## THE CONCEPT OF MOTION IN JACQUES LEGRAND'S PHILOSOPHICAL COMPENDIUM

# EL CONCEPTO DE MOVIMIENTO EN EL COMPENDIUM FILOSÓFICO DE JACQUES LEGRAND

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#### Abstract

The following paper investigates the concept of motion in Jacques Legrand, a hitherto little-studied author of the early fifteenth century. Legrand, an important member of the *Order of Hermits of Saint Augustine*, wrote a philosophical *Compendium* for the students of his Order. This contribution first attempts to provide a contextualization of Legrand's treatment of motion within this work. Legrand's contribution to philosophical encyclopedism is here discussed. Secondly, it reviews the most important theories on the nature of movement in the Middle Ages. Thirdly, it offers a detailed analysis of Legrand's arguments in support of the nominalist view that it is unnecessary (if not wrong) to consider the local motion as a *fluxus* added to the moveable body. The article suggests that Legrand's generalized nominalist position may be connected with certain lines to be followed within his own Order or even with the anti-realist ideology of the conciliarists philosopher, like Pierre D'Ailly and Jean Gerson.

#### **Keywords**

Aristotle; Jacques Legrand; Nominalism; Medieval Encyclopedism; Medieval Physics

#### Resumen

El siguiente artículo investiga el concepto de movimiento en Jacques Legrand, un autor de principios del siglo XV hasta ahora poco estudiado. Legrand, miembro importante de la Orden de los Ermitaños de San Agustín, escribió un compendio filosófico para los estudiantes de su Orden. Esta contribución intenta en primer lugar proporcionar una contextualización del tratamiento del problema del movimiento llevado a cabo por Legrand en su *Compendium*. Aquí se discute la contribución de Legrand al enciclopedismo filosófico. En segundo lugar, se revisan las teorías más importantes sobre la naturaleza del movimiento en la Edad Media. En tercer lugar, se ofrece un

análisis detallado de los argumentos de Legrand en apoyo de la visión nominalista según la cual es innecesario (si no erróneo) considerar el movimiento local como un *fluxus* añadido al cuerpo en movimiento. El artículo sugiere que la posición nominalista generalizada de Legrand puede estar conectada con ciertas líneas a seguir dentro de su propio orden o incluso con la ideología antirrealista de los filósofos conciliaristas, como Pierre D'Ailly y Jean Gerson.

#### Palabras clave

Aristóteles; Jacques Legrand; nominalismo; enciclopedismo medieval; física medieval

#### Introduction\*

In this paper I shall examine Jacques Legrand's ideas about the concept of motion as presented in a special chapter of his only known text on natural philosophy, the *Compendium utriusque philosophie.* By treating the concept of motion, it is evident that my primary aim will be to contribute to our understanding of the late medieval history of natural philosophy. However, this will only be as a subordinated purpose derived from the very nature of Legrand's *Compendium*, this paper is also intended to enrich our knowledge of the late medieval encyclopedic tradition – a research topic which has a long history and has received new attention in the last decades.<sup>2</sup>

As his name does not stand on the top of the list of the best-known Schoolmen philosophers, a few words about Legrand will be of use for the general contextualization

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<sup>&</sup>lt;sup>1</sup> This text, to which I shall refer in abbreviated form as "Compendium," has never been printed. It is conveyed in two manuscripts which are independent of each other: **G** = Genova, Biblioteca Berio, C.F.53, fols. 2r-235v; **P** = Paris, Bibiothèque Nationale, lat. 6752, fols. 4r-236r. For further indications about the manuscripts, see Daniel A. Di Liscia, "The Subject Matter of Physics and Metaphysics in Jacques Legrand's Compendium utriusque philosophie", Revista Española de Filosofía Medieval 24 (2017): 258-259.

<sup>&</sup>lt;sup>2</sup> For an overview, see Christel Meier, "Grundzüge der mittelalterlichen Enzyklopädik. Zu Inhalten, Formen und Funktionen einer problematischen Gattung", in *Literatur und Laienbildung im Spätmittelalter und in der Reformationszeit. Symposion Wolfenbüttel 1981*, edited by L. Grenzmann and K. Stackmann (Stuttgart: J. B. Metzlersche Verlagsbuchhandlung, 1984), 467-500, and Christel Meier, "Organisation of Knowledge and Encyclopaedic Ordo: Functions and Purposes of a Universal Literary Genre", in *Pre-Modern Encyclopaedic Texts. Proceedings of the Second COMERS Congress, Groningen, 1-4 July 1996*, edited by P. Binkley, Brill's Studies in Intellectual History 79 (Leiden: Brill, 1997), 103-126.

of this paper and its scope. Jacques Legrand (Jacobus Magnus; approx. 1360?-1418?) was a member of the *Order of Hermits of Saint Augustine* – a fact which is significant for the text I am discussing in this paper.<sup>3</sup> Besides, he gained considerable fame at the royal court, especially due to his critical sermons reprehending the dissipated life of the court. As champion of the Armagnacs against the Bourguignons, he was also deeply involved in the political affairs of the French Kingdom.<sup>4</sup>

Although we are allowed to assume that Legrand aspired as a young man to an academic career, basically only two major works by him are extant in this style: A *Commentary on the Sentences*, which is conserved in only one manuscript and remains still unstudied, and the *Compendium* itself, which originally was intended to also include a part on moral philosophy. The rest of Legrand's literary activity, which is no doubt significant in itself and worthy of attention, is yet scarcely relevant for our topic.<sup>5</sup> He was particularly

<sup>5</sup> Two different texts on the *Sentences* can be attributed to Legrand: a *Lectura super Quattuor libros sententiarum* (MS Tarragona, Biblioteca provincial, 103) and a "*Collatio*" or "*Collectio*" super Sententias, which – somehow implied by the elusive information given in Beltrán, "Jacques Legrand O.E.S.A", 587, 401-402 – is contained in MS Paris, BnF, Arsenal, 481, ff. 28r-36r (the reference to BnF, Arsenal, 542, ff. 28r-36r in ARLIMA (https://www.arlima.net/il/jacques\_le\_grand.html, N° 11 is most likely mistaken. This manuscript contains certainly a series or sermons and other works by Legrand, as his Bible commentary and his *Ars memorandi* but, as far as I can see, not a commentary on the *Sentences*. For a general description, see Henry Martin, *Catalogue des Manuscripts de la Bibliothèque de l'Arsenal*, vol. 1 (Paris: Plon, 1885), 402-404). At least in a subordinated way, one could also include into this group Legrand's *Dicta* on Seneca, Boethius and Aristotle contained in the same MS 481 (Beltrán, "Jacques Legrand O.E.S.A", 587-588. ARLIMA adds MS Würzburg, Universitätsbibliothek, M.ch.q.3, f. 116-145). In two of the "moral" works there are sections on logic and mathematics (see next fn.). Especially the part on Aristotle could have played some role for the multiple references to the Aristotleian corpus within the *Compendium*.

<sup>&</sup>lt;sup>3</sup> There is uncertainty about the exact dates of Legrand's birth and, especially, death. According to Roth, for instance, Legrand lived until 1425 (see Francis Roth, "Jacques Legrand (Jacobus Magni) † 1425", *Augustiniana* 7 (1957): 313-326. The entry "Jacques Le Grand" in ARLIMA (https://www.arlima.net/il/jacques\_le\_grand.html) limits Legrand's life until 1415 and 1418, which seems to be more likely. For an in-depth survey of Legrand's life and writings, see Evencio Beltrán, "Jacques Legrand prédicateur", *Analecta Augustiniana* 30 (1967): 148-209. Evencio Beltrán, "Jacques Legrand O.E.S.A. Sa vie et son oeuvre", *Augustiniana* 24 (1974): 132-160 / 387-414.

<sup>&</sup>lt;sup>4</sup> Legrand was part of the legation sent in 1408 to negotiate with Pope Benedictus XIII about his resignation at the next council. Object of Legrand's verbal strikes were not only the Queen – Isabeu de Bavière – but even the King himself, Charles VI (called "le Bien-Aimé," but also "le Fou") and his brother, the Duke of Orléans, whose assassination in 1407 brought the already complicated situation to an unprecedented state of instability in both foreign and domestic political affairs. For Legrand's sermons, see the previously mentioned papers by Roth and E. Beltrán and Dora M. Bell, *L'idéal éthique de la royauté en France au Moyen Âge d'après quelques moralistes de ce temps* (Genève and Paris: Droz and Minard, 1962), 83-87. Legrand's sermon from Christmas 1396 before the Queen was published by Evencio Beltrán, "Un sermon français inédit attribuable à Jacques Legrand", *Romania* 93 (1972): 460-478, at 468-78 (Legrand's authorship is not sure but Beltrán considers it "très probable," 466). For the political background see Bertrand Schnerb, *Les Armagnacs et les Bourguinons. La maudite guerre* (Paris: Perrin, 1988).

celebrated as an author of a number of moral works, the most famous of which are probably his *Sophilogium* (conserved in more than hundred manuscripts), the *Archiloge Sophie*, and the *Livre des bonnes moeurs*.<sup>6</sup>

For the discussion to follow, it is important to note that there is a direct connection between Legrand's *Compendium* and his academic aspirations within his order. The *Augustinian Hermits* promoted, from the very beginning, the study of grammar and logic. Besides, the chapter held in 1338 at Siena required special training in natural philosophy to become a teacher. Legrand's textbook was intended to attest his own expertise in this field, and thus to fulfil the applicable conditions for becoming a professor within his order. Hence, aspiring to an academic career in this context, it is not surprising that Legrand's *Compendium* complied with the general lines of thought promoted at this time by the *Augustinian Hermits*.<sup>8</sup>

Despite his *Compendium*, Legrand's life did not develop in an academic direction. As significant as his engagement in France's politics and in Church affairs might have been, he was surely not a university figure of the same pedigree as Jean Buridan, Nicole Oresme, Albert of Saxony, or Marsilius of Inghen. Neither can he, in this regard, be compared to his contemporaries, Pierre D'Ailly and Jean Gerson, whom he knew very well.

However, his *Compendium* deserves more attention in many respects, since it displays at many places a deep knowledge of the matter and includes – as far as we can assess according to the current state of research – many original thoughts. As we will see, Legrand's treatment of motion is argumentative, skillful and sophisticated. Furthermore, the *Compendium* represents a suitable tool to evaluate the development of the physical

<sup>&</sup>lt;sup>6</sup> For a general list of works and manuscripts, see the mentioned entry "Jacques Le Grand" in ARLIMA (https://www.arlima.net/il/jacques le grand.html). For a critical edition of Legrand's Archiloge Sophie and Livre des bonnes moeurs, see Jacques Legrand, Archiloge Sophie et Livre des bonnes mœurs (Bibliothèque du XVe siècle 49), edited by E. Beltrán (Paris: Champion, 1986). The first work includes sections on logic (68-82) and on arithmetic, including algorithm and practical computation (227-261). The short-cut characterisation of the above-mentioned works by Legrand as "moral" is – strictly taken - insufficient, as they include many questions on theology, grammar, poetry, and literature in general. But this is not the topic of the present contribution. Some aspects concerning literature and rhetoric are examined by Elsa Marguin-Hamon, "Jacques Legrand: deux langues, deux espaces, un projet double", in L'expérience des frontières et les littératures de l'Europe médiévale (Colloques, congrès et conférences sur le Moyen Âge 26), edited by S. Lodén and V. Obry (Paris: Champion, 2019), 271-292 and Amandine Mussou, "Declairier aucunes choses que la rime contient': lumières de la prose, étincelles du vers chez Évrart de Conty et Jacques Legrand", in Sens, rhétorique et musique. Études réunies en hommage à Jacqueline Cerquiglini-Toulet, vol. 1 (Colloques, congrès et conférences sur le Moyen Âge, 21), edited by S. Albert, M. Demaules, E. Doudet, S. Lefèvre, Ch. Lucken and A. Sultan (Paris: Champion, 2015), 459-472.

<sup>&</sup>lt;sup>7</sup> For a general presentation of the education within the Augustinian Hermits, see Eelcko Ypma, *La formation des professeurs chez les ermites de Saint-Augustin de 1256 à 1354. Un nouvel ordre à ses débuts théologiques* (Paris: Centre d'Études des Augustins, 1965).

