does so also in an undivided time. And immediately he made plain the inferiority of the cognition co-ordinate to these things, for it does not know in the impartible now that is superior to all time, if one may call 'now' what is superior to all time, but in time, although in an actually undivided time."

35 Aristotle, *Aristotelis de anima libri tres, graece et latine*, ed. Giulio Pace (Frankfurt, 1596), 386.

jecting the notion of an ‘eternal now’: intellection of forms is achieved neither in time nor in eternity, as Simplicius argued, but in a moment of time.<sup>36</sup>

But a problem still remains. If Aristotle employs the expression ‘indivisible time’ for the intellection of both forms and quantities, it undoubtedly follows that pure intellections should not be called instantaneous either. Simplicius, who was aware of that difficulty, developed the following explanation:

Although Aristotle said ‘in time’, he nevertheless added ‘in indivisible’ so as to indicate what is above time, ‘for all time is divisible’. Thus, as the addition ‘of stone’ in the expression ‘ship made of stone’ destroys its being a ship, so also the addition of ‘indivisible’ to time cancels its being a time.<sup>37</sup>

If this is the only way to preserve the intellection of forms from falling into time, it seems an almost purely rhetorical strategy! Another solution would be to accept the idea that the intellection of forms also happens in continuous time. But this move would certainly amount to rejecting the neoplatonic conception of time and the human soul.

Giulio Castellani, faithful for the most part to Porzio’s psychology, embraced that position in the late 1550s and offered a viable alternative to the Simplician interpretation that gave a new impulse to the debate on the time of the intellect.<sup>38</sup> Castellani’s interest in the question of intellectual time seems to originate in a quite different context, namely the reading of *Nicomachean Ethics* 10.3 (1174a 16–19), where it is claimed that pleasure occurs in an instant.<sup>39</sup> Castellani first commented on that claim in his *Aduersus M. Tullii Ciceronis academias quaestiones disputatio* of 1558. Against the theory of pleasure presented in Porzio’s *De Dolore*, Castellani follows the fifteenth-century editor and

36 Genua recalls Themistius’ saying, “Hoc est, ut inquit Themistius, de mirabilibus intellectus; audit in tempore, intelligit autem non in tempore, sed in nunc temporis”: Genua, *In tres libros Aristotelis de anima*, 164v.

37 ‘Simplicius’, *On Aristotle On the Soul* 3.6–13, 254, 20–23. On ‘lapidea navis’, see also Genua, *In tres libros Aristotelis de anima*, 164v.

38 Kessler, “The Intellectual Soul,” 521–22.

39 Giulio Castellani, *Aduersus M. Tullii Ciceronis academias quaestiones disputatio* (Bologna, 1558), 81: “Voluptas ... est enim quoddam totum, nulloque in tempore voluptatem quispiam accipiet, cuius species, si maior tempore fiat, perficietur.” Pleasure, Aristotle says, is “a whole, and one cannot at any moment put one’s hand on a pleasure which will only exhibit its specific quality perfectly if its duration be prolonged”: Aristotle, *Nicomachean Ethics*, transl. Harris Rackham (Cambridge-London, 1994), 591. On this passage of the *Nicomachean Ethics*, see Sarah Broadie, *Ethics with Aristotle* (Oxford, 1991), 340–43.

commentator on the *Nicomachean Ethics*, Donatus Acciaiolus (1429–1478). Acciaiolus explains that pleasure in Aristotle, far from being the result of a motion, is always produced “in an instant” or “moment of time,” that is to say without any process or delay. Like “the vision of light” or “the representation of an image in a mirror” that can be immediately perceived by the beholder, Acciaiolus says, pleasure happens “*tota simul*”: it requires no time to be experienced and whenever it has to be prolonged, like a visual image lasting for several minutes, it will nonetheless be entirely actualised “in every part and at every point” of its duration.<sup>40</sup> In *Metaphysics* 9.6, Aristotle indeed argues that vision does not need time to occur. It is immediately completed: “At the same time we are seeing and have seen, are understanding and have understood, are thinking and have thought,” (1048b 23–24) because the end pursued is entirely achieved in the act itself. Present and perfect tenses, Aristotle argues, are therefore conjoined in that particular circumstance.<sup>41</sup> From that analysis of vision and pleasure Castellani coins a distinction that allegedly applies to all the “powers of the soul”: a “proper sensible”, insofar as it is known as “delectable”, will give birth to a “first generation of pleasure” once it is perceived. Then, that first action will be completed by a second action, unfortunately ignored by Acciaiolus, when the “*virtus appetendi*” is put into motion and develops into an enjoyable movement or activity.<sup>42</sup> Castellani distinguishes two modes of pleasure, one linked to the reception (*suscipere*) of ‘species’, the other one to enjoyment (*fruor*). In the first case, pleasure is a pure sensation; it can affect any animal and does not depend on common sense as Porzio unsuccessfully argues. But Castellani’s claim is that human sensation, when taken as a whole and including the second mode of pleasure, inevitably requires awareness as

40 *Aristotelis Ethicorum ad Nicomachum libri decem. Joanne Argropylo Byzantio interprete* (Lyon, 1544), 837–38. The comparison of pleasure and vision is also to be found in Castellani, *Aduersus M. Tullii Ciceronis academias quaestiones*, 92–93.

