

RAMON LLULL'S DEMONSTRATIVE METHOD

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Abstract

This paper aims to examine a specific topic in a portion of the Lullian *corpus*, i.e. Llull's later works dating from the Paris, Messina, and Tunis period, starting in May 1310. In Llull's opinion, as in Duns Scotus, the concepts of the supreme substances and God cannot be acquired from below—through the intellectual abstraction of data of the senses and imagination—but rather drawn from above, that is, from theological principles. These principles ultimately correspond to the dignities, which are all placed on the same ontological level according to a circular dynamic approach, due to their common inherence to God as their subject, and to the mutual conversion and equalization of these attributes, which can serve interchangeably as subject or predicate of the principle. This logical structure originates a demonstrative method which proves to be very effective in theology to provide evidence about the existence and activity of God, as the subject of these attributes, with a need so strong as to exceed the most rigorous form of deductive demonstration in Aristotelian terms. In fact, while the latter draws its formal validity from logical rules, the *demonstratio per aequiparantiam* is based on a particular ontological property of the necessary and primary terms *per se*, which was merely referred to as *medium mensurationis*. This demonstration proved to be more effective than the Aristotelian deductive demonstration.

Charles H. Lohr's studies on the reception of Arabic and Algazelian logic by Llull are well known. Llull assumes the contemplation of divine dignities or names starting from the creatures, their dynamic and correlative structure, the distinction of the primary and secondary intentions and the intellectual knowledge of intellectual things.¹ Based on these studies, this paper focuses on a theme of the Lullian logic, touched upon by Lohr: i.e. the syllogistic method and, in particular, the *demonstratio per aequiparantiam*, which is a very original feature of Lullian epistemological thought.

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1. Vid. Lohr (1965: 223-290), Lohr (1967, *passim*), *Logica Nova* (Charles H. Lohr, ed.: 1985), Lohr (1993: 729-745), Lohr (1998: 1204-1214) and Lohr (2000: 159-170).

This topic was already more recently addressed by two major scholars. In 1999 Josep Maria Ruiz Simon thoroughly studied the *demonstratio per aequiparantiam* starting from *Liber principiorum theologiae* to *Liber de divina existentia et agentia*. Ramon Llull opts for the epistemological primacy of deductive demonstration (*propter quid*) rather than the inductive demonstration (*quia*) that proceeds from the demonstrative syllogism principle to the conclusion, through the middle term, in terms of the *Analythica Posteriora* by Aristotle. Yet, Llull considers that deductive demonstration is less rigorous than any other type of necessary demonstration; this demonstration is known as “per aequiparantiam”; it is not linear, proceeding from the major premise to the conclusion, or *vice-versa*, but circular, since it develops between mutually equal, identical and exchangeable terms, devoid of any relations of anteriority and posteriority, superiority or inferiority and cause or effect. These terms are made *unum secundum esse* and are converted, as divine dignities, when they are intended as the major premise and conclusion of the syllogism, thanks to a middle term, which is able to transmute the subject of the principle into the predicate of the conclusion, through a property identical both to the subject and the predicate. For example, given the principle “Omnis animal est sentiens” and the conclusion “omnis substantia sensata est sentiens”, the middle term is “omnis substantia sensata est animal” so as to obtain the syllogism “Omnis animal est sentiens; omnis substantia sensata est animal; ergo omnis substantia sensata est sentiens” according to the circular pattern “A = B; C = A; C = B”.²

In 1995 and 2007 Anthony Bonner highlighted that the Lullian programme was designed to reconcile logic and ontology, showing that after processing *Ars generalis ultima*, Llull focused on syllogistic logic, which was completely renewed outside the Aristotelian framework, thanks to mutually contradictory syllogisms including the superlative degrees of the divine dignities, and *demonstratio per aequiparantiam*. It renounced the relation of superiority and inferiority between the subject and predicate of the principle of the syllogistic deduction and the cause-effect relationship between the major premise and the conclusion of the *propter quid* and *quia* demonstrations. Yet, it activated the conversion and the equalization of two mutually identical terms that serve as subject and predicate of the principle, in