<sup>&</sup>lt;sup>8</sup> According to Beltrán (Beltrán, "Jacques Legrand O.E.S.A.", 140), this was the immediate background and motivation for Legrand's writing of his *Compendium*.

theories once the "classical century of natural philosophy" came to an end, a time populated by authors many of whom have been under scrutiny by various scholars since Duhem attributed to them a decisive role in the emergence of modern scientific thought.9

My focus being the understanding of Legrand's ideas on the concept of motion in an adequate context, I will first describe the immediate textual environment within which Legrand's discussion of local motion takes place. I think it important to take into consideration how Legrand divided the subject matter to be treated in his *Compendium*. Second, I will provide the reader with some basic historical and conceptual background needed for a better understanding of Legrand's ideas. This section contains an abridged presentation of the *forma fluens* and *fluxus formae* theories of motion that preceded Legrand. Third, I will revise Legrand's discussion following closely the statements of the *Compendium* one by one and trying to reconstruct the main lines of argumentation.<sup>10</sup> I will conclude my contribution with some remarks about the possible consequences of this tradition of thought in natural philosophy, which might be more significant than up to now assessed, even if Legrand's text itself seems to have experienced only a limited spread.

## 1. The study of motion in Legrand's Compendium

Legrand's *Compendium* forms part of a long tradition of textbooks on "philosophical encyclopedism" in which the focus was put on a presentation of the matters conveyed in the Aristotelian corpus. Yet, Legrand does not "comment" closely on the Aristotelian text itself; he rather carries out his own selection of the topics, also explaining the opinion of other authors which he seldom mentions by name (*aliqui*) and, of course, his own views.<sup>11</sup>

His text, he emphasizes, deals with natural philosophy, but this does not have to mean that metaphysics is left out of the program. On the contrary, both disciplines can

<sup>&</sup>lt;sup>9</sup> After having abundantly scrutinized the concept of motion in one of her *Studien*, Anneliese Maier concludes: "Das Jahrhundert, das um 1277 mit dem Physikkommentar des Aegidius Romanus beginnt und 1377 mit dem *Traité du ciel et du monde* des Nicolaus von Oresme endet, ist eben noch kein erstes, klassisches Jahrhundert der Physik', aber es ist ohne Zweifel ein klassisches Jahrhundert der Naturphilosophie," Anneliese Maier, *Zwischen Philosophie und Mechanik*, Studien zur Naturphilosophie der Spätscholastik V (Roma: Edizioni di storia e letteratura, 1958), 382.

<sup>&</sup>lt;sup>10</sup> In this paper I will give the passages of Legrand's *Compendium* from my still unpublished critical edition. Occasionally, I shall add some single remarks when the difference between both manuscripts is relevant for the content of this paper.

<sup>&</sup>lt;sup>11</sup> Legrand's *Compendium* seems to satisfy thoroughly the three conditions uttered by Ventura to describe a "philosophical encyclopedia"; see Iolanda Ventura, "On Philosophical Encyclopaedism in the Fourteenth Century: The *Catena aurea entium* of Henry of Herford", in *Une lumière venue d'ailleurs*. Héritages et ouvertures dans les encyclopédies d'Orient et d'Occident au Moyen Age. Actes du colloque de Louvain-la-Neuve, 19-21 mai 2005 (Réminisciences 9), edited by G. de Callataÿ and B. Van den Abeele (Louvain-la-Neuve: Centre de recherche en histoire des sciences, 2008), 199-245, at 200-201.

collaborate with each other.<sup>12</sup> Motion – the key notion for the understanding of nature – is a good example of this double and complementary approach from a physical and metaphysical point of view:<sup>13</sup>

Thus, when the natural philosopher considers the questions of whether the local motion is successive, it would also be suitable to investigate what such a motion is and whether it is to be distinguished from the moveable thing. The first consideration belongs to natural philosophy, the second one to metaphysics.

At the beginning of Part IV, in chapter 37, the content of which we are going to discuss in section 3, Legrand makes it clear that local motion is, as Aristotle had already established in his *Physics*, the principal kind of motion, that its name is derived from the very fact that it takes place "in loco" and – this being the decisive point here – that its successivity results from the resistance of a medium. Yet, before we go ahead – he notes –, it is necessary to discuss "whether local motion is some kind of accident which inheres in the moved thing."<sup>14</sup> Thus, we learn from Legrand's foreword that the question he is going to discuss below in his chapter on local motion is, strictly taken, a metaphysical question embedded, of course, within a natural philosophical framework.

Besides, Legrand's arrangement of the different topics he covers in his encyclopedic work is noteworthy. The *Compendium* is made up of six parts, following one of the already established orders of Aristotelian books on natural philosophy. <sup>15</sup> Legrand aims at an all-

<sup>&</sup>lt;sup>12</sup> "Nam considerationes phisice et metaphisice, cum sint speculative, rationabiliter possunt adunari, quinimmo difficulter possunt ab invicem separari quando precipue aliqua materia debet profundari," Legrand, *Compendium*, **G**, f. 12r; **P**, f. 4r.

<sup>&</sup>lt;sup>13</sup> "Nam cum philosophus naturalis considerat de motu locali utrum sit successivus, bene etiam congrueret investigare quid sit talis motus et utrum distinguatur a re mobili. Prima tamen consideratio pertinet philosophie naturali et secunda metaphisice," Legrand, *Compendium*, G, f. 12r; P. f. 4r.

<sup>&</sup>lt;sup>14</sup> "Inter species mutationis loci mutatio una numeratur, quinimmo motus localis est prior omni motu, ut dicitur 7° *Physicorum*. Et ideo tale nomen accepit, quia fieri habet in loco. Eiusque successio causatur ex resistentia medii vel etiam ex resistentia mobilis vel utriusque, ut dicit Commentator 4° *Physicorum*. Antequam tamen ulterius progrediamur, videre oportet utrum motus localis sit aliquid accidens inherens rei mote," Legrand, *Compendium*, **G** 149v, **P** 144r.

<sup>15</sup> Commentaries or "summaries" of this sort usually start with the *Physics*, it follows *De caelo*, then *De generatione et corruptione*, *Metheora* or *De anima* (here there were some divergent approaches) and the *Parva naturalia*, as far as they are connected to psychology. After this series of genuine Aristotelian texts, the study of more specific matters was planned, assuming to this aim the treatment of the animals, plants and minerals (using respectively *De animalibus*, and *De planctis* and *De mineralibus*). Of course, there are some variations. Paul of Venice, for instance, who was roughly a contemporary of Legrand and also a member of the Augustinian Order, sets forth his *Summa naturalium* with a treatment of the *Metaphysics* after *De anima* (see Paul of Venice, *Summa philosophiae naturalis magistri Pauli Veneti noviter recognita ... restituta* (Venice, 1503; reprint Hildesheim and New York: Georg Olms Verlag, 1974), 92vb-126ra). It seems to be clear that Legrand's *Compendium* follows the mentioned sequences of the *libri naturales*, starting with the first books of the *Physics* and the principles of nature and going through other books to more specific and concrete objects belonging

embracing presentation of natural philosophy which should be useful for students. The intent to offer a "modern" approach to a particular discipline trying not to simplify things too much and giving some place also to contemporary topics and theories is an old challenge. Legrand meets this particular task by arranging the complete part IV of his Compendium around the general concept of "mutation" or "transmutation." Thus, he starts with the notion of transmutation in general (chapters 1-3).16 After a short discussion of the concept of nature (chapter 4), he goes over to a set of problems all related to the "motion according to the substance" (chapters 5-11). He incorporates, here, some of the questions usually treated in the commentaries on *De generatione et corruptione*. Next, he provides a quite detailed analysis of the usual field of maxima et minima as integrated into the commentary tradition (chapters 12-17). Then, he starts the study of the "motion according to the quality" (chapter 7) which represents the background for the discussion of the qualitative changes between contraries (chapters 18-23) and the intensification and remission of forms (chapters 24-26).<sup>17</sup> In the following chapters (27-32) he deals with the "motion according to the quantity" (chapter 27) and further problems related to the notion of quantity itself, as for instance on the continuity of matter (chapters 28-29) and the concept of infinity (chapters 33-36). Finally, he treats the "motion according to the place" (ch. 37, discussed in this contribution), which he follows with two chapters on the concept of place (chapters 38-40), two about the void (chapters 41-42), and two on the concept of time and duration (chapters 43-44). Part IV is concluded with a very short final chapter of action and passion. To sum up: It seems evident to me that Legrand has taken, above all, the main subject matter of Physics V, which is the classification of changes, as a guiding criterion to order the materials in part IV of his own Compendium. By resorting to these four types of transmutatio, "according to the substance," "according to the quality," "according to the quantity," and "according to the place," he was able to condense thematically the content of the books III, IV, and V of the

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to alchemy, botany and mineralogy in the last books. A still useful general overview – with the title of the chapters according to the Paris manuscript – can be found in Thorndike, who was the first to draw attention to this text, see Lynn Thorndike, "An Anonymous Treatise in Six Books on Metaphysics and Natural Philosophy", *The Philosophical Review* 40 (1931): 317-340 and Lynn Thorndike, *A History of Magic and Experimental Science*, 8 vols. (New York: Columbia University Press, 1923-1958), here vol. 3 (1934), 569-584 and 761-66.

<sup>&</sup>lt;sup>16</sup> For an edition of chapters IV, 1-2, see Daniel A. Di Liscia, "Transmutación y movimiento según el tiempo en Jacques Legrand (*Compedium utriusque philosophie* IV, 1-2)", in *Per philosophica documenta. Estudios en honor de Francisco Bertelloni*, edited by C. J. Fernández and M. Pérez Carrasco (Buenos Aires: Editorial de la Facultad de Filosofía y Letras, 2021), 151-175, at 163-173.

<sup>&</sup>lt;sup>17</sup> By the way, examining in chapter 26 the special question (dubium) regarding how to distinguish "actus" from "habitus," Legrand anticipates the theory he is going to support later in chapter 37: "Sic enim dicere solemus quod motus localis non distinguitur a re mobili sed est quedam applicatio mobilis ad spatium..." Legrand, *Compendium*, **G** 136v; **P** 130r.

*Physics* integrating the subjects of the Aristotelian texts he considered unavoidable for students into a general but at the same time critical presentation.<sup>18</sup>

#### 2. Late medieval theories on the nature of motion

Legrand's reflections on local motion are aimed to clarify the notion of motion itself and its metaphysical implications. There was a long chain of discussion descending from Aristotle's admission into university teaching until the beginning of the fifteenth century. For, the essence of motion, of this at its core unstable entity, was for medieval philosophers an obscure question to be examined over and over again. Contrary to a modern approach to physics, such an inquiry was thought to be immediately linked with the logical task of "defining" motion and, consequently, of determining the category to which the *definiendum* belongs.

A curt and careless answer to this problem resorting to authorities was, in this case, hardly possible, since Aristotle himself had backed contradictory positions in different texts and, despite many attempts at clarification, misunderstandings between the Schoolmen themselves were not unusual.<sup>19</sup> When defining "motion" in *Physics*, Aristotle

<sup>&</sup>lt;sup>18</sup> It is to be noted that this traditional classification of (trans)mutations is for Legrand not at all exhaustive. According to him, we are allowed to speak also of a motion according to time. The issue is not directly connected to the problem of the nature of motion we are dealing with here, but rather to its measurement. However, as time is also a successivum and an essential element of every motion. it will be judicious at least to explain it briefly now. Legrand is of the opinion that actually Aristotle has himself omitted this kind of transmutation. The central argument is based on the principle according to which it is impossible to pass from one contradictory to another contradictory without mutation (a principle also mentioned in the discussion about the nature of motion). So, let us suppose that a thing would be subjected to none of the before-mentioned transformations, i.e., no substantial, qualitative, quantitative, or local change would be at work. In this case, the thing could keep on existing for one day or one hour; its duration would be different even if all the rest of it remained unchanged. Thus, the sentence "Socrates is 20 years old" and the sentence – after a certain time - "Socrates is not exactly 20 years old" (since he got older...) are mutually contradictory. A change must have taken place, which is none of those, until now known. So, there has to be an additional kind of "motion according to time." Legrand even declares that we do not need any special act of God to affirm this; we can assume this motion according to time physice loquendo. For a more detailed discussion of this aspect and the corresponding text see Di Liscia, "Transmutación y movimiento según el tiempo", 151-175. Some chapters below, discussing time and duration, Legrand reminds the reader: "Sicut ab exordio libri huius dicebatur inter motus naturales reperitur motus qui fit ad tempus quem non memoravit Aristoteles qui nomine communi dici potest duratio seu antiquatio," Legrand, Compendium, G 158v; P 154r.