41 Aristotle, *Metaphysics*, transl. David Ross, in *The Complete Works of Aristotle*, ed. Jonathan Barnes (Princeton, 1991), 1656.

42 Castellani, *Aduersus M. Tullii Ciceronis academias quaestiones*, 82–83: “Profecto in voluptate (idem autem erit & de dolore iudicium) ut in caeteris rebus, quae in animae potestatibus subsistunt, duo praesertim expostulantur, a quibus haec ortum ducit, atque perficitur, & ratione quorum eam duobus modis considerare potes. Alterum quidem est, ut in appetitu organo rei delectabilis species recipiatur, scilicet ut proprium sensibile cognitum, quatenus delectabile est, cum primo concitet, ac deducat in actum. & hic est primus voluptatis ortus, qui cum perse non sufficiat, ut ea compleatur, alterum postulat, quod quidem est ut appetendi virtus specie iam recepta fruatur, hoc est, hiet, iucundoque quodam motu diffundatur”; Castellani, *Aduersus M. Tullii Ciceronis academias quaestiones*, 84: “Quod minime Acciaiuolus consideravit.”

well as duration and cannot be simply said to be instantaneous. It is precisely in order to justify this assertion that he refers to *De Anima* 3.6 and engages with Aristotle's subtle distinction between an 'instant' and 'indivisible time', insisting that our intellect, because it is tied to phantasms, is necessarily entangled with temporality.<sup>43</sup>

Castellani devoted another substantial discussion to this question three years later in a chapter of his *De humano intellectu* (1561) significantly entitled "On the triple act of the intellect: that our intellection cannot be achieved in an instant, but always requires some time."<sup>44</sup> In this chapter he openly maintains the temporal nature of intellectual activity: "Either simply apprehending things, or composing and dividing, namely discoursing, intellection demands a determinate lapse of time, [it being] given that no action of our intellect can be completed within an instant."<sup>45</sup> What Castellani calls an "entirely new and amazing opinion" is based, he argues, on textual evidence: "If this undivided time in which (as Aristotle said above) a length is perceived as an instant, how would it be cut into two parts, since an instant can neither actually nor potentially be cut into parts?"<sup>46</sup> We are therefore induced to conclude that "indivisible time" always means "a continuous time which is one in act" or, as Castellani also puts it, a "space of time."<sup>47</sup> Intellection may therefore be compared to sensation and imagination as far as their generative process is concerned:

Nobody must be amazed that natural generation happens in an instant and that our intelligence, which is some spiritual generation, necessarily

43 Castellani, *Aduersus M. Tullii Ciceronis academicas quaestiones*, 89–90.

44 Giulio Castellani, *In libros Aristotelis de humano intellectu disputationes* (Venice, 1568), 37v: "De triplici intelligendi actu, neque intellectionem nostrum fieri in instanti posse, sed postulare semper aliquid temporis."

45 Castellani, *De humano intellectu*, 38v: "Sive enim simpliciter apprehendat res, sive componat & dividat, seu discurrat ipse, determinati aliquid temporis eius postulat intellectio, cum in instanti ulla intellectus nostri actio perfici nequeat." The passage continues: "Quoniam, licet phantasma in temporis momento sui speciem producat in intellectum, ut etiam efficit color, eiusdem tamen specie functio, quæ intelligentia est, absque tempore absolui nequaquam potest; quod oculo similiter accidit, qui coloris speciem suscipit in instanti, & colorem deinde non cognoscit ac iudicat, nisi dederis huic aliquid temporis."

46 Castellani, *De humano intellectu*, 40v: "Si tempus individuum, in quo supra dixerat percipi longitudinem, instans fuerit, quo pacto in duas hic secabitur partes, cum instans nec actu, nec potentia, ut diximus, in partes secari possit?"

47 Castellani, *De humano intellectu*, 40v: "... ubi per tempus individuum minime instans, sed tempus unum actu continuum accipi manifesto perspexeris"; Castellani, *De humano intellectu*, 41: "Alterum vero, quod nos animadvertere oportet, est eiusmodi obiecti cognitione, quæ ab anima proficiscitur; atque hæc absque temporis spatio perfici nequaquam potest."

requires some sort of time: since in our intellect and our other faculties of knowledge, leaving aside this first production of images and species that happens in an instant, we have judgment and knowledge of the object, which cannot be completed in a moment of time. This is quite clear in sense and imagination. Imagination, indeed, even if it is instantaneously moved by a phantasm, can hardly get to know it within an instant; it always requires some sort of time. I believe that anyone can experience it in oneself: to my mind, one cannot find anybody who has ever managed to perfectly and plainly perceive something in an instant with his imagination. As you may notice, it is the same in the judgment of the senses. We cannot see things going fast and speedily through our field of vision, when a projectile has been shot by this noisy and destructive military machine commonly called a cannon. Indeed, we are not given the time that is necessary for the judgment of our eyes to come up.<sup>48</sup>