2. Vid. Simon (1999: 29-43, 182-219, 239-320). For two Aristotelian demonstrations, vid. Fiorentino (2014: 29-32).

such a way that the middle term can introduce a new subject whose identity is deduced first by means of the predicate and then by the subject of the principle.³

Based on these studies, this paper aims to examine a specific topic of a section of the Lullian *corpus*, which is so far very little known: i.e. Llull's later works dating from the Paris, Messina and Tunis period, starting from May 1310. Hence, the following works shall be taken into particular consideration:

Some of Llull's works written between 1310-1315

Title	Date	Place	Opus	ROL vol., pp.
<i>Liber de modo naturali intelligendi</i>	Paris	May 1310	161	VI, 177-223
<i>De conversione subjecti et praedicati et medii</i>	Paris	July 1310	163	VI, 251-275
<i>Liber in quo declaratur quod fides catholica est magis probabilis quam improbabilis</i>	Paris	August 1310	165	VI, 319-373
<i>Disputatio Raimundi et Averroistae</i>	Paris	October / December 1310	168	VII, 9-17
<i>Liber lamentationis philosophiae</i>	Paris	February 1311	170	VII, 82-126
<i>Liber contradictionis</i>	Paris	February 1311	171	VII, 135-158
<i>Liber de syllogismis contradictoriis</i>	Paris	February 1311	172	VII, 159-198
<i>Liber facilis scientiae</i>	Paris	June 1311	176	VII, 293-317
<i>Quaestiones factae supra Librum facilis scientiae</i>	Paris	June 1311	177	VII, 319-341
<i>Liber de divina existentia et agentia</i>	Paris	August 1311	180	VIII, 103-137
<i>Liber de medio naturali</i>	Messina	October 1313	221	I, 205-221
<i>Liber de bono et malo</i>	Tunis	December 1315	272	II, 310-313

Each one of these works will now be analyzed one at a time.

In the fourth distinction of *Liber de modo naturali intelligendi*, Llull identifies three types of syllogisms that can be performed by the intellect without the latter surrendering to its unity:

3. Vid. Bonner (1995: 457-474; 2007: 195-225).

Intellectus est unus; et sic ratione suae unitatis habet unam naturam intelligendi. Sed quia plures sunt modi faciendi syllogismos, multipliciter intelligit faciendo ipsos, quoniam unum syllogismum intelligit quoad gradum positivum, alium quoad comparativum, alium quoad superlativum. Quoad positivum duobus modis: uno modo quantum ad opinionem; alio modo, quando subiectum et praedicatum non convertuntur. Quoad modum opinativum, quando syllogizat credendo sive supponendo, ut puta quando duo syllogismi sunt contrarii, quorum nulla propositio est necessaria, | eo quia est extra intelligere. Alio autem modo, quando subiectum et praedicatum non convertuntur; ut hic: Omne animal est substantia. Omnis homo est animal; ergo omnis homo est substantia. Et dicitur, quod est positivum per hoc, quia quod est superius, non est inferius. [...] Syllogismus comparativus est, quando in inferioribus extremitates sunt valde separatae; sicut quando dicitur: Nullus homo est lapis. Omne risibile est homo; ergo nullum risibile est lapis. Est autem iste syllogismus in comparativo gradu, quia magis assertive intelligit intellectus naturaliter per ipsum, quam per primum. Syllogismus vero dicitur in superlativo gradu esse, quando subiectum et praedicatum convertuntur, ut puta divina bonitas et divina voluntas; sicut quando arguitur: Omnis bonitas infinita est voluntas infinita. Deus vero est bonitas infinita; ergo Deus est voluntas infinita. Aliter fit syllogismus in superlativo gradu negative et per secundam figuram; et hoc sic: Nulla bonitas aeterna est malitia aeterna. Deus est bonitas aeterna; ergo non est malitia aeterna. Iste syllogismus dictus est in superlativo gradu, quia sua extrema infinite distant. Cum isto vero modo syllogizandi in superlativo gradu habet intellectus modum intelligendi in superlativo gradu.⁴