<sup>&</sup>lt;sup>19</sup> In this section I will restrict myself to the main theories which are relevant for the understanding of Legrand's *Compendium*. For a general account of the different positions in the Middle Ages on the nature of motion, the work done by Anneliese Maier is still the most excellent help. See above all, Anneliese Maier, *Die Vorläufer Galileis im 14. Jahrhundert*, Studien zur Naturphilosophie der Spätscholastik 1, 2<sup>nd</sup> ed. (Rome: Edizioni di storia e letteratura, 1966), 9-25, and Anneliese Maier, *Zwischen Philosophie und Mechanik*, 61-143. As a help for the reader, I have added

emphasized that there is nothing common to the changes according to the substance, to the quality, to the quantity, and to the place, so it does not make any sense to think of motion as something constituting a category in itself. On the contrary, in the *Categories* – in a much more obscure passage – Aristotle stated that movement would be a special kind of affection, or as it is often said in the commentary tradition from the fourteenth century onward, a *passio* in itself.  $^{21}$ 

Including references to Averroes and Avicenna, Albert the Great formulated the problem in terms which later generations assumed as a basis for further discussion. Averroes had labelled Aristotle's explanation in the *Categories* as *famosior* and the opinion held in the *Physics* as *verior*. He described the problem contraposing the *via* toward the *terminus* to be reached in the process of motion with the *terminus* or *perfectio* itself. For Averroes, according to the *verior* theory, there is no fundamental ontological difference between the process of change and the *perfectio* acquired through it. The existing difference is not but a mere distinction of "more or less" (*magis et minus*). Yet, this "more or less" does not justify the introduction of an independent category for motion, since *de* 

some bibliographical references about the main authors mentioned in this section. The discussion on the different approaches as well as further details are beyond the scope of this paper.

<sup>20</sup> "There is no such thing as motion over and above the things. It is always with respect to substance or to quantity or to quality or to place that what changes, changes. But it is impossible, as we assert, to find anything common to these which [201a1] is neither 'this' nor quantity nor quality nor any of the other predicates. Hence neither will motion nor change have reference to something over and above the things mentioned; for there is nothing over and above them," Aristotle, *Physics*, III.1 200b32-201a10, in *The Complete Works of Aristotle. The Revised Oxford Translation*, 2 vols., edited by J. Barnes (Princeton: Princeton University Press, 1984); translated by R. P. Hardie and R. K. Gaye, vol. 1, 1-16, at 36 (Bollingen Series LXXI.2).

<sup>21</sup> The statement of the problem in terms of "categories" into which motion is to be placed may be typical for medieval philosophy, but as a matter of fact, it hardly fits the way Aristotle had explored the problem. As Cecilia Trifogli warns "Aristotle himself never poses this question in such terms. He does claim that motion or change is always in respect of categorical properties. He also argues that change, strictly speaking, is not in respect of just any categorical properties, but only in respect of properties belonging to four categories: substance, quality, quantity and ubi," Cecilia Trifogli, "Thomas Wylton on Motion", Archiv für Geschichte der Philosophie 77, 2, (1995): 135-154, at 137-138. While, however, the Physics text is clearer regarding the categorisation problem, the corresponding passage in the Categories is very short and by no means unproblematic: "Doing and being-affected admit of contrariety and of a more and a less. For heating is contrary to cooling, and being heated to being cooled, and being pleased to being pained; so they admit of contrariety. And of a more and a less also. [5] For it is possible to heat more and less, and to be heated more and less, and to be pained more and less; hence doing and being-affected admit of a more and a less," Aristotle, Physics, translated by J. L. Ackrill, vol. 1, 2-27, at 18 (Bollingen Series LXXI.2). The main idea seems to be that the qualitative motions of "being heated" and "being cooled" are exemplary cases belonging to the category of "passio." From here, one could assume as a generalization that all motions are passions. Besides these two main Aristotelian sources, a passage in Metaphysics V.6 (1016a5-7), where Aristotle considers motion as a continuous quantity, was occasionally brought into discussion. This idea seems to have found supporters in William of Alnwick and Walter Burley (see below fn. 25).

genere motion belongs to the same category within which it occurs. As Anneliese Maier has pointed out, it was this very distinction as applied to the process of intensification and remission of qualities, that Avicenna found particularly untenable. For him - using Maier's words – "motion is not the form in the process of changing, but the change of the form itself, its fluxus."<sup>22</sup> In his commentary on Physics, Albert reformulated the problem.<sup>23</sup> According to him, the theory sustained by Aristotle in his *Physics*, called "verior" by Averroes and accepted by Albert himself, conceives the process of motion like a "forma fluens" which is essentially identifiable with its terminus. For this theory, the negritudo in doing, or on the way to its term, is nothing other than the *negritudo* itself, it is nothing different from it in essentia, but only in esse. According to the second theory, advanced also by Aristotle in his Categories and defended by Avicenna, "motion" means an independent "fluxus formae," a particular "passio" or a special category inhering in the moveable thing. This theory affirms a fundamental diversity in essentia between the motion ad negritudinem and the term of the motion, the *negritudo* itself, which belongs to the category of the quality. The same conceptualization transposed to local motion, would result in the fact that the process of moving in space from one point to another would be present in the mobile itself as special kind of quality.

William of Ockham's turnaround in natural philosophy has a determining effect for the following generations; as so it was for the discussion around the theories on the nature of motion and, consequently, also for Legrand. Ockham concentrated much of his efforts on a logical-semantical approach to the problem. He emphasized the negative consequences that a careless use of language could have in philosophical controversies, especially regarding the kind of entities which were understood as "successive," first in line, of course, time and motion. In Ockham's minimal ontology, there is no place for such things; only permanent entities like substances and their qualities are accepted. A more accurate analysis of the language would show that an unnecessary multiplicity of entities

<sup>&</sup>lt;sup>22</sup> "Und allgemeiner: nicht die sich verändernde Form ist die Bewegung, sondern die Veränderung der Form, ihr fluxus," Maier, Zwischen Philosophie und Mechanik, 73. This work contains also the essential passages for the understanding of Avicenna's and Averroes's account of motion (62-73). The essential passage of Averroes in his Physics Commentary is: Averroes Cordubensis, Aristotelis de Physico Auditu (Aristotelis Opera cum Averrois Commentariis 8) (Venice, 1562; repr. Frankfurt, 1962), 3.4, ff. 87ra C-rb E.

<sup>&</sup>lt;sup>23</sup> Alberti Magni Opera Omnia, Physica, Pars I, Libri 1-4, edited by P. Hossfeld (Münster: Aschendorff, 1987), lib. III, tract. 1, ch. 3: An in predicamentis sit motus et qualiter sit in illis (149-156). On Albert's analyses in terms of forma fluens and fluxus formae, see Ernest J. McCullough, "St. Albert on Motion as Forma Fluens and Fluxus Formae", in Albertus Magnus and the Sciences. Commemorative Essays, 1980, edited by J. Athanasius Weisheipl (Toronto: Pontifical Institute of Medieval Studies, 1980), 129-153. As Maier has pointed out, this distinction and the clear attribution respectively to Averroes and to Avicenna did not appear until John of Jandun's examination of the question "utrum motus sit eiusdem essentiae cum termino ad quem tendit" (see Maier, Zwischen Philosophie und Mechanik, 83-85).

could be avoided by re-interpreting the involved statements in terms of *permanentia*. Regarding the nature of motion, Ockham's reductive program derives in nothing but a new support of the traditional "verior" view of the *forma fluens* championed by Averroes Albert and others. In fact, Ockham was convinced that a linguistic purification of the question cannot have another output: "Motion" is to be identified with the moving body and with the acquired perfection itself. Aristotle and Averroes – if read carefully – would have affirmed nothing but this theory. In Ockham's approach, however, there is a crucial difference from the previous ways to support the *forma fluens*. According to this theory, we have to deny that motion is a special *fluxus* or category over and above. Ockham agrees with that only via a generalized negation: "Motion" itself, whatever the theory behind it might be, is only a word, not a real entity. We use this word to mean briefly that this particular body was at different places in different times. All there is, in reality, is the body itself (the thing) and the *terminus* (in case of the local motion, the place, the *ubi*). These are *permanentia*, not successive things.<sup>26</sup>

Ockham's general approach to physics provoked different reactions. Walter Burley, for instance, objected on the one side that this deprivation of reality to motion makes natural philosophy impossible in general. On the other hand, resorting to a special passage of Aristotle's *Metaphysics*, he indicated that there are different ways to consider motion and, at least in one of these ways, motion can be understood as the succession or

<sup>&</sup>lt;sup>24</sup> From the numerous texts of Ockham dealing with the concept of motion and claiming the necessity of an accurate linguistic approach, I would like to quote only the following passage from the *Summula*: "Propter modum loquendi multae videntur difficultates de motu quae mihi videntur secundum principia Aristotelis magis vocales quam reales. Si enim uteremur praecise istis vocabulis: movens, motum, motivum, mobile, movere, moveri et huiusmodi, et non talibus: motus, mutatio et consimibilius, quae secundum commune modum loquendi et opinionem multorum pro rebus permanentibus non videntur supponere, multae difficultates et dubitationes essent exclusae. Nunc autem propter talia videtur quod motus sit aliqua res secundum se totam distincta a rebus permanentibus. Videtur enim quod motus sit quidam fluxus, sed res permanens non est fluxus sed per se stans, igitur etc ...," William of Ockham, *Summula philosophiae naturalis*, edited by S. Brown, Guillelmi de Ockham Opera Philosophica et Theologica, Opera Philosophica VI (New York: St. Bonaventure University, 1984), 135-394 at 266-267.

<sup>&</sup>lt;sup>25</sup> However, one has to remember that Averroes' scrutiny received strong criticism by Thomas Wylton and other English authors. Emphasizing the physical aspects of the problem, Wylton rejected the identity between motion and terminus and affirmed at the same time the reality of motion as a via ad formam (Trifogli, "Wylton on Motion", 142 and 145). Others described motion as "defluxus et transitus", as for instance the anonymous commentator in MS. Oxford, Merton College 272, (for the corresponding Latin passage and an English translation, see also Trifogli, "Wylton on Motion", 142). So, it seems that Averroes' approach was not accepted throughout, as until now assumed.

<sup>&</sup>lt;sup>26</sup> For Ockham's physics see in general André Goddu, *The Physics of William of Ockham*, Studien und Texte zur Geistesgeschichte des Mittelalters 16 (Leiden: Brill, 1984), 83-209. Ockham's concept of motion is analysed in Maier, *Zwischen Philosophie und Mechanik*, 100-105; Herman Shapiro, *Motion, Time and Place according to William Ockham* (New York: St. Bonaventure University, 1957); and Marilyn McCord Adams, *William of Ockham* (Notre Dame: University of Notre Dame Press, 1987), vol. 2, 798-827.

the duration itself of a continuous quantity. Moreover, Burley affirmed that motion as a successive quantity is "a thing different from the moveable, since it is an act existing subjectively in the moveable." On the contrary, Ockham's views on natural philosophy found a positive reception in Gregory of Rimini, the General of the *Order of Hermits of Saint Augustine* since the Chapter held in Montpellier (1357). Gregory was rather hostile to several theological doctrines of Ockham, but he integrated a great deal of English philosophical-logic and Ockham's reductive arguments on natural philosophy into this *Commentary to the Sentences*. In a long question to the second book, he examined, in detail, the concept of motion focusing on the problem of existence of successive things. There are some philosophers – Gregory points out – who say, indeed, that motion is a certain entity, which is different *according to its totality* (i.e. not part after part, like in the *successivae*) from the permanent things involved in the motion.<sup>28</sup> This opinion is wrong – he concluded: no motion is such a thing as different from the permanent things, as this opinion sustains.<sup>29</sup>

Jean Buridan followed Ockham's reductive program except for local motion. He conceded that, for the other cases of motion, we can remain within the conceptual frame of the *forma fluens* theory, but for the particular case of the local motion, we cannot get by only with permanent things and need to assume a special *fluxus* added to the moveable.<sup>30</sup>

<sup>&</sup>lt;sup>27</sup> "Patet etiam quod est res distincta a mobile, cum sit actus existens in mobili subiective," quoted by Maier, *Zwischen Philosophie und Mechanik*, 106-117, at 113. This position had been anticipated by William of Alnwick when dealing with the question "utrum motus sit de genere termini ad quem est" (see Maier, *Zwischen Philosophie und Mechanik*, 89-90). For a discussion of Burley's position, above all in comparison to Averroes and Ockham, see Cecilia Trifogli, "Motion and Time", in *A companion to Walter Burley*, edited by A. Conti (Leiden and Boston: Brill, 2013), 267-299.