Castellani seems to distinguish between two moments within perception: the instantaneous reception of a given and then a judgment giving birth to knowledge and in particular to the identification of the perceived object.<sup>49</sup> One can be 'moved' by the 'species' coming from it but one does not have time to see it at all. There is a dual process in our faculties where intellection as a kind of '*objecti cognitio*' necessarily comes after '*objecti motio*'. What Castellani means is that all cognitive acts are submitted to the same temporality and that instantaneousness is found only in the primitive and confused moment of perception. Castellani's position therefore amounts to immersing the human intellect

48 Castellani, *De humano intellectu*, 40: "Nemini autem mirum videri debet, quod naturalis generatio fiat in instanti, atque intelligentia nostra, quæ spiritualis est quædam generatio, necessario aliquid temporis postulet: quoniam in intellectu nostro, & cæteris cognitione viribus præditis, præter illam primam imaginum, specierumque productionem, quæ fit in instanti, iudicium deinde & cognitione obiecti reperitur, quæ perferri in temporis momento nequeunt. Hoc in sensu, & phantasia valde conspicuum est. Phantasia quidem, tametsi a phantasmate in instanti movetur, huius tamen in instanti cognitionem ea assequi minime potest; sed aliquid semper temporis requirit. Quod quemvis hominem in se ipso equidem experiri crediderim; quippe qui nullum reperiri arbitror, qui hoc unquam fuerit consecutus, ut ullam rem in instanti perfecte planeque, imaginatione perciperet. Idem prorsus in iudicio sensus animadvertes. Illa enim quæ oculorum nostrorum aciem cito ac celeriter transeunt, quod ex obstrepente, & omnia prosternente tormento illo, quod vulgo bombardam vocant, glans eiecta efficit, iccirco videre non possumus: quoniam nobis non datur id temporis, quod iudicium postulat [sic] oculorum."

49 This pattern is similar to the one found in medieval optics where *aspectus* and *intuitio* are neatly separated. See for instance Vitellio, *Peri optikès*, (Nuremberg, 1551), 69v: "Omnis visio fit vel per aspectum simplicem, vel per intuitionem diligentem."

and all its operations within duration. Other philosophers resisted such a radical interpretation of *De Anima* 3.6, and while broadly accepting Porzio's and Castellani's naturalistic turn, they defended a renewed conception of intellectual instantaneousness.

#### 4 The Instantaneousness of Sensation and Intellection: Montecatini's *Lectura De Mente Humana* (1576)

Antonio Montecatini is one of these thinkers and clearly based his reading of Aristotle's *De Anima* on Simplicius. He claims with Genua that the Aristotelian "indivisible time" should not be confused with an "instant" or a "moment of time" because it is "true time,"<sup>50</sup> that is, "continuous and uninterrupted time."<sup>51</sup> However, he openly denies Genua's idea that when Aristotle wrote that extended objects are understood in indivisible time, he was dealing with dianoetic acts.<sup>52</sup> Although it takes place in a divisible portion of time, the apprehension of quantities is noetic in nature since it bears on a simple and undivided content. But Montecatini even more clearly opposes Castellani's treatment of the problem. Although he never mentions him in his survey of *De Anima* 3.6, his move is difficult to appreciate outside of this polemical context. Castellani insists on the discrepancy between sensation and intellection, between 'motion' and 'cognition,' whereas Montecatini's contention is that these operations occur in the same kind of temporality. Even though he seems to come back to the classical thesis that intellection of forms is instantaneous, Montecatini's arguments deserve a careful reading because they show a different understanding of the Aristotelian notions used by Castellani.

50 Antonio Montecatini, *In eam partem III. Libri Aristotelis de Anima, quae est de mente humana, lectura* (Ferrara, 1576), 349.

51 Montecatini, *De mente humana*, 349.

52 Montecatini insists that apprehension of quantities is not to be confused with intellection of complex notions which always occurs in successive and then divided time. Although inferior, intellection of quanta is close to intellection of forms. See Montecatini, *De mente humana*, 344: "Omnino autem mihi acriter cogitanti media quaedam esse hæc forma videtur inter intellectionem formarum, & eam secundi modi, quæ est compositio notionum: quamvis ad illam propius accedat, nam partim similis est utriusque earum & partim dissimilis. Quod enim tempore fiat, quod dividua sit, habeatque partes tam ipsa, quam obiectum illius saltem potestate; ab intellectione formarum degenerat, speciemque sumit intellectionis secundi modi. Quod vero & id, quod comprehenditur, & ipsamet simplex sit, & individua, & una, quodque non *tès dianoias* sit actio, sed *tou nou*; in primo genere reponitur."