This passage identifies three degrees of syllogism that culminate with *demonstratio per aequiparantiam*. The first degree, the positive one, splits into an opinative or probable mode, with the persistence of more competitive or contradictory syllogisms, and another one, which, while allowing to build a single syllogism, does not tolerate the conversion of the subject and predicate of the principle, and thus requires a relation of superiority and inferiority between the terms of the principle, for example the genus of animality and the species of substance, to be addressed according to the Aristotelian logic. While the last degree, the superlative one, is characterized precisely by this conversion in the affirmative or negative sense. This conversion is given between equal or identical terms, as divine dignities that are declined

4. *Liber de modo naturali intelligendi*, dist. 4 (ROL VI: 197-198). Latin graphically normalized by me.

to the infinite degree and are attributed to the same subject. For example, given the identity between the infinite goodness and the infinite will, if God is infinite goodness, He also is infinite will, according to the above-mentioned logical scheme. Therefore, the extremes, i.e. the subject and its properties are infinitely distant.

The second degree, the comparative one, does not tolerate the conversion, as the first one does; but it does not establish a relation of superiority and inferiority between the terms of the principle, sharing the same ontological level, as in man and stone. If it is true that man and stone are separated in a negative way, it is also true that if the laughing property corresponds to man, this same property does not belong to the stone.

De conversione subiecti et praedicati et medii is precisely intended to clarify the condition of the conversion of the subject and predicate for the formulation of what Llull considers to be the demonstrative syllogism. For this conversion, the *medium mensurationis* ensures *coaequatio* of terms and hence the mixture of dignities.

Tale medium requirit tres species: Quando convertuntur per ipsum subiectum et praedicatum, scilicet medium mensurationis, medium coniunctionis et medium extremitatum. Medium mensurationis est, quando existit aequaliter inter extremitates, ut puta intelligere naturale, quod existit aequaliter inter intelligentem et intelligibile. A tali medio oritur relatio et conversio inter subiectum et praedicatum. Medium coniunctionis est causa, quare extremitates connectuntur, et sequitur unio. Medium extremitatum est respectu continui subiecti, sicut linea | inter duo puncta. Clauditur; Praedicationes autem multae sunt et diversae, ut puta: Bonitas est magnitudo, et magnitudo est bonitas. Alia autem species praedicationis est, quando subiectum et praedicatum non convertuntur, ut puta quando dicitur: Omnis homo est animal; et non convertitur. Per primam praedicationem cognoscitur medium, a quo oritur syllogismus demonstrativus. Per secundam oritur syllogismus opinativus [...].⁵

As can be seen, only the measuring *medium* allows the equivalence and conversion of the subject and predicate of the principle, while the connecting middle term (*medium coniunctionis*) is confined to uniting or connecting the predicate to the subject without activating the conversion, as in the

5. *De conversione subiecti et praedicati et medii*, dist. 1 (ROL VI: 263). Latin graphically normalized by me.

case of the proposition “*omnis homo est animal*”. Instead, the extremity middle term correlates undivided essences or terms that are on different ontological levels, as a primary intention and a secondary intention in the proposition “*homo est species*”. The conversion of the terms becomes the dividing line between the opinative or probable syllogism and the demonstrative syllogism, according to Llullian terms.

In *Liber in quo declaratur quod fides catholica est magis probabilis quam improbabilis* this kind of demonstrative syllogism, marked by comparison and conversion of divine dignities, clashes with *potissima* or *propter quid ex necessariis* demonstration intended by the Parisian theologians, i.e. a more rigorous scientific demonstration that proceeds in a deductive way from the self-evident principle to the necessary conclusion through the *medium* that subsumes the definition of the subject on the basis of Aristotelian epistemology.⁶

The issue of the origin of the scientific knowledge of the wayfarer has been addressed in the debate between Llull and his Averroist interlocutor, i.e. John of Jandun according to the editors, in *Disputatio Raimundi et Averroistae*.⁷ This debate is conducted *per modum intelligendi* and not *per auctoritates* and starts with the Averroist philosopher’s position describing the typical inductive process, whereby all that the human intellect can think of and know, must emerge from the data of sensation and imagination of sensitive extra-mental entities, in the wake of Aristotle and Averroes philosophy; once they have been acquired through the senses and imagination, these data are progressively abstracted and generalized by intellect to ultimately shape the universal concepts of species, genera and supreme genera.⁸ Llull shares this stance only partially:

intellectus per ea, quae sunt inferius, ut puta per sensum et imaginationem, facit scientiam de his, quae sunt sensibilia et imaginabilia; sicut de albedine per album, de sono per auditum, et sic de aliis, quoniam ista sunt sensibilia et imaginabilia, et sic de aliis; et hoc, quia quod est superius, est contractum