<sup>&</sup>lt;sup>28</sup> "Dicunt enim quod motus quilibet est quaedam entitas, secundum se totam et quodlibet eius distincta a qualibet et quibuslibet rebus permanentibus, quae fuerunt antequam mobile moveatur, aut sunt dum moveatur, aut errunt postquam cessabit moveri, et illis atque istis simul," Gregorii Ariminensis OESA, *Lectura super Primum et Secundum Sententiarum*, t. IV, Super Secundum, dist. 1-3 (Berlin and New York: Walter de Gruyter, 1979), 125. To be absolutely clear, the difference meant here is valid also with respect to things which could have existed before, during, and after the motion having occurred.

<sup>&</sup>lt;sup>29</sup> "...nullus motus est aliqua talis res a permanentibus distincta, ut fingit opinio," Gregorii Ariminensis, *Lectura*, 128. The background is very-well explained by Kevin Smith, "Ockham's Influence on Gregory of Rimini's Natural Philosophy", in *Dialexeis: Akademaiko etos 1996-7*, edited by V. Syros, A. Kouris and H. Kalokairinou (Nicosia: Homilos Philosophias Panepistemiou Kyprou, 1999), 107-142. Gregory might have had above all Burley's ideas about motion as a model for the theory to be rejected (see Smith, "Ockham's Influence on Gregory of Rimini", 121-22). See also Stephen F. Brown, "Gregory of Rimini (c. 1300-1358)," in *Routledge Encyclopedia of Philosophy 10*, edited by E. Craig (London: Routledge, 1998), 170a-172b and Stephen F. Brown, "Walter Burley, Peter Aureoli, and Gregory of Rimini," in *Medieval Philosophy* (Routledge History of Philosophy 3), edited by J. Marenbon (London: Routledge, 1998), 368-385.

<sup>&</sup>lt;sup>30</sup> For this group of authors, though focusing on Buridan, see Johannes M. M. H. Thijssen, "The Debate over the Nature of Motion: John Buridan, Nicole Oresme and Albert of Saxony. With an Edition of John Buridan's *Quaestiones super libros Physicorum*, secundum ultimam lecturam, Book III, q. 7", in Evidence and Interpretation in Studies on Early Science and Medicine, edited by E. D. Sylla and W. R.

Thus, for Buridan and many of his colleagues, "being in motion" means that a body is somehow changing its behavior with regards to itself, not necessarily to something else exterior to it.<sup>31</sup> Supporting also in his own way the notion of a *fluxus* or motion as a "successive thing which is in itself different form permanent things," Nicole Oresme developed a special ontology to tackle the problem in his questions on the *Physics*.<sup>32</sup> Albert of Saxony also dedicated a great deal of space to discuss this problem in his question on the *Physics*. He also considered it unnecessary to assume a special category for the qualitative motion, but for local motion he felt compelled to accept a *fluxus superadditus*. Manifesting contrast to Ockham, he emphasized that whatever motion might be, it is for

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Newman (Leiden: Brill, 2009), 186-210. For Buridan's discussion are also the questions 6, 8, and 9 relevant, edited in John Buridan, *Quaestiones super octo libros Physicorum Aristotelis (secundum ultimam lecturam) Libri III-IV*, Medieval and Early Modern Philosophy and Science 27, edited by M. Streijger and P.J.J.M. Bakker, guide to the text by E. D. Sylla (Leiden and Boston: Brill, 2016), 60-98.

<sup>&</sup>lt;sup>31</sup> John Buridan, Quaestiones super octo, "Item aliter et aliter se habet intrinsece" (78,23).

<sup>&</sup>lt;sup>32</sup> This is the fifth opinion examined by Oresme in his questions on *Physics*: "Ex predictis potest elici quinta opinio, scilicet quod motus est res successiva distincta simpliciter a permanentibus," Nicole Oresme, Questiones super Physicam (Books i-vii), Studien und Texte zur Geistesgeschichte des Mittelalters 112, edited by S. Caroti, J. Celevrette, S. Kirschner and E. Mazet (Leiden: Brill, 2013), question III.6, 334,100-101. In the third book of his commentary of *Physics*, Oresme carried out an extensive discussion of the problem in six questions (Nicole Oresme, Questiones super Physicam, III.2-7, 304-341), which we cannot consider here in detail (fortunately, there is enough bibliography on this aspect of Oresme's natural philosophy, a selection of which the reader can find below). It is important to make clear, however, that Oresme did not give a straightforward and unconditional support to the *fluxus* theory. Moreover, understanding this theory as a "fluxus ad modum unius forme distincte" (Nicole Oresme, Questiones super Physicam, 341,163-164), it is "omnium pessima" (ibid.). However, if we understand that this is "modus" or "condicio" of the moveable, then, this theory "est verissima, et probabilior, et facilior inter omnes, et concordat dictis Aristotelis et philosophorum" (Nicole Oresme, Questiones super Physicam, 341, 167-168). On Oresme's concept of motion, see: Ernst Borchert, Die Lehre von der Bewegung bei Nicolaus Oresme, Beiträge zur Gesch. der Philos, und Theol. des Mitt. XXXI/3 (Münster i. W.: Aschendorf, 1934). Borchert's presentation is based on Oresme's Livre Du ciel et du monde and his De anima commentary. For Oresme's previous ontological analysis in his *Physics* commentary, see Stefano Caroti, "Oresme on Motion. (Questiones super Physicam III, 2-7)", Vivarium 31 (1993): 8-36; Stefano Caroti, "La position de Nicole Oresme sur la nature du mouvement (Questiones super Physicam III, 1-8): Problèmes gnoséologiques, ontologiques et sémantiques", Archives d'Histoire Doctrinale et Littéraire du Moyen Age 61 (1994): 303-385; Stefan Kirschner, Nicolaus Oresmes Kommentar zur Physik des Aristoteles, Sudhoffs Archiv Beihefte 39 (Stuttgart: Franz Steiner Verlag, 1997), 52-78; and Stefano Caroti, "Nicole Oresme et les modi rerum", Oriens-Occidens 3 (2000): 115-144.

sure that it is something real.<sup>33</sup> Also, Buridan affirms the reality of motion.<sup>34</sup> For Buridan, Albert of Saxony, and for many other authors discussing this problem from 1277 onward, there was a pending issue. Article 49 of Tempier's famous condemnation stated that it is forbidden to say that "God cannot move the heavens with rectilinear motion, and the reason is that, in this case, an empty space would emerge."<sup>35</sup> According to the Aristotelian understanding of nature, the lack of a place beyond the last sphere would render such a rectilinear motion of the whole world impossible. But, as philosophers are not allowed to transfer this limitation to God himself, one has to assume that it belongs to the realm of the possible because God would be able to produce such a case. Rethinking the problem of the categorization of motion on this basis, Buridan, Albert of Saxony, and others came to the conclusion that, in fact, a reduction to the *forma fluens* for the case of the qualitative motion is possible, but the "casus divinus" requires a new understanding of local motion as *fluxus formae*, i.e., as a special entity different from the place (the *terminus* of motion) and the moving body itself.<sup>36</sup> Particularly, Albert of Saxony declared that within the realm of the "divine cases" and assuming that the concept of motion involves the "aliter et aliter

permanentibus, sive non, concedendum est quod motus est," Albert of Saxony, Expositio et Quaestiones in Aristotelis Physicam ad Albertum de Saxonia attributae, 3 vols., edited by B. Patar (Louvain and Paris: Éditions Peeters, 1999), vol. 2, 492. Albert dedicates the question III.3-8 to the problem (Albert of Saxony, Expositio et Quaestiones in Aristotelis Physicam,, 481-527). For Albert of Saxony, see the detailed study by Jürgen Sarnowsky with valuable remarks on other commentaries as well: Jürgen Sarnowsky, Die aristotelisch-scholastische Theorie der Bewegung. Studien zum Kommentar Alberts von Sachsen zur Physik des Aristoteles (Münster: Aschendorf, 1989), 125-149. Albert was familiar with Buridan's commentary (tertia lectura). Moreover, his questions might have emerged after Oresme's questions; see Jürgen Sarnowsky, "Nicole Oresme and Albert of Saxony's Commentary on the Physics. The Problems of Vacuum and Motion in a Void," in Quia inter doctores est magna dissensio. Les débats de philosophie naturelle à Paris au xiv\* siècle, Biblioteca di Nuncius 52, edited by S. Caroti and J. Celevrette (Florence: Olschki, 2004), 161-175.

<sup>&</sup>lt;sup>34</sup> John Buridan, *Quaestiones super octo libros physicorum*, 62,2-4: "Licet secundum veritatem motus sit res distincta a mobili et loco, ut in alia quaestione dicetur, tamen sequitur quod ipse est, quia nihil est idem vel diversum, nisi sit ens, ut dicitur decimo *Metaphysicae*".

<sup>&</sup>lt;sup>35</sup> Chartularium Universitatis pariisiensis, edited by H. Denifle and A. Chatelain (Paris: Ex typis fratrum Delalain, 1889-1897), vol. 1, 546: "Quod Deus non possit movere celum motu recto, et ratio est, quia tunc relinqueret vacuum". For further details, see Edward Grant, Much Ado About Nothing. Theories of space and vacuum from the Middle Ages to the Scientific Revolution (Cambridge: Cambridge University Press, 1989), 108-115, For a general study on the prohibition of 1277, see Roland Hissette, Enquête sur les 219 articles condamnés à Paris le 7 mars 1277, Philosophes médiévaux 22 (Leuven: Publications universitaires, 1977), esp. 118.

<sup>&</sup>lt;sup>36</sup> See John Buridan, *Quaestiones super octo libros physicorum*, with reference to the Tempier article (76,2-15). The first answer to the rationes adduced runs: "...manifestum est quod sine dispositione superaddita non potest salvari quod ultima sphaera se habeat aliter et aliter intrinsece, sicut se habet," John Buridan, *Quaestiones super octo libros physicorum*, 79,10-12.

se habere" intrinsically, this "intrinsecum" is not the moveable thing, although it is something inherent to it.<sup>37</sup>

These are – reported briefly – the main ideas operating in the background of Legrand's discussion of the nature of motion. First, the sources of Aristotle, Avicenna, and Averroes. Second, the incorporation of the sources into the discussion formulated by Albertus Magnus in terms of *forma fluens* and *fluxus formae*. Third, Ockham's nominalism and its critical reception in – among others – Buridan's and Albert of Saxony's natural philosophy. Fourth, Ockham's nominalism and its minimalist ontology – for the case of motion and other physical notions – as assumed by Gregory of Rimini, the major philosophical figure for the Augustinian Hermits before Legrand.

## 3. Legrand's discussion on the nature of motion

With this background in mind, let us now examine Legrand's main ideas about what motion is and, above all, what motion is not. The background about forma fluens or fluxus formae is still clearly present in Legrand's examination of the problem (in what follows I will often use the abbreviations Fa and Fu for these theories, respectively); however, not in its original state but after having passed through the linguistic philosophy of Ockham and the criticism (on Ockham) by Burley and the Paris philosophers.<sup>38</sup> This must also be the reason why Legrand concentrates his discussion specifically on local motion when discussing the concept of motion as such. It is anyway evident hat Legrand intends to refute the fluxus formae theory. Introducing the question posited as "Is the local motion an accident inherent to the moving body?" he summarizes the opinion of those who are in favour of an affirmative answer in the following way: "And some say that the local motion is a flowing and successive accident (accidens fluxibile atque successivum), different from the moved thing"; an accident that, by the way, is not something already done, but which is in the process of being done.<sup>39</sup>

<sup>&</sup>lt;sup>37</sup> Albert dedicates a complete question to discuss the *casus divinos*: "Utrum admittentes casus divinos oporteat concedere quod motus localis sit alia res a mobile et a loco," Albert of Saxony, *Expositio et Quaestiones in Aristotelis Physicam*, q. 7, 515-520. For this special case of the world moving as a whole, the "moveri" means "aliter et aliter intrisece" (516,46-47) and "illud intrinsecum non est illum mobile, licet sit aliquod sibi inhaerens" (517,53-54). Thus, "illud intrinsecum secundum quod mobile aliter et aliter se habet est ipse motus seu fluxus" (517,59-60).

<sup>&</sup>lt;sup>38</sup> Still after Gregory of Rimini but some decades before Legrand, Hugolino of Orvieto reports that discussion of the question in terms of *forma fluens* and *fluxus formae* is usual (and he decides himself for the first one): "Aut motus ad formam est forma fluens vel fluxus forme, sed non est fluxus forme, ut patet ex prima conclusione, igitur es forma fluens. Maior patet secundum communiter loquentes in ista materia de motu, qui dicunt istam disunctam esse necessariam," Stefano Caroti, "Hugolinus ab Urbeveteri, *'Questiones super Physicam'*, III, 1-3 (avec quelques souvenirs personnels)", *Przegląd Tomistyczny* 24 (2018): 91-134, at 120,136-39.