Montecatini sets out a series of four justifications to support the idea that the intellection of forms occurs in an instant: from Aristotle's own words (argument 1), from experience (argument 2), from the senses (argument 3) and from "the nature of causes of intellection" (argument 4). Arguments 2 and 3 are particularly intriguing. They are explicitly directed against Genua (who, however, does not seem to hold the position Montecatini attributes to him, at least in his survey of *De Anima* 3.6) and another scholar, Vincenzo Maggi.<sup>53</sup> He reproaches them for "not paying attention to the fact that all forms are understood and grasped by the intellect in a moment of time, even though one can remain as much as one wants and even a long time in the use and contemplation of forms."<sup>54</sup> Montecatini claims not only that intellection is instantaneous but also that this instantaneousness corresponds to a true experience or feeling. Argument 3 reinforces that idea: from the superiority of the intellect to the senses, Montecatini infers that if sensation is instantaneous and happens "in an indivisible time" as explained in *De Anima* 3.2 (426b 29–427a 5),<sup>55</sup> then intellection must also be instantaneous and the expression "indivisible time" has the same meaning in both cases. Montecatini's argument is all the more convincing since Aristotle, when describing the process of intellection in *De Anima* 3.7, explicitly compares science and sensation; he insists that they entail a "motion of a distinct kind" (*De Anima* 3.7, 431a 6), which is indeed different from motion in physical substances. Montecatini develops this point in argument 4 where he emphasizes the difference between progressive and instantaneous change in Aristotle's *Physics*.<sup>56</sup> He had insisted earlier on the analogy with natural philosophy, stressing the fact that intellectual time depends on the motion of spiritual things as tightly as physical time depends on the motion of bodies.<sup>57</sup> Here is the content of argument 4:

53 Montecatini, *De mente humana*, 349. See Genua, *In tres libros Aristotelis de anima*, 163–64. Vincenzo Maggi (1498–1564) taught natural philosophy in Ferrara and had Castellani as a pupil. It has been noticed that Castellani "had derived [his *De humano intellectu*] from a commentary of Maggi on the third book of *De anima*": see *History of Italian Philosophy*, ed. Eugenio Garin, vol. I, transl. Giorgio Pinton (Amsterdam-New York, 2008), 363. See also Castellani, *De humano intellectu*, 2.

54 Montecatini, *De mente humana*, 349: "Cur se non attendunt momento temporis singulas formas comprehendentes, atque intelligentes; etsi in functione earum, contemplationeque possunt, quoad voluerint vel ad longum tempus permanere?"

55 See also Aristotle's *De Sensu* (for instance 447 b 17–19; 448 a 1; 448 b 19–20; 449 a 2–3).

56 See Michel Crubellier, "On Generation and Corruption I. 9," in *Aristotle's On Generation and Corruption I*, ed. Franz de Haas and Jaap Mansfeld (Oxford, 2004), 284–85.

57 When commenting on the assertion that "time is also both divisible and indivisible in the same sense as length," Montecatini adds, "Ut vero corporeo in motu IIII & VI Physicarum

The form insofar as it is of that kind [i.e. intelligible] and not continuous is unqualifiedly indivisible; the mind comprehending it is unqualifiedly indivisible too: therefore (following the fifth and sixth books of *Physics*, in perfect similitude with this bodily motion that happens in a moment, namely generation and corruption, as we declared in our resolution), it is necessary that the form be comprehended and understood by the mind in an unqualifiedly indivisible time as well, which is a moment of time. That claim can be confirmed from an *a minori* argument. Indeed, if bodily generation can be completed in a moment, how much more is this the case with spiritual generation, which is more perfect, and less entangled with matter which has time as a property?<sup>58</sup>

Aristotle argues, indeed, that when something changes, it instantaneously changes into something else and that the time in which such a transformation takes place is an atomic and indivisible moment. “It is clear that that which passes out of existence or comes into existence must do so at an indivisible moment” (*Physics*, 6.5, 236 a 6–7): A when it becomes B either is A or B; if it is A, then it has not changed; if it is B, then it has already changed. Therefore “the thing that has been changed must already exist as the thing into which it has been changed” (235 b 27–28). That conception is connected with another claim according to which the beginning of a motion is not a motion but an instantaneous event, as John Philoponus had already pointed out. But it also echoes an important argument in Aristotle’s analysis of sensation, namely that there are motions without genesis and that sensations “involve no process of becoming, but exist without any such process” (*De sensu*, 6, 446b 4). Here Montecatini uses the same arguments as Castellani, but whereas the former considers immediate apprehension, especially in the case of knowledge, as incomplete, the

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sequebatur continuatio, divisioque temporis, continuationem, ac divisionem rei, quæ moveretur: sic quoque in intelligentia, quæ est motus spiritalis, ut in resolutionibus dicebam, conveniens est, ex rei, quæ intelligitur divisione, continuationeque pendere continuationem, & divisionem temporis”: Montecatini, *De mente humana*, 344.

58 Montecatini, *De mente humana*, 349: “Novissime, & est ratio, quæ ex hoc textu sumitur, forma qua huiusmodi est, & non qua continua, est simpliciter individua; simpliciter etiam individua est mens, quæ illam comprehendit: ergo (quemadmodum ex *Physics* v & vi similitudine perfecta motionis corporeæ, quæ momento sit, idest ortus & interitus in resolutione declaravimus) necesse est, ut in tempore etiam simpliciter individuo, quod est momentum temporis, forma comprehendatur a mente, atque intelligatur. Confirmari potest hæc ratio per locum a minori. Nam si absolui momento potest generatio corporea; quanto magis poterit spiritalis, quæ est perfectior quam illa, minusque implicata cum materia, cuius materiæ proprium est tempus?”

latter holds that instantaneousness is a true aspect of human experience and that it qualifies sensation and intellection in the same way. The Aristotelian conception of sensation helps support the view that intellection is not a temporal event, at least in Castellani's sense, and that it is different from the atemporality of eternity as well as the coming-to-be of natural substances.