6. Vid. *Liber in quo declaratur quod fides catholica est magis probabilis quam improbabilis* (ROL VI: 331-332). For *demonstratio potissima* vid. Biard (2014: 61-79).

7. This debate recalls the first question of Prologue of *Lectura Oxoniensis* and *Ordinatio* where John Duns Scotus represents the different stances of philosophers and theologians; vid. Fiorentino (2016: 1-153).

8. Vid. *Disputatio Raimundi et Averroistae*, q. 1 (ROL VII: 10).

ad hoc, quod est inferius, ut albedo ad hoc album, et dulcedo ad hoc dulce. Sed albedo et dulcedo non sunt obiecta sensus nec imaginationis, cum sint principia abstracta, sed tantummodo sunt obiecta intellectus, qui est altior per intelligibile, quod est suum proprium obiectum, quam sensus per sensibile et imaginatio per imaginabile. Verumtamen cognosco, quod sensus et imaginatio sunt potentiae dispositivae et praeparativae ipsius intellectus, ut intelligat abstracta, sed non sunt causae; quia si sic, causarent intelligibilitates, et intelligere non esset proprius actus intellectus, sed communis sensui et imaginationi et ipsi intellectui; quod est impossibile.⁹

Therefore, while recognizing the inductive and abstractive method of sense and imagination, Llull clearly claims the prerogatives of the intellect, which cannot be compressed by lower faculties. The intellect receives these particular concepts from the data of sense and imagination. Yet the process leading from the particular concept to universal concepts or to those defined as abstract principles by Llull must be overturned, shifting from induction to deduction. Assuming that sense performs its operations in the world that can be perceived by the senses and that the imagination operates in the sphere of what can be imagined, the acts of the intellect cannot but be separated and connected with the intelligible reality. Now, on the basis of the Arab logic and works by Severinus Boëthius, Llull proves to discriminate between the *intelligibilia* and *intellectibilia*, i.e. between the sensitive knowledge of intelligible realities and the intelligible knowledge of intelligible realities.¹⁰

Therefore, it is necessary that the intellect, regardless of induction of the sense and the imagination, formulates the universal concept according to the principles, namely by drawing on what is superior and not on what is lower and material. As a result, the data of sense and imagination do not ultimately cause the abstractive acts of the intellect, as Latin Averroists would suggest, but data prepare the intellect to be independent in carrying out such acts.

In the third question, Llull exemplifies what he means by these principles in ten syllogisms corresponding to the ten divine dignities, i.e. unity, goodness, greatness, eternity, power, intellect, will, virtue, truth and glory.

9. *Disputatio Raimundi et Averroistae*, q. 1 (ROL VII: 10). Latin graphically normalized by me.

10. For this distinction in Boethius vid. Coppola (2010: 19-24).

These dignities are systematically applied to the entity equipped with simple existence and activity, provided that it is infinite:

1. Nullum ens unum est per se simpliciter existens et agens, nisi sit infinitum. Deus est unus; ergo Deus non est per se simpliciter existens et agens, nisi sit infinitus. 2. Nullum ens bonum est per se simpliciter existens et agens, nisi sit infinitum. Deus est bonus; ergo non est per se simpliciter existens et agens, nisi sit infinitus.¹¹

This clearly is a typical *per aequiparantiam* demonstration chain, which, starting from the initial conversion of two properties, that is, on the one hand, a divine dignity and, on the other hand, the dynamic existence, conditioned to infinity, clearly establishes the inherence of the two properties of God. In other words, if $A = B$, God is A and God is B.