<sup>&</sup>lt;sup>39</sup> "Antequam tamen ulterius progrediamur, videre oportet utrum motus localis sit aliquid accidens inherens rei mote. Et dicunt aliqui quod motus localis est quidam accidens fluxibile atque

The whole chapter 37 (*De motu secundum locum*) is made up of a short introduction, a series of six main arguments for the Fu thesis and ten "positive" reasons for the thesis he wishes to defend, according to which "motus" is nothing but the "mobile." Legrand discusses and refutes the arguments for Fu in the same passage in which they are explained. For the last argument (number 6), he proposes a series of counterarguments.

## 3.1. The arguments pro and contra the fluxus theory of motion

The discussed arguments (rationes) are as follows:

1) If motion were identical with the moveable (mobile) (i.e., "if Fa in its nominalist version were right"), then it would follow that "whenever there is a moveable, there is also motion." But this is wrong, and therefore the thesis affirmed in the conditional's antecedens is also wrong. The implied result of the argument is that motion is not identical with the moveable; which means that there must still be something else, the supposed "fluxus" aimed at by the Fu theory. We can now ask ourselves: How can the falsity of the consequence be ensured? The supporter of Fu has to give reasons for the affirmation "sometimes there is a moveable, but there is no motion." How is that possible at all? In Legrand's rendering of this thesis, the supporters of Fu point out that we perceive that "sometimes we have a mobile without motion." Thus, when this one body – which was not moving - starts moving, something else has been added to it. At this point, the discussion threatens to turn itself into a simple verbal divergence: Can we use the term "mobile" for something that is not in motion? Or are we, from the moment we do it, already accepting that in the body itself, there is something like "motion," which has now been added to the body (and therefore is now better called mobile than "body")? Legrand objects to this argument by saying that mobile and motus are identical and still one could find a resting *mobile*, and by this he means a body which is not yet in motion. The presentation of the argument for Fu and the intended refutation are, unfortunately, too

successivum distinctum a re mota cuius accidentis esse consistit in fieri et non in facto esse," Legrand, Compendium, G 149v, P 144r. For the understanding of quoted texts, it will be useful to keep in mind that – as not unusual in late medieval philosophy – the refutation of a theory, for instance of Fu, is not always carried out directly. Often enough, the refutation is built upon the modus tollens so that the thesis to be refuted is presented in the antecedens of a conditional sentence. The strategy consists mostly in searching for reasons to negate the consequens (and then transfer the negation back to the antecedens) or in negating the necessity of the implication (consequentia) itself.

<sup>&</sup>lt;sup>40</sup> "Prima ratio est quia, si motus idem esset quod mobile, tunc sequitur quod quandocumque mobile esset, motus esset, cuius oppositum experimur. Igitur, non sunt idem. Hec autem ratio non valet, quia stat quod mobile sit idem quod motus, et tamen mobile quandocumque potest esse quando non movebitur. Quo posito, verum est dicere quod mobile(*l*) est, licet non sit motus, quia illa res, que est idem quod motus, est; sed nullus est motus, quia ipsa res non movetur in casu posito," Legrand, *Compendium*, G 149v, P 144r. G has omitted "tunc sequitur quod". The passage needs editorial emendation, since both manuscripts convey "motus" for "mobile" in the argument's refutation (indicated with *l*).

narrow and pressed to permit a completely reliable interpretation. However, it is clear that it is not Legrand – the nominalist – but the Fu supporter who resorts to experience to substantiate his position. This seems to be one of those cases of a preference for a quia rather than a propter quid approach to knowledge which Anneliese Maier has pointed out precisely in connection with the fluxus theory of motion.<sup>41</sup>

- 2) Bringing into the discussion a particular case of motion, the second reason of the *fluxus* supporters is more physically anchored. In this case, the *Fu* argument states that the down and up motion of the heavy and light bodies is caused by the qualities "heaviness" and "lightness" (*gravitas* and *levitas*) respectively, although heaviness and lightness do not cause the bodies themselves.<sup>42</sup> In short: we cannot reduce this kind of motion to the moving body, since the cause of this motion is clearly not the cause of the body. Legrand replies that we can, nevertheless, accept this reduction also for this case. For "heaviness" and "lightness" are nothing but something that arises from condensation and rarefaction of matter, which are respectively an approaching or distancing of its parts. Thus, he concludes, "if the local motion is an effect of the heaviness, then also it is an effect of the heavy body itself."<sup>43</sup>
- 3) A similar argument however, built upon the inverted causal relationship can be adduced regarding the heavenly bodies. These say the defenders of Fu have their influences from their motions. Hence, their motions are distinguishable from themselves. "Motion" in this argument is not conceived as the effect but as the cause of that quality or capacity present in the planets, called their *influentia*. As it is not to be doubted that these are in the planets, we need a cause for them: Their motions. So, again, these result to be some sort of *fluxus* independent from the planets themselves. Legrand can destroy this argument with less effort: The motion of the heavens is nothing else but a behavior of the heavens themselves. One could accept that the heavens have different influences in their parts, but this is neither inconvenient in itself nor a proof of the independence of motion. For, we say, for instance, that by the process of condensation, a thing gets harder without anything being added.<sup>44</sup>

<sup>&</sup>lt;sup>41</sup> See Maier, Die Vorläufer Galileis, 22.

<sup>&</sup>lt;sup>42</sup> "Secunda ratio eorum est quia motus localis in gravibus et levibus causatur a gravitate et levitate, sed ipsum grave non causatur a gravitate et levitate. Igitur videtur quod mobile non sit idem quod motus, quia ipsum grave est mobile," Legrand, *Compendium*, **G** 149v, **P** 144r.

<sup>&</sup>lt;sup>43</sup> "Ad hoc dicendum est quod, licet grave non sit effectus gravitatis inquantum est aliqua res naturalis, verumtamen gravitas potest esse causa, ut sic se habeat, scilicet ut moveatur localiter. quia motus localis non est nisi quidam modus se habendi. Item potest dici quod gravitas et levitas non dicunt aliquam rem distinctam a gravibus et levibus nec sunt accidentia realia eis inherentia. Unde gravitas consurgit ex condensatione et levitas ex rarefactione. Condensatio autem nihil aliud est nisi partium approximatio," Legrand, *Compendium*, **G** 149v, **P** 144r.

<sup>&</sup>lt;sup>44</sup> "Tertio arguunt, quia corpora celestia a suis motibus habent suas influentias, videtur ergo quod motus eorum ab eis distinguantur. Ad hoc dicendum est quod motus celi nihil aliud est nisi celum sic se habens. Et conceditur quod ad sic se habere celi in parte suas habent influentias nec istud est inconveniens nec tamen tales motus ab eis distinguntur. Sic enim dicimus quod per

- 4) Following the same line of argumentation, the fourth *ratio* states that "motion" is a cause of warmth and of health, but this cannot be said of the moving body. So, it is evident that motion and moving body are not identical. For the refutation, Legrand resorts to the previous argument: "The *mobile* is the cause of the health, not as far as there is such a thing, but only as far as it behaves that way when being in motion." That could be generalized for many other cases, he points out.<sup>45</sup>
- 5) The next argument for the theory Fu is also constructed in a conditional form and is related to the general theory of mutation. The argument affirms that if there were no distinction between motion and moved thing, we would have to assume that a transit from one contradictorium to another contradictorium would be possible without the production of a new thing. This is, however, a fundamental principle we cannot deny. According to the standard Aristotelian understanding of change and generation, the passage from one to another contradictorium supposes the production of something new. 46 Against this special argument for the Fu theory, one can argue on two fronts: on the one side, one could try to show that from this, it does not follow that we have to accept a distinction between motion and moving thing. On the other side, we could also try to explain that this principle does not necessarily get violated if we know how to understand it. The *fluxus* supporters pose an imaginative case: suppose there were only one thing in the world and this thing does not move. Then, this proposition would be true: "There is no motion." Let us then set this one thing in motion. In this case, the contradictory proposition would be true: "There is a motion." Legrand gives a double answer to the case: first, in good nominalist mood, he affirms, that there is no problem in not producing a new thing in a case of "transit from one contradictorium to another," for it is sufficient that a relatio arises, which is by no means an independent, new entity. Second, he adds that "maxima famosa" should be not understood in the sense that a new thing must necessarily be produced. It is sufficient that solus fluxus temporis be present.<sup>47</sup>

condensationem res alterius et alterius redditur conditionis et tamen per condensationem nulla res nova sibi superadditur," Legrand, *Compendium*, **G** 150r, **P** 144v.

 $<sup>^{45}</sup>$  "Quarto arguitur quod motus est causa caloris atque sanitatis. De re autem mobili hoc non dicitur. Videtur igitur quod non sint idem. Ad hoc dicendum sicut prius, scilicet quod mobile est causa sanitatis non inquantum est talis res sed inquantum sic se habet per motum; et similiter responderi potest ad infinitas similes rationes," Legrand, Compendium, G 150r, P 144v.

<sup>&</sup>lt;sup>46</sup> Simo Knuutila and Anja Inkeri Lehtinen, "Change and Contradiction: A Fourteenth Century Controversy", *Synthese* 40 (1979): 189-207.

<sup>&</sup>lt;sup>47</sup> "Quinto arguunt quia, si motus non distinguatur a re mobili, tunc sequitur quod fieri potest transitus de contradictorio in contradictorium sine productione nove rei; quia, posito casu quod esset una sola res in mundo que non moveretur, tunc hec esset vera 'nullus motus est'. Si autem postmodum movetur, tunc sua contradictoria esset vera, scilicet 'aliquis motus est'. Ad hoc dicendum (est) quod nullum est inconveniens fieri transitum de contradictorio in contradictorium sine productione nove rei, quia sufficit alius modus se habendi seu relatio que nullam rem distinctam dicit. Nec illa communis maxima sic intelligenda est qua dicitur quod fieri non potest transitus de contradictorio in contradictorium sine mutatione rei, quia per illam maximam non est intelligendum quod sit necesse aliquam rem novam produci si motus aliquis debeat fieri, imo sufficit

The next reason involves a series of arguments, all of which are related, imagined cases occasioned by an omnipotent God. As it was previously mentioned, the discussion's background is the Thesis 49 in Tempier's condemnation of 1277. In our text, however, the discussion is not about a possible vacuum and the nature of space, but about the concept of motion. Article 49 is relevant since it urges to accept that God, in his unlimited power, could move the heavens with a straight motion. Hence, the existence of an empty space and its concrete physical consequences are not necessarily involved in our discussion. It is about the need for further information, of another body, or of "a system of reference" that would enable us to establish the existence of motion at all. Albert of Saxony's questions illustrate very well the kind of ideas to which Legrand's criticism is addressed: if we admit the "divine cases," we will have to assume, for local motion especially, a *fluxus* successively acquired by the *mobile*. Let us now revise the argument itself.

6) This argument for the Fu resorts to God's decision making and to the late medieval understanding of motion as "behaving differently" ("aliter se habere") in itself. Are both compatible with the more traditional Fa theory? Let us suppose that God would annihilate all existence except only one mobile. We have to assume that such an action be possible for the Christian God. In this case, since only these two contraposed theories are under examination, one can affirm the real existence of motion by refuting the opposite theory, Fa. For, if motus is nothing but the mobile (as Fa sustains), then we will have to accept that the moving body does not fulfill the definitional condition of "behaving differently." The reason for this is that, by hypothesis, there is nothing else with respect to which we could establish that this body is moving. But we have accepted that there is motion (produced in this one body by God himself). Therefore, a contradiction arises: the body would be moving (because of God's action) and, nonetheless, it would not be behaving differently (which is conceptually required). Thus, "from this reason they conclude that in such a case, the moving body behaves differently because of the motion or because of a fluxus superadded to him and distinct from him."<sup>49</sup>

solus fluxus temporis, ut in sequentibus dicetur," Legrand, *Compendium*, **G** 150r, **P** 144v. This is not the first time that Legrand resorts to this "maxima famosissima"; see Di Liscia, "Transmutación y movimiento según el tiempo", 165. For the sake of avoiding possible misunderstandings I would like to indicate that Legrand follows the nominalist approach not only regarding motion but also regarding time: "Ex quo sequitur quod quia motus non distinguitur a re mobili consequenter nec tempus distinguitur ab illa re cuius motus est tempus," Legrand, *Compendium*, **G** 159v, **P** 149v. It is here where Legrand's idea of a "motion according to the time" can be useful, since it is one and same thing (nothing new!) which has experienced the passing of time (see the remarks in the previous fn. 18).