## 5 Francesco Piccolomini's Temporal Dualism

Although he is best known for his *Comprehensive Philosophy of Morals* and his lifelong rivalry with Jacopo Zabarella, his colleague at the University of Padua,<sup>59</sup> Francesco Piccolomini also took part in the debate on 'indivisible time' and gave a valuable commentary on *De Anima* 3.6 in his *In tres libros Aristotelis de anima lucidissima expositio* of 1602. Some of his arguments had already been formulated in the fifth part of his *Libri ad Scientiam de Natura* (1597). Piccolomini clearly endorses the naturalistic approach that was developed by some of his contemporaries. He offers what can be considered as a middle position in the early modern debate over the time of the intellect: trying to reconcile the view that "spiritual action is accomplished in an instant" and the opposite claim that "intellection is our action and we are subject to time."<sup>60</sup>

To the question "whether the first operation of the mind concerns indivisibles and is done in an indivisible time," Piccolomini answers that the intellect always apprehends indivisibles even if they are not always pure indivisibles but actually undivided notions like quantities.<sup>61</sup> There is nothing original here. What is less ordinary is the way he solves the second part of the question. He

59 See Jill Kraye, "Francesco Piccolomini," in *Cambridge Translations of Renaissance Philosophical Texts: Volume One, Moral Philosophy*, ed. Jill Kraye (Cambridge, 1997), 68. See also Artemio Enzo Baldini, "Per la biografia di Francesco Piccolomini," *Rinascimento*, series II, 20 (1980), 389–420.

60 Francesco Piccolomini, *In tres libros Aristotelis de anima lucidissima expositio* (Venice, 1602), 181v: "Apparet id facere momento, tum quia actio spiritalis momento fit, ut patet de Visu, tum insuper, quia Mens est individua, & simul tota, quare similiter eius actio, tum tertio, quia rei essentia individua est, tum quarto, quia actio perfecta est tota simul, & non est motus qui est actus imperfectus, intellectio autem est actus & actio perfecta. Ex adverso, intelligere est actio nostra, nos autem subjicimur temporis, & ut intelligamus praesertim latentiora, egemus ocio, & tempore."

61 Francesco Piccolomini, *Naturae totius universi scientia perfecta et philosophica* (Frankfurt, 1628), 1830: "An prima operatio Mentis fit indivisibile, tempore indivisibili, & simul unius obiecti tantum"; Piccolomini, *Naturae totius universi scientia*, 1830: "Semper itaque mens est indivisibile."

seems to support the claim that all cognitive acts, even those bearing on essences, have a certain duration:

I say that occurring in an indivisible time is twofold, either in a potentially indivisible time, that is in a moment, or in an actually indivisible time, that is in a continuous & undivided time. Assuming that, I say three things. First, the convenient application of a faculty to an object occurs in some continuous and undivided time. Aristotle rightly says in his book *On Memory and Reminiscence* [*De Memoria* 1, 450a 6–7] that we do not understand anything without continuum and time.<sup>62</sup> For example, even though we see in a moment, nonetheless we do not see a projectile shot by a catapult because of its fast motion, since there cannot be any proximate application of our faculty.<sup>63</sup>

The military example is visibly borrowed from Castellani. The idea that perceptive and intellectual acts share the same pattern reminds the reader of both Castellani's and Montecatini's positions. But Piccolomini understands it in quite different manner: while Castellani says that one has a primitive image of a thing but not the time to see it – that is, to judge – Piccolomini argues that one does not have time to apply the faculty of vision and hence one does not even have a first perception of the projectile. The consequence is that, according to Piccolomini, one needs time to get a first perception before judging, whereas in the case of Castellani one has first a confused perception and then one needs time to make a judgment about what is perceived. Thus, we can say that intellection occurs in continuous time insofar as it depends on a faculty that has to be applied to an object. But if considered in its own right, the act of intelligence, which Piccolomini also calls a “judgment,” “occurs in a moment”:

Since the faculty is indivisible, as it is said in the twelfth book of *Metaphysics*, text 51 [12.10, 1075a 5–10], its object (as we have seen) is indivisible. That is the reason why it is necessarily apprehended in an indivisible

62 Aristotle does indeed say at *De memoria* 450a 6–7 that “it is impossible to think of anything without continuity, or to think of things which are timeless except in terms of time.”

