Disagreement in Aristotle's *Topics* and its Latin Medieval reception

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This paper aims to shed light on the Aristotelian notion of dissent and its understanding in the medieval reception of Aristotle's dialectics. Dissent is fundamental in Aristotle's *Topics*, although its exact nature is not clear. Specifically, it is unclear whether dissent is essentially related to an epistemic quality of the premises involved, or whether it simply amounts to social disagreement about them, regardless of their epistemic quality. Medieval scholars clearly opt for the former reading. We aim to show that this owes to their understanding of logic as a tool for science.

1. ARISTOTLE'S TOPICS

In his *Topics,* Aristotle sets out to provide a method for the dialectical discussion. Although the dialectical discussion has several uses (cf. *Top.* I.2.101a25–28), it is clear[1] that the immediate use the method developed in the *Topics* intends to regiment is the gymnastic discussion between a questioner and an answerer, possibly in the presence of a third party.

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[1] Mainly from the advice to questioner and answerer given by Aristotle in *Topics* VIII. This is Primavesi's position in Primavesi (1996), with which we side. See also Allen (2007). Owen (1961), Barnes (1980), and Bolton (1990) hold that the *Topics* provide a method for philosophical discussion.

The gymnastic dialectical discussion is structured as follows:

(a) A questioner, *Qu*, presents a problem (*problema*) to the answerer, *An*, of the form 'Is p the case or not? Where 'p' is a problematic proposition. Let's call t the thesis (i.e., either 'p' or '$\sim p$'), the statement to which *An* commits himself. *Qu*'s objective is to force *An* to concede $\sim t$, the contradictory of his thesis.
(b) *Qu* must do that by introducing questions (*protaseis*) of the form 'Is q_n the case?', which *An* can concede or reject. If *An* concedes, 'q_n' becomes a premise to which *An* is henceforth also committed.
(c) *Qu* wins whenever she has led *An* to accept a set of q_ns that syllogistically imply $\sim t$, so that *An* will be forced to also concede $\sim t$ and be in contradiction with his initial position. She loses, and hence *An* wins, if she fails to do so over a given amount of time.

Let's call (a) the opening stage of the dialectical discussion, (b) its interrogative stage, and (c) its concluding stage.

Aristotle's method in the *Topics* aims to improve the quality of such a dialectical discussion through a systematic understanding of its opening and interrogatives stages in a way that enhances the training aspect of the discussion. So, a fundamental part of the method includes a determination of suitable dialectical problems and premises given a gymnastic aim.[2]

In *Topics* I.11 Aristotle describes the dialectical problem as:

> [(i)] a point of speculation, [(ii)] directed either to choice and avoidance or to truth and knowledge [...] [(iii)] about which people either have no opinion, or the public think the opposite of the wise, or the wise think the opposite of the public, or each of these groups have opposed opinions within itself.[3] (Smith, 1997, p. 10)

This characterisation[4] delimits the dialectical problem in terms of (i) the puzzling nature of its proposition, (ii) its subject matter, and (iii) its socio-epistemic character: A problem is the questioning of a puzzling proposition, most commonly practical or theoretical, with respect to

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[2] Cf. Mora-Márquez (forthcoming).

[3] *Top.* I.11.104b1–5: Πρόβλημα δ' ἐστὶ διαλεκτικὸν θεώρημα τὸ συντεῖνον ἢ πρὸς αἵρεσιν καὶ φυγὴν ἢ πρὸς ἀλήθειαν καὶ γνῶσιν, ἢ αὐτὸ ἢ ὡς συνεργὸν πρός τι ἕτερον τῶν τοιούτων, περὶ οὗ ἢ οὐδετέρως δοξάζουσιν ἢ ἐναντίως οἱ πολλοὶ τοῖς σοφοῖς ἢ οἱ σοφοὶ τοῖς πολλοῖς ἢ ἑκάτεροι αὐτοὶ ἑαυτοῖς.

[4] For other analyses of Aristotle's *problemata*, see also Rubinelli (2009, pp. 4–5); Slomkowski (1997, pp. 15–18).

which there is either no general opinion or social disagreement.[5] Let us focus on (i) and (iii).

The puzzling nature of the problematic proposition is a necessary condition for it to be worth an inquiry at all. Aristotle's characterisation of the puzzling proposition, the *theorema*, points to a proposition that warrants investigation insofar as (i) it does not come across as evident (*phaneron*) to everyone or the majority, and (ii) involves a difficulty (*aporia*):

> No one in his right mind would hold out as a premise what nobody thinks or make a problem of what is evident to everyone or to most people, since the latter contains no puzzle while nobody would concede the former.[6] (Smith, 1997, p. 9)

The aporetic aspect of the problematic statement (ii) suggests that something related to its subject matter makes it genuinely puzzling and hence worth an inquiry. For instance, 'the soul is unperishable' would be aporetic because of the difficult epistemic access we have to its subject, the soul. This is something that all problematic statements have in common. In the *Topics*, however, Aristotle focuses on the aspect that makes a problematic statement specifically dialectical *for the gymnastic purpose*: (i) that it does not come across as evident (*phaneron*) *to everyone or the majority*, i.e., its possibility of being the object of social disagreement. In other words, that a statement is puzzling for individual thinkers, and hence a matter of disagreement between them, is of no relevance for the gymnastic discussion.