In *Liber lamentationis philosophiae* Llull represents the lower way of the sense and imagination and the higher way of the principles in philosophy paraments, coated with two crowns: the silvery crown of the sense and imagination and the golden crown of the twelve guiding principles of theology, namely, goodness, greatness, eternity, power, wisdom, will, virtue, truth, glory, perfection, justice and mercy.

Ego autem dupliciter sum philosophia videlicet: Primo cum sensu et imaginatione meus intellectus causat scientiam. Post autem cum duodecim imperatricibus, quae sunt haec: (1) diurna Bonitas, (2) Magnitudo, (3) Aeternitas, (4) Potestas, (5) Sapientia, (6) Voluntas, (7) Virtus, (8) Veritas, (9) Gloria, (10) Perfectio, (11) Iustitia et (12) Misericordia. Cum istis autem sum superior, et habeo coronam auream; et cum sensu et imaginatione sum inferior, habens argenteam.¹²

Philosophy makes use of the *intellectus*, which is intended to acquire species, distinguish, agree and contradict to gain the science and to accomplish the truth.¹³ But this kind of science, while operating in the field of possibility and impossibility, is gained by the intellect through the sense and the imagination, whereas the lower arts, namely the liberal, mechanical and moral ones, through dignities, in theology:

11. *Disputatio Raimundi et Averroistae*, q. 3 (ROL VII: 13-14). Latin graphically normalized by me.

12. *Liber lamentationis philosophiae* (ROL VII: 87). Latin graphically normalized by me.

13. Vid. *Liber lamentationis philosophiae* (ROL VII: 118).

Rursus ait Intellectus: Duobus modis intelligo et facio scientiam. Primo per sensum et imaginationem de rebus inferioribus tanquam in artibus liberalibus et mechanicis, et de moralibus. Alium modum habeo per ea, quae sunt superiora, ut puta per Deum et per suas dignitates et per substantias separatas. Et sicut facio scientias inferiores | per possibile et impossibile, sic facio scientias superiores per possibile et impossibile. Et magis sum altus et assertivus per possibilitatem et impossibilitatem ad superiora, quam ad inferiora [...].¹⁴

In *Liber contradictionis*, contradiction can be subdivided in an intense part *per impossibile* regarding the contradictory entities, and in another extensive part *per possibile* concerning contrary entities, such as the true and false. Contradiction recommends Llull's follower to formulate one hundred syllogisms to which the Averroists will have to answer, according to the majority rule, that is to choose the syllogisms that are most valid, relevant and durable. These syllogisms are arranged according to twenty dignities, each of which rules five syllogisms: unity, operation, goodness, greatness, eternity, power, intellect, will, virtue, truth, glory, actuality, perfection, difference, correlation, principle, nature, singularity, height and quiet.¹⁵ One hundred traditionally constructed syllogisms follow from the first figure, such as "Omne ens magis unum ponit maiorem possibilitatem, quam ens minus unum. Sed Deus est ens magis unum; ergo ponit maiorem possibilitatem, quam ens minus unum".¹⁶

Liber de syllogismis contradictoriis is the continuation of the previous one and presents ten pairs of mutually contradictory syllogisms that from time to time state and deny the dynamic and active existence of God according to the ten dignities, namely: goodness, greatness, eternity, power, intellect, will, virtue, truth, glory and perfection, raised to the superlative degree in principle to obtain the necessary and infallible conclusions.¹⁷ The first dignity can for example be taken into account:

Divina bonitas est optima. Omne ens, existens bonitas optima, existit et agit optime. Deus est bonitas optima; ergo Deus existit et agit optime. Ad conse-

14. *Liber lamentationis philosophiae* (ROL VII: 118-119). Latin graphically normalized by me.