63 Piccolomini, *Naturæ totius universi scientia*, 1830–31: “Dico, fieri tempore indivisibili, dupliciter contingere, vel in indivisibili potestate, hoc est momento, vel in indivisibili actu, hoc est, tempore continuato, & non diviso. Quo assumpto, tria profero, primum est, congruens applicatio facultatis ad obiectum fit tempore aliquo continuato, & non diviso, ita recte dicitur in lib. De Memor. & Reminiscencia, nos nil intelligere sine continuo & tempore; veluti etiam quamvis momento videamus, tamen pilam tormento bellico expulsum, ob velocem motum non videmus, quia non potest fieri congruens applicatio.”

time, namely in a moment. As Aristotle teaches us in the third book of *De Anima*, text 28 [3.7, 431a 5], the sense is neither affected nor altered by a sensible object, and it is another species of motion; indeed motion is the action of the imperfect, but action unqualifiedly considered is action of the perfect. Aristotle indicates that the action of feeling is perfect and accomplished all at once as Simplicius declared in his exposition, and also Averroes. Because of that, Aristotle has said in his *Metaphysics*, text 22 [9. 10, 1051b 23–26] that the object can be touched or not touched – touching it is truth, not touching is falsity – and that the touch of indivisibles is indivisible. These things I have said are true of the mind, and they are also somehow true of sense: indeed, the connection of the faculty with the object needs some undivided time, when it is about things conjoined with time, but judgment occurs in a moment and at the end of time.<sup>64</sup>

The phrase ‘*in termino temporis*’ is equivalent to ‘*in momento temporis*’ or ‘*in nunc temporis*’ and means nothing other than an instant. It comes from the idea that neither the end nor the beginning of a time, as we saw earlier, is properly a time in Aristotelian physics. For Piccolomini, instantaneousness does not qualify any ‘motion of the object’ that would be prior to intellectual acts. While the application of the intellectual faculty takes time, judgment or ‘apprehension’ instantaneously occurs once the faculty has been properly applied to the object, at least in the case of ‘objects conjoined with time.’ There is indeed an ambiguity here: does it mean that intellections bearing on non-temporal objects, like essences, do not need any previous application of the mind and that we reach them with no delay? Another problem concerns the notion of application. Piccolomini insists twice that the application of a faculty must occur in an actually undivided time. But he holds a different position in his *De*

64 Piccolomini, *Naturæ totius universi scientia*, 183r: “Quia facultas est indivisibilis, ut dicitur duodecimo *Metaphysicæ*, 51, obiectum (ut patuit) est indivisibile, quare est necesse, ut apprehendatur tempore indivisibili, hoc est momento, hoc nos docet Aristot. in 3 de *Anima*, & ob id in com. 28 inquit, sensitivum a sensibili non pati, nec alterari, & eam esse aliam speciem motus, nam motus imperfecti actio est, quæ vero simpliciter actio, alia est quæ perfecti, indicans sentire esse actionem perfectam, & totam simul, ut declarat in eius expositione Simplicius, necnon Averroes. & ob id ipsum Aristoteles *Metaphysicæ*, 22 dixit: Obiectum vel attingi, vel non attingi, attingere illud, verum est, non attingere falsum, tactus autem indivisibilium, indivisibilis est. Hæc quæ dixi præsertim vera sunt de mente, modo etiam aliquo vera sunt de sensu: nam connexio facultatis cum obiecto, eget tempore aliquo non diviso, cum sit rerum conjunctarum cum tempore, iudicium tamen fit momento & in termino temporis.”

*Anima* commentary, saying that such an application cannot be “all at once”: it necessarily comes “through a succession because of its link with *phantasia*.”<sup>65</sup> The situation described by Piccolomini is probably different in each work: in the commentary he is dealing with the human mind insofar as it is confronted with “hidden things (*latentiora*)” and is compelled to investigate; in the *Naturæ totius universi scientia*, the object is, so to speak, a given and the application of the intellectual faculty is not hindered by any obstacle. But nevertheless it requires some time while apprehension, which amounts to the actualization of that same faculty, is immediately accomplished.

A third stage of the intellective process must be taken into account and may help to clarify Piccolomini’s purpose:

I add a third point. While we are in the process of knowing a certain essence and are versed in the inspection and contemplation of it, it is said to happen in an actually indivisible act, that is undivided, and the Philosopher uses that way of speaking, ‘actually indivisible’, because, even if we have been engaged in the contemplation of a simple essence for one hour, yet such a contemplation is all at once at every moment, because it is a perfect act and not imperfect as motion, just as the sun goes on illuminating the air for hours and does it in indivisible time because its illumination is entire and perfect at every single moment.<sup>66</sup>

Piccolomini deals here with what he will call “conservation of judgment” in his *De Anima* commentary, that is to say when “we persist in the contemplation of an object,” which undoubtedly takes time.<sup>67</sup> But, even though it is temporal, such a process entails something instantaneous. The analogy between illumination and contemplation is quite telling: the immediate transmission of light through the diaphanous medium is used in chapter 6 of Aristotle’s *De Sensu*

65 Piccolomini, *In tres libros Aristotelis de anima*, 181v: “Nam pro applicatione ita requiritur tempus, ut non sit tota simul, sed fiat successione quadam ob nexum cum Phantasia.”

66 Piccolomini, *Naturæ totius universi Scientia*, 183r: “Addo tertio, dum noverimus essentiam aliquam, & versamur in eius inspectione & contemplatione, id dicitur fieri tempore indivisibili actu, hoc est non diviso, & utitur Philosophus hoc loquendi modo, indivisibili actu: quia quamvis per horam versemur in continuata contemplatione unius simplicis esse essentiae, ea tamen contemplatio in quovis momento est tota simul, quia est actus perfectus, non autem imperfectus, ut motus, veluti dum sol per continuatas horas aerem illustrat, dicitur id facere tempore indivisibili; quia ea illustratio singulis momentis est tota, & perfecta.”