This aspect draws attention to certain socio-epistemic attitudes towards the problematic proposition, so Aristotle introduces (iii): The problematic proposition suitable for the discussion must be either one about which there is no social stance at all or one about which there is disagreement, i.e., between the many and the wise, or between sub-groups within the many, or between sub-groups within the wise (cf. Brunschwig, 1967, p. 127). Moreover, such an aporetic proposition yields a good dialectical problem as long as the extent of its puzzlement is manageable given the length of the dialectical exercise, for:

> Nor ought one to inquire into that the demonstration of which is near to hand, or those the demonstration of which is

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[5] Cf. Mora-Márquez (forthcoming).
[6] *Top*. I.10.104a5–7: οὐδεὶς γὰρ ἂν προτείνειε νοῦν ἔχων τὸ μηδενὶ δοκοῦν οὐδὲ προβάλοι τὸ πᾶσι φανερὸν ἢ τοῖς πλείστοις· τὰ μὲν γὰρ οὐκ ἔχει ἀπορίαν […].

excessively remote. For the former present no difficulty, while
the latter present too much for exercises.[7] (Smith, 1997, p. 10)

But mostly, suitable dialectical problems involve problematic propositions about which there is already disagreement between social groups: (a) between the many and the wise; (b) between sub-groups of the many; or (c) between sub-groups of the wise.

How can we characterise the kind of disagreement Aristotle has in mind here? First of all, that it owes to the puzzling nature of a proposition indicates that it cannot include fabricated disagreement:[8] Disagreement must be based on a plausible proposition whose truth-value is, however, not easily determinable. Second, that it obtains between the many and the wise, that is, well-demarcated social groups (in the Greek *polis*), also indicates that it must be social: Disagreement between individuals is of no relevance in this context. Finally, that the two well-demarcated social groups separate people with different epistemic backgrounds indicates that value is given to some degree of epistemic diversity: The opinion of the many has the same weight as that of the wise in determining whether a practical or theoretical proposition makes a good dialectical problem.

The two last entailments are better supported when we contrast the dialectical problem with the dialectical premise. Contrary to the dialectical problem, which is characterised in terms of social disagreement, the dialectical premise is characterised[9] in terms of social acceptability – on its proposition being an *endoxon*:

A dialectical premiss is [(i)] the asking of [(ii)] something acceptable to everyone, most people, or the wise (that is, either all of them, most of them, or the most famous), provided it is not contrary to opinion (for everyone would concede what the wise think, so long as it is not contrary to the opinions of the many).[10]
(Smith, 1997, p. 9)

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[7] *Top*. I.11.7–9: οὐδὲ δὴ ὧν σύνεγγυς ἡ ἀπόδειξις, οὐδ' ὧν λίαν πόρρω· τὰ μὲν γὰρ οὐκ ἔχει ἀπορίαν, τὰ δὲ πλείω ἢ κατὰ γυμναστικήν.

[8] An example of such "fabricated" disagreement can be found in those who doubt the validity of the principle of non-contradiction; see infra.

[9] Other analyses of the premise are found in Brunschwig (1967, pp. xxxvi–xxxvii); Primavesi (1996, pp. 34–35); Slomkowski (1997, pp. 19–35); Smith, (1997, pp. 77–80).

[10] *Top*. I.10.104a8–12: ἔστι δὲ πρότασις διαλεκτικὴ ἐρώτησις ἔνδοξος ἢ πᾶσιν ἢ τοῖς πλείστοις ἢ τοῖς σοφοῖς, καὶ τούτοις ἢ πᾶσιν ἢ τοῖς πλείστοις ἢ τοῖς μάλιστα γνωρίμοις, μὴ παράδοξος· θείη γὰρ ἄν τις τὸ δοκοῦν τοῖς σοφοῖς, ἐὰν μὴ ἐναντίον ταῖς τῶν πολλῶν δόξαις ᾖ.

The dialectical premise is an interrogative statement of the form 'is *q* the case?', where *q* must be an *endoxon* for the premise to have the highest odds to be conceded by *An*. There is disagreement between interpreters of Aristotle's dialectics about the semantic and epistemic qualities a statement must have in order to be an *endoxon*.[11] We want to defend the view that the *endoxon* requires no epistemic quality other than to be plausible, and that it is characterised in terms of its social acceptability.