 $<sup>^{48}</sup>$  "Septima conclusio: in omni mobili quod movetur localiter, volentes admittere casus divinos oportet ponere fluxum seu motum inhaerentem mobili qui successive illi mobili acquiritur," Albert of Saxony, *Expositio et Quaestiones in Aristotelis Physicam*, q. 7, 517,66-68.

<sup>&</sup>lt;sup>49</sup> "Sexto arguunt ponentes casum quod deus omnia entia creata annihilaret dempto unico mobili quod moveatur. Quo posito petunt quid sit realiter motus eius: Si dicatur quod sit ipsummet mobile, tunc sequitur quod aliquid movetur quod aliter se non habet, quia in tali casu tale mobile non se habet aliter respectu dei nec se habet aliter respectu alicuius extrinseci, quia nullum est, nec

#### (6.1.) First counterargument:

Before getting into a more detailed discussion of this argument, Legrand makes it first clear that the motion in question could not be a rectilinear motion, since in this case, one has, in fact, to assume the existence of something else exterior to the mobile, which is the place needed for local motion.<sup>50</sup> Once having established this, Legrand faces this imaginative argument with a counter-imagination. Let us call the imagined body proposed by the Fu theory A, a unique body created by God as staying in motion.<sup>51</sup> Against the imagination of a body moving without any further bodies, Legrand proposes to take the case of another imagined body B, which would not but could exist exteriorly to the body A in question. This would satisfy the concept of motion without introducing any additional fluxus, since already the possibility of this body B would be enough for us to say that there is a "aliter se habere respectu extrinseci" (even if this exterior body B did not exist). Legrand seeks to clarify this less intuitive argument through an analogy: The essential perfection of a thing can be "measured" according to its distance to the pure potential, i.e., to matter. However, it is not necessary that matter factually does exist for this "quantification." One could anyway affirm that this kind of perfection "distaret si materia esset." Thus, in the same way, it would be possible to imagine a unique body, the behavior of which is changing with respect to another body if there were one.<sup>52</sup> Legrand's

ratione motus advenientis, quia motus est idem quod mobile. Relinquitur ergo quod tale mobile movetur et tamen aliter se non habet, quod videtur implicare contradictionem – ut ipsi dicunt –, quia moveri nihil aliud est nisi aliter se habere. Si vero dicatur quod motus distinguatur a re mobili tunc ipsi habent propositum. Imo ex ista ratione concludunt quod in tali casu mobile se habet aliter per motum seu per fluxum motus sibi superadditum et ab eo distinctum," Legrand, *Compendium*, G 150r-v, P 144v-145r.

 $<sup>^{50}</sup>$  "Ad istam rationem dicendum est quod in tali casu mobile non potest moveri motu recto, quia tunc necesse esset dicere quod esset aliud sibi extrinsecum, utputa locus in quo movetur. Conceditur tamen quod posset moveri motu circulari, sicut de celo concedimus," Legrand, *Compendium*, **G** 150v, **P** 145r.

<sup>&</sup>lt;sup>51</sup> "Et cum queritur utrum tale mobile aliter se habeat respectu alicuius extrinseci, dicendum est quod non. Sufficit tamen dicere quod aliter se haberet si aliquod extrinsecum sibi esset, quia, si tale corpus quiesceret, non se haberet aliter respectu extrinseci, si esset. Ad hoc igitur quod moveatur sufficit quod aliter se haberet respectu extrinseci, si esset, et, si nullum extrinsecum est, non propter hoc minus movetur. Sic enim dicimus quod rei perfectio essentialis potest attendi penes distantiam a pura potentia seu matéria," Legrand, *Compendium*, G 150v, P 145r. I am adding the denomination A and B which does not occur in the text to clarify Legrand's example.

<sup>&</sup>lt;sup>52</sup> "Et tamen, si materia non esset, ad hoc quod rei perfectio quantificetur, sufficit dicere quod ipsa distaret si materia esset; quinimmo dicimus quod penes non esse simpliciter essentialis perfectio potest attendi et tamen non esse nihil est. Non esset ergo inconveniens imaginari tale corpus moveri, quia imaginatur aliter se habere respectu extrinseci, si esset," Legrand, *Compendium*, G 150v, P 145r. Reasoning in terms of degrees of *perfectio* is one of Legrand's favourites argumentative approaches. For further information about this, see Daniel A. Di Liscia, "Perfections and Latitudes. The Development of the Calculators' Tradition and the Geometrisation of Metaphysics and Theology", in *Quantifying Aristotle. The Impact, Spread and Decline of the* Calculatores *Tradition*, Medieval and Early Modern Philosophy and Science, edited by D. A. Di Liscia and E. D. Sylla (Leiden: Brill, 2022), 278-327, for Legrand see 295-304.

opponent could object to this argument that it actually sounds like a linguistic excuse. For, to mean that "this body would behave differently with respect to another extrinsic body *if there were any*" essentially means "this body would move, if it were in motion." Nonetheless, this objection is not acceptable for Legrand, for it applies the concepts of "actuality" and "conditionality" wrongly, as if it were necessary to use them symmetrically on both sides of the argument. Legrand counterargues that this is erroneous, since for the *actual motion* of the body, it is enough that the "aliter et aliter se habere" can be affirmed *conditionally*.<sup>53</sup> Thus, conditionality and potentially are not always interchangeable.

## (6.2.) Second counterargument:

Legrand still brings further arguments tending to affirm that even in the adduced, imagined case, no *fluxus* is needed because the objection resorting to the (non-existing) exterior body is not conclusive. For instance – he points out –, we could consider the motion of the body in question not in its totality but merely according to its parts, so that one part changes its behavior with respect to another. That could be done by putting points onto a spherical body, so that we could appreciate that one part of such point goes back and the other one moves forward. Thus, even under the case's presupposition that there is nothing but this one body, one should be able to appreciate the different positions the points put on a sphere are assuming while its motion is taking place.<sup>54</sup>

#### (6.3.) Third counterargument:

Legrand seeks to strengthen this line of argumentation by introducing a special case which, taken without further qualification, seems questionable. We could imagine – he now adds – an immobile sky in which we set an arbitrary point (for instance at 20 degrees of altitude from the horizon in the East) as a reference for the motion of other things. This point would itself be *immobilis*, so that the presupposition of the case is not contradicted, but – here is an "imagination" against the previous imagination – only imagined as if it

<sup>&</sup>lt;sup>53</sup> "Sed contra hoc ipsi replicant quia tunc sequeretur quod tale corpus precise moveretur condicionaliter, quia idem videtur dicere 'hoc corpus aliter se haberet respectu extrinseci, si esset', et dicere 'hoc corpus moveretur, si moveretur'. Ad hoc dicendum est quod non est idem, quia ad hoc quod mobile moveatur actualiter sufficit quod aliter se habeat conditionaliter, ut patet, quia res quiescens non se haberet aliter conditionaliter. Bene ergo apparet quod ad moveri sufficit conditionaliter se habere aliter, ut predictum est," Legrand, *Compendium*, **G** 150v, **P** 145r.

<sup>&</sup>lt;sup>54</sup> "Item potest dici quod tale corpus se habet non respectu alicuius extrinseci sed una pars se habet aliter respectu alterius. Et hoc sufficit quia etiam tale corpus non movetur secundum se totum sed secundum partes, quarum autem una pars se habeat aliter respectu alterius. Patet, signatis aliquibus punctis in tali corpore circulari, certum est quod una pars a tali puncto vel punctis recedit vel ad ipsa accedit," Legrand, *Compendium*, **G** 150v-151r, **P** 145r-v. P conveys "Ad hoc dicendum est quod *mihi* est idem" instead of "Ad hoc dicendum est quod *non* est idem".

were immobile. Thus, we could "quantify the motion" according to this point used as a reference  $^{55}$ 

#### (6.4.) Fourth counterargument:

A further argument proposed by Legrand consists of seeing the concept of motion not as a kind of changing of behavior with regard to something else but as being *in potentia* to something that the body does not yet have, which is, in this case, the place to which the body moves. Thus, having this "potentiality" to another place (for which one does not need the real existence of this place so that the condition is satisfied) is sufficient for "being in motion." <sup>56</sup>

### (6.5.) Fifth counterargument:

The next argument changes the discussion's strategy: It targets the sense and utility of the argument claimed by the *fluxus* supporters. Let us suppose that motion was such a quality inherent to the *subjectum* of motion. Even in this case – Legrand objects –, they have to add something, i.e. some other body, with respect to which this *aliter se habere* can be appreciated. In other words: they could not say that the body is moving, staying on its own, and so the imagined case itself does not make sense (or it is superfluous).<sup>57</sup>

## (6.6.) Sixth counterargument:

Thus, the *fluxus* theory is based on a wrong understanding of what motion is, which Legrand indicates in the following remark: *aliter se habere*, according to local motion, does

<sup>55 &</sup>quot;Item nos possumus motum rerum considerare secundum accessum vel recessum a puncto signato in celo dummodo imaginetur tanquam immobilis, etiam supposito quod talis punctus signetur in zodiaco in quo nullus est punctus immobilis. Verbi gratia, si cum quadrante notaveris punctum elevatum versus orientem per 20 gradus, certum est quod penes distantiam a tali puncto poteris considerare quantum alie res sunt mote et utrum aliter se habeant, et tamen talis punctus signatus non est immobilis sed imaginatur tanquam immobilis. Sic ergo in proposito imaginari possemus in tali corpore signato punctum immobile, quo imaginato secundum recessum et accessum possumus quantificare motum. Unde quolibet puncto signato in tali corpore dummodo imaginetur immobilis, tunc quelibet pars talis mobilis signati aliter et aliter se habet respectu illius, dummodo tamen talis punctus signatus non sit centrum talis corporis, quia penes distantiam ab eo motus partium non potest attendi eo quod equaliter semper se habent respectu illius," Legrand, Compendium, G 151r, P 145v. A special condition – for the previous argument, but not introduced until now – is that the signed point in the body does not need to be its center which is useless to this end since all parts of the sphere would steadily remain at the same distance of it during the motion.

<sup>&</sup>lt;sup>56</sup> "Item potest dici quod moveri non est aliter se habere respectu alicuius sed potius illud dicitur moveri quod est in potentia secundum quod in potentia ad illud quod non habet, quia igitur in tali casu una pars est in potentia secundum quod in potentia ad locum alterius. Ideo quelibet pars talis corporis movetur," Legrand, *Compendium*, **G** 151r, **P** 145v.

<sup>&</sup>lt;sup>57</sup> "...miror quia etsi motus distingueretur a re mobili adhuc per hoc, non respondetur ad argumentum quod ipsi faciunt, quia sicut alias dicetur formale loci attenditur penes aliquid immobile signatum vel signabile. Si ergo motus esset quedam qualitas aliter et aliter subiecto inhereret, non tamen illud moveretur nisi respectu alicuius aliter se haberet saltem, si esset," Legrand, *Compendium*, G 151r, P 145v.

not denotate that an accident inheres but rather, it denotes the *distance or proximity* regarding a signed (or signable!) movable.

## (6.7.) Seventh counterargument:

Besides, and still questioning the concept of motion based on the predicate of *aliter se habere*, the *Fu* supporters wonder about the fact that one should accept that something is in motion but not "behaving differently" in itself, without noticing that exactly the same problem occurs while contemplating the problem from the opposite point of view. Moreover, one should rather wonder about the fact they are assuming, which is: a body is "behaving differently" but, strangely enough, is not moving. This is, for Legrand, absurd to the point of implying that God could not produce this quality (*accidens*) in the center or in the poles of the world, since these are not moving.<sup>58</sup>

#### 3.2. Reasons for not distinguishing motus from mobile

Should we, then, assume that the local motion is to be distinguished from the moveable thing? Legrand means to have refuted through the previous arguments the affirmative answer to this question as supported by (his rendering) of the Fu theory. Now, after having shown that the above explained reasons "do not conclude that the local motion is to be distinguished from the moveable thing," Legrand still adds some concluding reasons to prove that "local motion is not to be distinguished from the moveable thing."

1) In the same nominalist way, Legrand is against a similar distinction between quantity and quantified thing, as he referred to in the previous passage in the

<sup>&</sup>lt;sup>58</sup> "Item sicut ipsi habent pro mirabili quod aliquid moveatur et non se habeat aliter – quod tamen non sequitur, ut dictum est –, sic et peramplius habeo pro mirabili quod aliquid se habeat aliter et non moveatur, quod tamen sequitur ex dictis eorum, quia ex quo motus distinguitur a re mobili suppono quod deus talem qualitatem producat in aliquo subiecto et quod ipsum non moveatur, non video quid dicant nisi quia idem est motum in aliquo producere et facere quod illud moveatur Hoc enim non satisfacit, quia tunc sequeretur quod deus non posset tale accidens producere in centro vel in polis mundi qui moveri non possent," Legrand, *Compendium*, G 151r-v, P 145v-146r. Additionally, Legrand mentions briefly (nr. 6.8. following my numeration) that in the case that such an *accidens* were to be separated from every subject, one could ask whether it can be locally moved or not. The negative answer is unacceptable, but the affirmative leads to the affirmation of an *accidens* of an *accidens*, which is not better.