67 Piccolomini, *In tres libros Aristotelis de anima*, 181v.

(446 a 25-b 13)<sup>68</sup> as another model for the instantaneousness of sensation. Piccolomini insists that illumination has an objective or cosmic duration ('for hours') but considered as one act, having no variation in itself, it must be said to occur in an "actually indivisible moment."<sup>69</sup> Illumination is neither a physical motion nor a successive process composed of multiple flashes of light: it is one flash lasting for a definite period of time. It is the same with contemplation: the instantaneous apprehension is maintained through time and for that very reason it cannot be one in the purest sense of the word. It only has the oneness of an enduring psychological event, even if the very content of contemplation is something alien to extension and duration.<sup>70</sup>

Piccolomini's treatment of contemplation is instructive: just like the intellection bearing on divisible objects, it entails a certain relationship to time because the conservation of the intellectual act depends on the temporal functioning of a faculty. According to him, that is the key to *De Anima* 3.6:

When Aristotle said that the intelligible is understood in undivided time, he meant the apprehension along with its conservation and contemplation, and he used that way of speaking, saying that it occurs in an indivisible or not divided time, because, as I said, in every moment intellection is all at once<sup>71</sup>

68 See also *De Anima* 2. 7 (418 b 20–419 a 6).

69 Aristotle insists on that point in *Physics* 4.11 218b 21–23, with the famous example of the Sardinian sleepers: "For when we experience no changes of consciousness, or, if we do, are not aware of them, no time seems to have passed."

70 Piccolomini also considers the objection that the intellection of an essence is not necessarily accomplished all at once; Piccolomini, *Naturæ totius universi scientia*, 1831: "Nonnunquam essentiam aliquam primo noscimus in parte, ut noscendo genus eius, mox exacte noscendo postremam differentiam, quare apprehendimus indivisible cum divisione, & ille actus non est unus, & perfectus, sed ex imperfecto tendit in perfectionem." He gives the following answer: "Respondeo, dum id facimus, perinde disponimur, ac dum continuum in partes dividimus, & partes seorsum distincto tempore indivisibiliter apprehendimus, nam seorsum considerando & genus, & differentiam, eas consideramus ut essentias distinctas, & quamlibet apprehendimus indivisibiliter, tunc tamen essentiam rei dicimur attingere, dum attingimus differentiam postremam, quæ est totum id, quod proprie est, & id facimus momento." He further confirms that discourse and reasoning are made "ex indivisibili ad indivisibile": Piccolomini, *Naturæ totius universi scientia*, 1836.

71 Piccolomini, *In tres libros Aristotelis de anima*, 181v: "Aristot. inquiring intelligibile intelligi tempore individuo, denotavit apprehensionem cum eius conservatione, & contemplatione, & usus est eo loquendi modo, dicendo, quod fiat tempore indivisibili, sive non diviso, quia ut dixi in quovis eius momento intellectio est tota."

Considered as a whole, intellection is made ‘in undivided time’ since it contains a complex structure including application and conservation. But it also occurs ‘in true indivisible time’ as long as apprehension is done all at once at every moment within the very time of knowledge. Contrary to Montecatini, who classically distinguishes between the intellection of the pure indivisibles (in an instant) and of the actually undivided (in continuous time), Piccolomini claims that there is something instantaneous at the core of every intellection, namely ‘judgment’. The divisibility of the intellectual act does not depend on the nature of its content, but rather on the way the psychological process of intellection is carried out.

## 6 Conclusion

“Alexandrianism” is a concept coined by Ernest Renan, used to define “the close relation between the denial of the immortality of the soul and the ‘naturalistic’ approach to nature in the tradition of Aristotle’s *De Generatione et corruption*.”<sup>72</sup> An interesting aspect of the debate over intellectual time is indeed the attempt to think of intellection as a temporal reality, produced by the mind. In that particular framework, sense-perception and intellection are not opposed because they are understood as referring to separate realities or experiences, but seen as natural events capable of being compared and described with the same theoretical tools. From Porzio to Piccolomini, the Aristotelian concept of ‘act’ or *energeia* appears as a key notion, implying a renewed description of the psychology of faculties and their mutual relationships. In such a context, time is no longer conceived only as a feature of *motion* (in terms of Aristotle’s *Physics* alone), but also as an aspect of *acts*, either mental, corporeal, or involving both mind and body, such as sensation, intellection or judgment. Because these acts occupy a very short lapse of time or are said to be instantaneous, they are sometimes considered to be different components of one activity developing in a temporal sequence rather than independent operations. Although they disagree over the meaning of Aristotelian concepts, Castellani, Montecatini and Piccolomini give detailed descriptions of the different stages leading to the act of intellection.

72 Eckhard Kessler, “Metaphysics or Empirical Science? The Two Faces of Aristotelian Natural Philosophy in the Sixteenth Century,” in *Renaissance Readings of the Corpus Aristotelicum*, ed. Marianne Pade (Copenhagen, 2001), 100. See also Eckhard Kessler, “Alexander of Aphrodisias and his Doctrine of the Soul. 1400 Years of Lasting Significance,” *Early Science and Medicine*, 16 (2011), 1–93.