15. Vid. *Liber contradictionis* (ROL VII: 139).

16. Vid. *Liber contradictionis* (ROL VII: 140).

17. This infallibility of the demonstrative syllogisms pushing the every intellect to assent, is present in the great part of Lullian works in Messina and Tunis; vid. Fiorentino (2008: 43-84; 2012: II, 1109-1117; 2013: 1109-1132).

quentiam istius syllogismi sequitur, quod non est aliquod ens, quod possit resistere Deo, quin sit ens optime existens et agens; et quod non est aliquod ens, quod possit evadere ab ipso cum malo existere et agere. In oppositum arguitur sic: Divina bonitas non est optima. Quodcumque non est bonitas optima, non potest optime existere et agere. Deus non est bonitas optima; ergo Deus non potest optime existere et agere. Ad consequentiam istius syllogismi sequitur, quod sit aliquod ens impediens, quod Deus non possit existere et agere optime, et quod potest evadere ab ipso, cum malo existere et agere. Cum autem iste syllogismus sit falsus et erroneus, necessarie sequitur, quod syllogismus in oppositum sit verus et necessarius. Et hoc intellectus non potest negare Secundum modum intelligendi; neque suum oppositum est credibile.¹⁸

This passage introduces two mutually contradictory syllogisms in which the affirmation or denial of the superlative degree of divine goodness, as primary dignity, is addressed in a four-party system, which splits the equivalence between the dignity and dynamic existence in the two initial propositions; once these propositions are taken for granted, the inherence of God logically derives from them, with dignity expressed at the superlative degree and with the dynamic existence. The subsistence of an entity that exists and acts in a supreme way is thus demonstrated in a deductive fashion: hence the identification of God with this entity. While the lack of impediment to this existence and the absence of a principle of evil agree with the existence of such an entity and its identification, the presence of an impediment and a principle of evil that would impair the being and act of God is logically unacceptable and not credible. These conclusions are reached with such a logical rigour that they cannot be avoided by the intellect *per modum intelligendi*, i.e. by the intellect that, irrespective of sense and imagination, contemplates the abstract principles per se, no matter the religion one believes in or the philosophy that is supported.

The first positive syllogism serves as the basis for demolishing forty errors by the Averroist philosophers, which bear resemblance to the Parisian condemnations of 1277.¹⁹

Sicut autem diximus et praedicavimus de optimitate, ita posset dici de maximitate, aeternitate etc, mutando subiectum in praedicatum. Et talis praedica-

18. *Liber de syllogismis contradictoriis* (ROL VII: 173). Latin graphically normalized by me.

19. Vid. *Liber de syllogismis contradictoriis* (ROL VII: 173-195). For the condemnations in 1277 vid. Bianchi (1990: passim).

tio est primitiva, vera et necessaria et infallibilis. Et intellectus humanus ipsam non potest negare per modum intelligendi. Ergo tu Averroista, quare negas ipsam, cum dicas te esse philosophum, et subiectum philosophiae sit intelligibile? Quid lucraris inde, si cum tali opinione mortuus es? Vitam beatam aeternam amittis, et mortem aeternam acquiris. A qua morte libera nos, Domine! Liber iste sive Ars est valde utilis, et est derivatus ab Arte generali. Utilis est pro tanto, quia per ipsum possunt destrui omnes errores omnesque obiectiones, quae fiunt et fieri possunt contra sanctam fidem catholicam. Et hoc in suo processu exemplificatum est. Iterum est utilis ad cognoscendum distantias inter syllogismos priores et posteriores, et inter possibile et impossibile, superiora et inferiora. Nulla autem lex sive secta, quaecumque sit, potest ponere ita apparenter syllogismos primitivos veros et necesarios, sicut lex christianorum.²⁰

Therefore, according to Llull, conversion and equalization of the subject and predicate of the principle of the demonstrative syllogism deliver an indisputable and infallible logical tool to Christianity, providing a demonstration of the truths of faith, to which neither Averroists nor Muslims can resist. There is no truth and salvation outside of Christianity.

The mutually contradictory syllogisms are then reformulated in *Liber facilis scientiae*. Here the ten dignities are raised to the superlative degree and blended together with their respective correlatives per *modum intelligendi*.²¹

The first of the nine questions that follow in *Quaestiones factae super Librum facilis scientiae*, attempts to prove the existence of God, stating that the positive and possible syllogism, demonstrated with the first dignity in the previous book, cannot be hindered by the corresponding negative and impossible syllogism:

Utrum Deus sit? Solutio: Suppono, quod sit bonum, magnum et verum, Deum esse. Et si contraria suppositio sit bona magna | et vera, bonum magnum et verum est ipsum non esse; quod est falsum et impossibile. Et in capitulo bonitatis dicit prima ratio, quod nullum impossibile potest, impedire maius possibile bonitatis. Quod impossibile impediret, si Deus non esset; quod est impossibile. Probatum est ergo Deum esse.²²

20. *Liber de syllogismis contradictoriis* (ROL VII: 195). Latin graphically normalized by me.