<sup>&</sup>lt;sup>59</sup> "Ex his ergo patet quod predicte rationes non concludunt motum localem distingui a re mobili. Sed restat ponere rationes quibus moveor dicere quod motus localis non distinguitur a re mobile," Legrand, *Compendium*, **G** 151v, **P** 146r. After having examined ten different arguments, Legrand concludes at the end of his treatment of the notion of quantity in chapter 28: "Ex his igitur rationibus et similibus videtur esse concludendum quod quantitas non distinguitur a re quanta..." Legrand, *Compendium*, **G** 139v, **P** 133r.

*Compendium*, where he deals with this problem. Thus, for the same reason, or even all the less (*a potiori*), we should not admit a distinction between motion and moveable thing.<sup>60</sup>

- 2) In the processes of rarefaction and condensation both cases of quantitative motion there is local motion of some of the parts. During these processes, an acquisition or loss of a quantity takes place. Since this quantity cannot be distinguished from the quantified thing, the corresponding motion is also not different from the thing under rarefaction and condensation. The remarkable twist of the argument consists in reducing the quantitative motion to local motion.<sup>61</sup>
- 3) The distinction between motion and moveable thing supposes that nothing can be moved unless God produces something new. This can be doubted since the local transfer of things without the need to produce anything new is a capacity hardly deniable to God.  $^{62}$
- 4) The fourth reason shows us how perplexing and puzzling the arguments are: this argument, for instance, is not about God moving or not moving a thing from one point in space to another, but about transferring the (supposed) quality of "motus localis" itself from one thing to another without producing a new thing. There are two possible answers, and both are against the *fluxus*. Either this is possible for God, and then, one could affirm the same about the moveable thing itself (so the *fluxus* turns out to be superfluous); or not, and then it follows that a motion is moved by another motion and so *in infinitum*, which does not seem to be acceptable.<sup>63</sup>
- 5) If so, and now we are arriving at the hardcore nominalist objections we are obliged to accept endlessly new accidents added to the heavenly orbs, just because of the fact that they are eternally in motion. $^{64}$

 $<sup>^{60}</sup>$  "Prima enim ratio est quia quantitas non distinguitur a re mobili, ut prius dictum est. Ergo videtur quod nec motus localis distinguatur. Hec enim ratio procedit a potiori," Legrand, Compendium, G 151 $\nu$ , P 146r.

<sup>&</sup>lt;sup>61</sup> "Item omne quod rarefietur vel condensatur movetur localiter secundum quodlibet sui movetur; talis autem motus nil aliud videtur nisi quantitatis acquisitio vel deperditio; sed talis quantitas non distinguitur a re quanta, ut probatum est, ergo nec talis motus," Legrand, *Compendium*, G 151v, P 146r; "rarefietur vel condensatur" was omitted in P.

<sup>&</sup>lt;sup>62</sup> "Item si motus localis a re mobili distingueretur tunc sequitur quod nulla res posset localiter moveri nisi deus de novo aliquid produceret. Hoc tamen non aparet verum quia verisimile est quod deus potest unam rem transferre de uno loco ad alium absque nove rei productione," Legrand, Compendium, G 151v, P 146r.

<sup>&</sup>lt;sup>63</sup> "Item queritur an deus posset huiusmodi motum localem transferre de uno loco ad alium absque productione nove rei. Si dicatur quod sic, igitur de mobili hoc idem potest dici. Si dicatur quod non, tunc sequitur quod motus movebitur per alium motum et sic in infinitum," Legrand, Compendium. G 151v. P 146r.

<sup>&</sup>lt;sup>64</sup> "Item sequeretur quod nova accidentia continue advenirent orbibus celestibus, quia continue movebitur" (Legrand, *Compendium*, **G** 151v, **P** 146r). Legrand defines this notion thus: "Accidens autem intentionale dicitur illud quod non educitur per transmutationem neque conservatur in virtute qualitatum primarum sed ex sola potentia obiecti in subiecto apto nato recipere producitur atque per solam presentiam sine transmutatione reducibili ad qualitates primas conservatur;

- 6) Even more, since in every motion there are infinite parts, we would consequently have an infinity of generations and corruptions.<sup>65</sup>
- 7) One may ask whether such a motion is educed from the potentiality of the matter. Since everything that is moved is also being altered (the motion being conceived as nothing but a quality), warm or cold will arise. That is manifestly wrong for the case of the heavenly bodies. Hence, the positive answer to this question is not assumable. Besides, mixed bodies can move without such alteration (from which it would follow that this quality is not needed). Moreover, if motion arose from the eduction of matter through alteration, it would follow that all that is moved by alteration would also be moved locally. But experience contradicts this assertion. Only the possibility of an "intentional accident" remains, but this is something that nobody affirms. <sup>66</sup>
- 8) As it could not be lacking in this line of reasoning, the razor principle is to be followed. And Legrand affirms it with full validity and clarity: "No multiplicity of entities is to be introduced without necessity." Everything can be efficiently explained assuming that motion is not distinguishable from the moved thing. To be clear: The problems can also be explained "per oppositum," i.e., accepting in fact the distinction between *motus* and *mobile*; only this is not necessary and hence one has to prefer the other, the simplest explanation.<sup>67</sup>
- 9) If a body is moved by many different motions at the same time for instance, when something is moving with circular and rectilinear motion, or with different circular motions then it would necessarily have several different accidents of the same species

huiusmodi est species in médio," Legrand, Compendium, G 67v, P 58r. Accordingly, an intentional accident, like the species in medio, is real but it possesses a weaker ontological status: "Ulterius sciendum quod talia accidentia sunt realia ad istum sensum quod realiter existunt quia tamen eorum realitas non dependet a subiecto nec a transmutatione rerum, ut pertactum est; ideo sunt diminutione realia seu minus realia. Item quia eorum realitas minus praecipitur ideo quasi non realia dicuntur," Legrand, Compendium, G 68r-v, P 58v-59r.

<sup>&</sup>lt;sup>65</sup> "Item sequeretur quod in quolibet motu fierent infinite generationes et corruptiones, quia quilibet motus habet infinitas partes," Legrand, *Compendium*, **G** 151v, **P** 146r.

<sup>&</sup>lt;sup>66</sup> "Item queritur an talis motus educatur de potentia materie. Si dicatur quod sic tunc sequitur quod omne quod movetur alteratur | et consequenter efficitur calidus vel frigidus. Hoc tamen manifeste falsum est, sicut patet de corporibus celestibus. Imo etiam in corporibus mixtis accidere potest, ut localiter videantur moveri absque tali alteratione. Imo si motus educeretur de potentia materie | per alterationem tunc necesse esset omne quod alteraretur localiter moveri, cuius oppositum experimur. Relinquitur ergo quod motus est accidens intentionale quod numquam legitur," Legrand, *Compendium*, G 151v-152r, P 146r-v).

<sup>&</sup>lt;sup>67</sup> "Item non est ponenda multiplicitas entium absque necessitate. Sed omnia eque bene possunt salvari ponendo motum non distingui a re mobili, sicut ponendo oppositum," Legrand, *Compendium*, **G** 152r, **P** 146v.

inhering in it. But this cannot happen since the number of accidents of the same species is always the same as the number of the subjects of these accidents.<sup>68</sup>

10) Continuing along the same line of argumentation, one could finally object that such an accident could be separated from the moved thing if it were distinguishable. But then, once it has been separated, it could be moved (and, as it has been argued before, not by another motion).<sup>69</sup>

Thus, Legrand may finish his discussion by proposing that "it is better" not to distinguish between the local motion and the moveable.<sup>70</sup>

## **Concluding remarks**

Jacques Legrand wrote, for the students of his Order, a metaphysical overview on natural philosophy. As it has been pointed out, the Augustinian mindset is at the base of the Christian-medieval encyclopedic project. However, in Legrand's view, a treatment of the main texts of the Aristotelian corpus was a more essential part of the program. His *Compendium* is an encyclopedic work which, containing some remarks about the methods of acquiring knowledge, pays particular attention to the theoretical foundation of science. This approach is surely not exceptional but, at the same time, not obvious. There are enough examples of well-done abbreviated texts on natural philosophy without any special discussion of the key theoretical notions involved in the text. And this is

<sup>&</sup>lt;sup>68</sup> "Item ponendo talem distinctionem sequitur quod si una res moveretur pluribus motibus tunc etiam haberet plura accidentia eiusdem speciei sibi inherentia, utputa si una res moveretur motu circulari et recto aut pluribus motibus circularibus superdiversis polis et tamen credendum est quod tale accidens – si poneretur – distinctum esset tamen eiusdem speciei atque perfectionis essentialis in omnibus. Quo posito sequitur quod non posset multiplicari in eodem subiecto, quia accidentia eiusdem speciei numerantur numero suorum subiectorum vel ergo per eundem motum res moveretur pluribus motibus vel tot essent accidentia quot essent motus," Legrand, *Compendium*, **G** 152r. **P** 146v.

 $<sup>^{69}</sup>$  "Item si tale accidens distinguerentur tunc posset separari a re mota. Separatione autem facta tunc posset moveri et non per alium motum, ut primus arguebatur," Legrand, *Compendium*, **G** 152r, **P** 146v.

 $<sup>^{70}</sup>$  "Igitur, videtur melius ut ponamus motum locale non distingui a re mobili," Legrand, Compendium, G 152r, P 146v.

<sup>&</sup>lt;sup>71</sup> A thesis emphatically affirmed already by Michel de Boüard, "Encyclopédies médiévales. Sur la "Connaissance de la nature et du monde au moyen âge", *Revue des questions historiques* 112 (1930): 258-305, at 279 and 283 (following Augustine's *De doctrina christiana* 2.59).

<sup>&</sup>lt;sup>72</sup> The methodological aspects of the philosophical encyclopaedies are emphasised by Mariateresa Beonio Brocchieri-Fumagalli, "Le enciclopedie", in *Lo spazio letterario del Medioevo. 1. Il Medioevo Latino. Volume I: La produzione del testo*, vol. 2, edited by G. Cavallo, C. Leonardi and E. Menestò (Rome: Salerno Editrice, 1995), 635-657.

<sup>&</sup>lt;sup>73</sup> The Compilatio de libris naturalibus Aristotelis et aliorum quorumdam philosophorum in MS BnF, lat. 15879, ff. 125ra-176rb, for instance, is also fundamentally based on Aristotle and the Aristotelian text tradition but it contains more "empirical" material and less conceptual discussion. At least

what Legrand intended to do when approaching the Aristotelian doctrine: to prepare students for a theoretical understanding of the involved problems as they were under discussion in his time. Within the Aristotelian corpus, the *Physics* assumes a preeminent place, and in it, the concept of motion is pivotal. Legrand has carefully pondered how to integrate the substantial content of the Aristotelian *Physics* into his *Compendium* without excluding a critical analysis of other authors. Part IV of this work is structured on the basis of the Aristotelian types of transmutation and includes, of course, a special chapter on locomotion.

As previously observed, Jacques Legrand's reflections in this chapter are about what motion is not, rather than about what it is. In principle, we have no reason to attribute to him another understanding of the concept of motion than the more traditional one, the *forma fluens* as previously reformulated by Ockham. This is a significant feature of the *Compendium*. Legrand's thinking is not oriented to the trendy streams of "Neo-Albertism" or "Neo-Thomism," but to nominalism.