If we take a broader view, we can also stress the importance of the notion of ‘instantaneousness’ in the Aristotelian psychology of cognition. It is most obvious in renaissance philosophers like Genua or Montecatini who reject the idea that mental acts, although not eternal, may have a natural duration. Sensation and intellection are both instantaneous and preserved from the temporality of becoming. But this tight relationship between instantaneousness and mental activity can be found elsewhere. It is frequently used to account for the operations performed by the human mind. For instance, philosophers claiming that the intellect can know many things at once sometimes argue that one intellectual act, like a judgment, can entail several operations of the mind and that those operations are achieved ‘in an instant’.<sup>73</sup> A similar use of instantaneousness is to be found in the Renaissance and early modern discussion over the status of enthymematic reasoning.<sup>74</sup> In this case, the discussion bears on the question whether the conclusion and the minor premise of a syllogism can be known together in the same instant, as Aristotle seems to suggest in *Posterior Analytics* 1.1 (71a 17–24).

Despite all this, we should not overestimate the impact of these conceptions on the early modern philosophy of time. If we look at Aristotelian discussions on this topic at the beginning of the seventeenth century, it clearly appears that the theological model of angelic thought is still prevalent in most theological and philosophical works at this time. The Coimbra commentary on *De Anima* argues that the structure of the human intellect is ‘circular’ and atemporal and must be contrasted with the ‘linear’ structure of sense.<sup>75</sup> And when Descartes claims in 1648 that intellectual time knows some sort of ‘succession’

73 Some indications on this point can be found in Olivier Dubouclez, “*Plura simul intelligere. Éléments pour une histoire du débat médiéval et renaissant sur la simultanéité des actes de l’intellect*,” in *Recherches de théologie et de philosophie médiévale*, 81/2 (2014), 249–85.

74 On the instantaneous grasp of syllogistic propositions, see Collegium Conimbricensis, *In universam Aristotelis logicam* (Coimbra, 1604), 162–164; Collegium Conimbricensis, *In universam Aristotelis dialecticam* (Cologne, 1611), 460–464.

75 Collegium Conimbricensis, *Commentarii in tres libros De anima Aristotelis* (Cologne, 1629), 409–10: “Docet vero animam humanam cognoscere quidem rem singularem, eamque sensibilem sensitiva potentia: universalem vero vel potentia separabili, id est diversa realiter, vel re quidem una, sed secundum rationem diversa: & quæ se habeat ad seipsam ut linea inflexa ad semetipsam rectam. Sicut enim cum inflexa magnitudo in rectum porrigitur, eademet linea, quæ antea flexa, seu curva erat, sit recta, neque tamen a se realiter, sed ratione tantum differt: ita fortassis (nec enim hic propositam controversiam ex toto dirimit) sese haberet facultas, qua universale, & qua singulare sensibile cognoscitur.” On the interpretation of this passage, see Edwards, “Time, Duration and the Soul,” 115.

and is no different from the physical time of corporeal substances, Antoine Arnauld reproaches him for sustaining a very uncommon position, which contradicts most philosophers and theologians.<sup>76</sup> In this respect, it is important to emphasize that the rise of Alexandrianism in the course of the sixteenth century is linked to a specific cultural context. Since mortalists no longer consider the body as an instrument of the soul, potentially detachable from it, but, in line with Galen's psychology, as the necessary basis of everything mental and intellectual, Aristotelian scholars were invited to emancipate their philosophical and psychological reflection from the authority of theology. Mortalism encouraged the development of a 'purified' Aristotelian model whose defenders were led to read Aristotle and theorize without the usual limitations and requirements imposed by faith. Even to some opponents of Pomponazzi, this appeared to be a sound way of doing philosophy. Francesco Piccolomini is a good example of this trend: while he is an open defender of the immortality of the soul, he develops his reflection on intellectual time within the framework originated by Alexandrist scholars like Porzio or Castellani.<sup>77</sup> It is quite understandable that the topic of time would receive special attention within that context. Given that the conceptual justification of eternity or immortality, linked to the eschatological aspects of Christianity, has always been a major concern for theologians, describing the relationship of human thought to time apart from the model of separated substances was undeniably a new and challenging enterprise.

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76 See René Descartes, *Principia philosophiae*, 1, § 57, in *Œuvres de Descartes*, ed. Charles Adam and Paul Tannery, 11 vols. (Paris, 1996), 8: 27; Arnauld to Descartes, June 3, 1648: *Œuvres de Descartes*, 5: 188–89; Descartes to Arnauld, June 4, 1648: *Œuvres de Descartes*, 5: 193; Descartes to Arnauld, July 29, 1648; *Œuvres de Descartes*, 5: 223. See Jean-Luc Solère, "Descartes et les discussions médiévales sur le temps," 335–41.

77 See Martin, *Subverting Aristotle*, 81, also 54–59. On Piccolomini's arguments in favour of the immortality of the soul, see Emily Michael, "Renaissance Theories of Body, Soul and Mind," in *Psyche and Soma: Physicians and Metaphysicians on the Mind-Body Problem from Antiquity to Enlightenment*, ed. John P. Wright and Paul Potter (Oxford, 2002), 161–62.