21. Vid. *Liber facilis scientiae* (ROL VII: 304-316).

22. *Quaestiones factae super Librum facilis scientiae* (ROL VII: 330-331). Latin graphically normalized by me.

Hence, the attribution of the dignities to God is logically possible, while the denial of this attribution implies the non-existence of God, which is impossible.

In *Liber de divina existentia et agentia*, Llull proposes his new type of demonstrative syllogism, deducing the conversion of goodness, greatness and truth with God as subject.²³

Liber de medio naturali focuses on the search of the middle term of a demonstrative syllogism:

Prædicari de subiecto pluribus modis potest fieri, scilicet per prædicationem necessariam, sicut quando dicitur: "Homo est animal". Et talis prædicatio est necessaria, quia inter subiectum et prædicatum est dare connaturale medium. Connaturale oritur sicut quando dicitur: "Petrus est homo". Et ex duabus propositionibus sequitur naturalis conclusio, ut puta: "Ergo Petrus est animal".²⁴

In other words, the necessity of predicate in the principle of a demonstrative syllogism depends on the use of the natural middle term, i.e. a middle term that complies with the Porphyrian tree, descending from the genus and the species, expressed by the predicate and the subject of the principle, to the individual. For example, if the major premise is "homo est animal", the natural middle term becomes "Petrus est homo", in such a way as to shift from the animality genus to the human species and ultimately to the individual Petrus. Hence, the syllogism of the first figure in Lullian terms "homo est animal; Petrus est homo; Petrus est animal". But the search of the natural middle term to prove the proposition "mundus est creatus" is more difficult, because this proposition might be misleading and thus leading to contrary opinions. Therefore it is necessary to proceed from a logical middle term to a physical middle term, employing the Holy Spirit as a natural and exemplary middle term, representing all the other natural middle terms, namely sight, hearing, smell, taste, touch, *affatus*, imagination, intellect, love and honour, and mixing divine dignities according to the three correlative terms to obtain science.²⁵

In Llull's opinion, *Liber de bono et malo* attempts to remedy to one of Muslims' defects, namely the presumed divine causation of sin as evil. Fur-

23. Vid. *Liber de divina existentia et agentia* (ROL VIII: 113).

24. *Liber de medio naturali* (ROL I: 206). Latin graphically normalized by me.

25. Vid. *Liber de medio naturali* (ROL I: 206-207).

thermore, Llull develops a syllogistic argument that seeks to prove the superiority of Christian religion: “illa lex est melior et verior qua homo potest plus agnoscere, diligere et laudare Deum; lex Christianorum est lex qua homo potest plus agnoscere, diligere et laudare Deum; ergo lex Christianorum est melior et verior alia lege”.²⁶ The book is subdivided into three parts, namely the impeccability of God, Trinity and Incarnation. The impeccability is demonstrated with an argument that Llull believes to be primeval, true, necessary, co-essential and undeniable for anyone, namely the repugnance between the twelve divine dignities to the superlative degree and the possibility of committing, directly or indirectly, a sin.²⁷ If God sinned or caused sin, His ability to act *ad extra* would be minor.²⁸ This conclusion is so persuasive, according to Llull, that it does not lend itself to be refuted by Muslims:

Dixit Raimundus Alcadio: Sic probant christiani, quod Deus agit bonum et non peccatum. Et si aliquis Saracenus vellet contrarium dicere, deberet procedere per argumenta contraria. Et non possent utraque esse vera; nam sic bonum et malum non essent contraria, et divina dignitas sustineret in se ipsa contradictionem, scilicet. Quod esset bona et non bona, mala et non mala etc.²⁹

Even if Muslims wanted to disprove it, they could not help but to employ the same arguments used by Llull and so they would get an overt contradiction in divine dignities, which would be themselves individually and they would not be at the same time. That is to say that God would prove to be good and not-good or bad and not-bad at the same time. Whereas truth can only be unique and totally in favour of Christianity, thanks to the strength of its demonstrative logic. This evidence encourages Llull to directly exhort Alcadius, religious leader of Tunis, to violate the Koran, by professing the non-divine causation of sin.