The discussion strategy in the chapter on local motion is plain: The Fu supporter must find cases where motion seems to be something added to the moving body; Legrand, supporting Fa, seeks for refutation or questioning of the adduced cases. As we could

according to this manuscript, this compilation is made up of three main parts, the first part being only on theology and natural philosophy and the others on moral philosophy. To avoid confusion, it is useful to note that Michel de Boüard, who probably pointed to this work for the first time, usually referred to it as "Compendium" or "Compendium philosophiae" (See De Boüard, "Encyclopédies médiévales", at 259, 266, 268, 300, 302-4; the manuscript 15879, which he follows, contains "compilatio..." at the beginning, but "compendium" at the end). De Boüard knew no author for this work but he declares to have identified seven copies from which the already mentioned would be the best one (291, fn. 2). There are, however, some inconsistencies regarding the dating and authorship of this text which deserve a more detailed and updated study. For, the above-mentioned copy is anonymous, but MIRABILE. Archivio digitale della cultura medieval. Digital Archives for Medieval Culture mentions a master "Philippus de Vitriaco" (fl. 1240 ca.) as author and lists almost forty manuscripts of it (http://sip.mirabileweb.it/manuscript/paris--bibliothèque--nationale--de-france-lat--15879--manuscript/148010). The date for this so far unknown author (not fitting the famous musician, certainly, who lived almost a hundred years later) is not compatible with De Boüard's remark, according to which "Le Compendium Philosophiae a été compose après la condemnation portée en 1277 par l'evêque de Paris" (De Boüard, "Encyclopédies médiévales", 293, fn. 2). This might be correct, but De Boüard was also of the opinion that this is a work which belonged to the "École de Strasbourg", Hugues de Strasbourg being the best candidate for its authorship (something which seems hardly acceptable since Hugues died before 1277). Ventura, refers to this work as anonymous (Ventura, "On Philosophical Encyclopaedism", 42). For an edition of the prologue, selected passages and the list of chapters according to the MS BnF Lat. 15879, see Michel De Boüard, Une nouvelle encyclopédie médiévale: le Compendium philosophiae (Paris: E. De Boccard, 1936), 121-206. For an updated study on the transmission of this text see Emmanuelle Kuhry, "La tradition textuelle du Compendium philosophie: une illustration des échanges culturels dans le monde monastique et scolaire anglaise", Tabularia "Études" 14 (2014): 235-270.

answer the main questions and get on without such a "superadded predicate," it is better, i.e., more economic, to simply renounce it. At the basis of the discussion a fundamental incompatibility, between (local) motion as a predicate and motion as a successive entity, is hidden. That is why a part of the discussion – above all regarding the first argument – can make the impression of an odd and empty disagreement about words. Buridan had already made it clear that the "moveri" in his concept of motion as "aliter et aliter se habere" is intended with a general meaning, including locomotion. As Anneliese Maier has pointed out, this is not an omission but an indication of the most central aspect of the fluxus formae theory.74 Moreover, she has expressed the opinion that fluxus formae, particularly in the shape it received by Buridan and Albert of Saxony, was rather the theory on the nature of motion which late medieval philosophy thought transferred to early modern philosophy and science as an ontological pre-construct of the modern concept of inertia,75 Legrand's discussion of the topic suggests now a critical revision of Maier's historical reconstruction. Further research work should determine whether Legrand's nominalism was an isolated case or - what I in fact presume - a widely supported doctrine, at least within some determined circles.

The sources of Legrand are not completely evident, yet. It is perfectly possible that Legrand's nominalism be connected with Gregory of Rimini rather than with Ockham himself, as Gregory of Rimini was probably the most outstanding philosophical figure within the same order to which Legrand belonged and within which he was intending to progress academically. It seems that the philosophical orientation of the Order experienced an important change of direction with Gregory of Rimini. In any case, some texts *before* Gregory are anti-Ockhamist, not only in general regarding language, knowledge and theological matters, but specifically regarding the nature of motion.

<sup>&</sup>lt;sup>74</sup> Maier, Zwischen Philosophie und Mechanik, 122.

<sup>&</sup>lt;sup>75</sup> Maier, *Zwischen Philosophie und Mechanik*, 132, 143 (with special reference to Blaius of Parma). Sarnowsky (*Die aristotelisch-scholastische Theorie der* Bewegung, 148-49) has uttered some doubts about Maier's hypothesis.

<sup>&</sup>lt;sup>76</sup> Founded in 1256, the Order of Hermits of Saint Augustine resolved in the General Chapter of Florence (1287) to follow the doctrinal line of Giles of Rome for the sake of doctrinal unity within the Order. Zumkeller indicates that this is still clearly evident in Gregory's predecessor, Thomas of Strasburg (Adolar Zumkeller, "Die Augustinerschule des Mittelalters: Vertreter und philosophischtheologische Lehre (Übersicht nach dem heutigen Stand der Forschung)", *Analecta Augustiniana* 27 (1964): 166-262. For the adoption of Aegidius' doctrine, 168-170; on Thomas of Strasburg, 212-214. Occasionally, it can be noticed that Jacques Legrand is mentioned only very briefly in this paper and without reference to his *Compendium*, 244). Trapp held the view that Gregory's nominalism goes back to Augustine himself: "Gregory is the authentic follower of Augustine, the doctor gratiae, and of Augustine, the nominalist," Damasus Trapp, "Notes on the Tübingen Edition of Gregory of Rimini II", *Augustiniana* 30 (1980): 46-57, at 46.

<sup>&</sup>lt;sup>77</sup> There is enough documentation substantiating anti-Ockhamism within the Order in the generation before Gregory, as for instance in Michael of Massa's discussion of the question "Utrum motus sit realiter ipsummet mobile quod movetur"; see William J. Courtenay, *Ockham and Ockhamism. Studies in the Dissemination and Impact of His Thought*, Studien und Texte zur Geistesgeschichte des Mittelalters 99 (Leiden: Brill, 2008), 285-346, ed. of the question at 339-346.

the contrary, some other texts belonging to the Order of the Augustinians Hermits, which are datable *after* Gregory's death, indicate that Gregory's philosophy was still alive in the next generations. Franz Ehrle, for instance, mentions the Augustinian Hermit, Bonsembiante Badoer, who in 1362/3 held lectures in Paris on the *Sentences* according to the doctrines of Ockham and Gregory (rather than of Thomas of Strasburg).<sup>78</sup> And despite all the nuances we cannot go into here, it seems evident to me that Hugolino of Orvieto is following Ockham's and Gregory of Rimini's approach at assuming the *forma fluens* theory.<sup>79</sup> Consequently, I think that the impact of Gregory's doctrine upon his own Order is a question which deserves more attention and, given the extraordinary significance that the treatment of physical questions occupies in Gregory's main work, the focus for the appreciation of his influence should not lie alone on theology, as it seems to be the case until now.

Finally, I would like to open the spectrum of reflections to questions which are beyond the punctual determination of the essence of motion, of its understanding as a forma fluens or a fluxus formae and of the pure theoretical implications of a minimal ontology. As we accept that we are trying to reconstruct lines of thought considering its adequate framework of reference, as we do approach the problems recognizing the existence and the role of institutions like universities and religious orders, I think that it is a fact hardly to deny that the socio-political factors are able to have a bearing on the development and transformation of ideas. Thus, it can be useful for the understanding of this particular case, to mention the change of the philosophical-political scene at the turn of the century, which could have influenced Legrand's tendency to nominalism. For, after a period of critical reception, nominalism was gaining more and more terrain to the point of becoming a politically more comfortable philosophical position, especially with regard to Council of Constance (1414-18), where the doctrine of the extreme-realist Augustinian John Wycliff – and

<sup>&</sup>lt;sup>78</sup> Franz Ehrle, *Der Sentenzenkommentar Peters von Candia des Pisaner Papstes Alexanders V. Ein Beitrag zur Scheidung der Schulen in der Scholastik des vierzehnten Jahrhunderts und zur Geschichte des Wegestreites,* Franziskanische Studien, Beiheft 9 (Münster: Aschendorff, 1925), 51-55, at 55-56. Unfortunately, Ehrle's remarks are only linked to the doctrine of the "complexum significabile." For a comprehensive and up-to-date study on Gregory of Rimini focusing on philosophy of language and theology, see Pascale Bermon, *L'assentiment et son objet chez Grégoire de Rimini*, Études Philosophie Médiévale (Paris: Vrin, 2007). By the way, Ehrle characterized the period as "nominalist," a characterization that, from his Thomistic point of view, did not mean anything necessarily good (see Courtenay, *Ockham and Ockhamism*, 8).

<sup>&</sup>lt;sup>79</sup> "Circa tertium articulum breviter pono tres conclusiones. Prima est quod motus localis non est accidens existens in mobili subiective. Secunda est quod motus localis non est fluxus mobilis existens in mobile subiective. Tertia est quod moveri est accidens predicabile de mobile tamquam de subiecto," Caroti, "Hugolinus ab Urbeveteri, 'Questiones super Physicam'", 114-115,601-606. The "moveri" as a predicable accident is valid for the other types of motion, not for locomotion: "motus localis non est in subiecto nec per consequens in mobile subiective, sicu plurimi opinantur" (116,658-659).

his followers - was condemned. Far from being only a general remark, this circumstance touches upon the immediate circle of intellectuals around Legrand. The famous nominalist philosophers Pierre d'Ailly and John Gerson (both, like Legrand, advocates of the Armagnac cause) belonged to the most visible personalities among the conciliarist movement and were not only committed to limit the Pope's power and to unify the Church, but also to the ideological repression and violent persecution of realism in theology and philosophy.<sup>80</sup> Yet – I wish to make clear – I do not hold it as proved that this background be the specific motivation for Legrand's nominalism. However, I consider it significant and likely enough as to be mentioned. A longer way of research is still to be traversed before we can arrive at safer knowledge. In the meantime, I think that this line of research deserves more attention. For, supposed that the facts I am speaking of were approximately as I have described them, it would have been too much of a coincidence to be only facts. I do not see any use in being aware of such a fitting context and, at the same time, dismissing its significance. After all, historians of the Augustinian Hermits have plentifully documented how active their order was in combatting the "heresies" of Wycliff and Hus during the Council of Constance, a historical event of the highest significance, for which the concept of

<sup>80</sup> Kaluza has pointed out that Gerson's criticism of the Scotist "formalizantes" is based on Ockham (Zénon Kaluza, "Gerson et les querelles doctrinales", in Les querelles doctrinales à Paris, Nominalistes et réalistes aux confins du XIVe et du XVe siècle, edited by Z. Kaluza (Bergamo: Pierluigi Lubrina Editore, 1988), 35-86, at 64). The issue has been studied again by Hoenen, who shows the extent to which Gerson was involved in the condemnation of the "formalizantes" as supporters of the heretical realism, especially with his Sermo Prosperum iter from 1415 (Marteen J. F. Hoenen, "Modus loquendi platonicorum'. Johannes Gerson und seine Kritik an Platon und den Platonisten", in The Platonic Tradition in the Middle Ages. A Doxographic Approach, edited by S. Gersch and M. J. F. Hoenen, with the assistance of P. Th. van Wingerden (Berlin and New York: Walter de Gruyter, 2002), 325-343). Nevertheless, Hoenen leaves open the question about whether Ockham is indeed the main source of Gerson (at 336) and underlines the fact that Gerson had never characterized himself as a defender of nominalism. This would have rather been a position attributed to him in the midst of the "nominalism/realism" debate of the 15th century. Gerson's nominalism was incorporated into the classical approach by Gerhard Ritter, Studien zur Spätscholastik, II, Via antiqua und via moderna auf den deutschen Universitäten des XV. Jahrhunderts, Sitzungsberichte der Heidelberger Akademie der Wissenschaften, Phil-Hist. Klasse 7 (Heidelberg: C. Winter, 1922), 25. As for Pierre D'Ailly, see his intervention in Hus's trial as reported by the Taborist Peter of Mladoňovic in Matthew Spinka, John Hus and the Council of Constance, translated from the Latin and the Czech with Notes and Introduction (New York and London: Columbia University Press, 1965), 160. McGrade has pointed to a series of "political Ockhamism (still not sufficiently investigated, though) going from Ockham through Peter of Ailly, John Gerson, James Almain, and John Major even until John Locke," Arthur Stephen McGrade, "Rights, natural rights, and the philosophy of law", in The Cambridge History of Renaissance Philosophy, edited by Ch. B. Schmitt, Q. Skinner, E. Kessler and J. Kraye (Cambridge: Cambridge University Press, 1992), 738-756, at 745. See also Heiko Oberman, The Harvest of Medieval Theology: Gabriel Biel and Late Medieval Nominalism, revised ed. (Grand Rapids, MI: Baker, 2001).

motion itself might have been secondary, but its metaphysical background, menacing.<sup>81</sup>

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<sup>81</sup> Damasus Trapp, "Clm 27034: Unchristened Nominalism and Wycliffite Realism at Prague in 1381", Recherches de théologie ancienne et médiévale 24 (1957): 320-360; Francis Roth, "The Great Schism and the Augustinian Order", Augustiniana 8, 3 (1958): 281-298; and especially Adolar Zumkeller, "The Augustinians at the Councils of Constance and Basle", in *Theology and History of the Augustinian School in the Middle Ages*, edited by J. E. Rotelle O.S.A. (Villanova, PA: Augustinian Press, 1996), ch. IV, 155-186.

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