Quapropter tu, qui es Saracenus episcopus, dicas tuo populo. Quod non credat Deum facere peccatum, quamvis Maftumetus dixerit in Alcorano [...].³⁰

26. Vid. *Liber de bono et malo* (ROL II: 312).

27. Vid. *Liber de bono et malo* (ROL II: 310-312).

28. Vid. *Liber de bono et malo* (ROL II: 313).

29. *Liber de bono et malo* (ROL II: 312). Latin graphically normalized by me.

30. *Liber de bono et malo* (ROL II: 312). Latin graphically normalized by me.

In essence, the demonstrative logic leads to such a degree of truth so as to sweep away any sacred text that must recognize its fallibility and subordination.

In conclusion, the examination of the works under question shows an essential fact, i.e. the resonance of the dispute between theologians and philosophers about the way in which a wayfarer man can know the supreme substances, and it argues that—as has been observed elsewhere—it resonated strongly in *Lectura Oxoniensis* and in *Ordinatio* by Duns Scotus after the condemnations in March of 1277.³¹ This dispute can be found again in Llull's works dating from the Paris period, intending to establish the superiority of the theological method over the philosophical one. In other words, in Llull's opinion, like in Duns Scotus, the concepts of the supreme substances and God cannot be acquired from below, i.e. through the intellectual abstraction of the data of the senses and imagination; but they must be drawn from above, i.e. from theological principles. These principles ultimately correspond to the dignities, i.e. the essential attributes of God, which are absolutely necessary and primeval, since they are raised to the infinite or superlative degree. In such a way, these attributes are all placed on the same ontological level according to a circular dynamic approach, due to their common inherence to God as their subject. Consequently, a property is not more or less universal than the other, it does not act as genus or species in relation to one another, and therefore it cannot be hinged on the principle of a syllogism according to a relation of superiority and inferiority. This inability prevents the formulation of a demonstrative syllogism in Aristotelian terms, as attempted by Parisian theologians; but it identifies a property that can be exploited to formulate another type of syllogism. This property consists in the mutual conversion and equalization of these attributes, which can serve as subject or predicate of the principle in an exchangeable manner. Given this exchangeability, it becomes easy to demonstrate the inherence of the two attributes that serve as subject and predicate of the principle, to a term which is not included in the principle, by taking this latter term as the subject of the middle term and of the conclusion and the two initial attributes as predicates. For example, if good is great, Peter is good and Peter is great.

31. Vid. Fiorentino (2016: 1-153).

This demonstrative method, which seems peculiar in ordinary cases, proves to be very effective in theology to provide evidence about the existence and activity of God, as the subject of these attributes, with a need so strong as to exceed the most rigorous form of deductive demonstration in Aristotelian terms. In fact, while the latter derives its formal validity from logical rules, the *demonstratio per aequiparantiam* rests on a particular ontological property of the necessary and primeval terms *per se*, which was merely referred to by *medium mensurationis*. Thus, in Llull's opinion, the *demonstratio per aequiparantiam* is a demonstration that proved to be more effective than the Aristotelian deductive demonstration, but there is a price to pay for this greater strength, namely the restriction of the scope of application of Lullian demonstration. In fact, while the Aristotelian demonstration, aiming at purely formal validity after the application of the correct logical rules, is universal and applicable also to theology, Lullian demonstration may be applied only to theology, because it rests on a real property that occurs only in the case of deity.

In Llull's intentions, the formalization of this type of necessary demonstration in no way affects the ordinary deductive demonstrations employed by Llull in the simple or mutually contradictory form against any kind of unfaithful, *infideles*, be they Averroists or Muslims, or both. As already observed elsewhere, they cannot resist the logically necessary arguments supported by Llull.³²

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