From the semantic perspective, the dialectical premise must meet no requirement, as its truth-value is irrelevant as long as it is *acceptable*. But how is this acceptability understood? As already said, a necessary condition for a proposition to be acceptable is that it be plausible, but, as we have seen, this is also a condition for it to yield a problem, so plausibility cannot be the defining feature of the *endoxon*. We submit that the defining feature of the *endoxon*, in opposition to that of the problem, is its being the object of wide social agreement. This means that an *endoxon* is: (a) in fact accepted by everyone or by most people, or by every wise or the majority thereof, as long as the many do not disagree with it, or (b) derived in some specific ways from propositions as in (a). A proposition that is accepted by the wise, but not by the many, does not make a good dialectical premise, not because the many are more likely than the wise to be right about it, but because *An* can justifiably reject it on the basis of such a disagreement.

To sum up, the dialectical discussion in the gymnastic setting (i.e., the one for which the *Topics* provides a method) trains the participants in the art of arguing about matters of societal relevance by putting under scrutiny a genuinely puzzling proposition which is the object of disagreement between well demarcated and diverse social groups. If *Qu* wins the discussion by skilfully introducing the right acceptable premises, she will have incidentally shown that *An*'s thesis is inconsistent with a set of opinions widely accepted by the relevant social groups. The purely gymnastic use of dialectics, however, is unrelated to truth-determination or epistemic-enhancement purposes with regard to individuals, even though other uses of dialectics can have those purposes in mind.

2. LATIN MEDIEVAL RECEPTION

Latin medieval readers of the *Topics* largely focused on the epistemic-enhancement potential of the dialectical discussion, mainly, we submit,

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[11] For other interpretations of the *endoxon*, see Bolton (1990); Brunschwig (1967, pp. 113 – 114); Karbowski (2015); King (2013); Reinhardt (2015). Bolton and Reinhardt hold that the premise in the *Topics* is characterised by an epistemic quality; Karbowski rebuts such a reading.

because they took it to be one of the most efficient tools for the production and dissemination of scientific knowledge.[12]

Boethius of Dacia, a Danish master of Arts, active at the University of Paris during the 1270s, explicitly addresses this issue in the prologue of his commentary on the *Topics*, stating that "the dialectician does not consider truth itself (...) but rather shows the method that a given professional must apply in the pursuit of truth within a particular subject" (Green-Pedersen & Pinborg, 1976, pp. 8–9). [13] Thus understood, then, the dialectical discussion does not seem to have a proper subject matter, but becomes rather a method used within the particular sciences or disciplines that provide the premises and problems of dialectical discussions. Consequently, their understanding of the disagreement and agreement involved in problems and premises relies on the epistemic qualities of scientific propositions and the epistemic attitudes of individual thinkers within the particular sciences.

This presented a problem for medieval commentators, since the dialectician and the scientist would deal with the same problems, thus rendering one of them superfluous (Green-Pedersen & Pinborg, 1976, pp. 46-49). On q. 36 of the first book of his commentary on the *Topics*, Radulphus Brito, a French master of Arts, active at the University of Paris from at least the 1290s, asks whether every premise and every problem are dialectical (*utrum omnis propositio et omne problema sit dialecticum*). He argues that they are not, but admits that if we consider only the way in which they are formulated, namely the *modus interrogandi* in the case of the premise and the *modus quaerendi* in the case of the problem, any proposition *p* could become a dialectical premise ("Is *p* is the case?"), or a dialectical problem ("Is *p* the case or not?").[14] But this, according to

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[12] The study of the medieval reception of Aristotle's *Topics* is still in many ways a work in progress, given that the vast majority of the sources remain unedited. Moreover, the place given to the *Topics* in the University curricula varied throughout the Middle Ages (Green-Pedersen, 1984, pp. 87-93; Ebbesen, 1997, p. 337). In the following pages, then, we will focus on some key aspects of that tradition. We will give a transcription of the manuscript when using an unedited source.

[13] Boethius of Dacia, *Quaest. Top.*, Prooemium: *Dialecticus ipsam veritatem non considerat* (...) *sed docet modum, quem artifex specialis debet materiae speciali applicare ad veritatis inquisitionem*. The anachronism "a given professional" for *artifex specialis* indicates here a person who masters a particular scientific discipline.

[14] Radulfus Brito, *Quaestiones super librum Topicorum*, q. 36, ms. Paris, BNF lat. 11132, f. 24vb: Every proposition in which the assent of the answerer is required is dialectical insofar as its formulation is concerned. But in any proposition, it is possible to ask for the assent of the answerer. Therefore, <every proposition is dialectical.> The major premise is evident, because in a dialectical proposition the assent of the answerer is required, and therefore every proposition thus

Brito, cannot be the sole criterion to determine whether a premise or a problem is dialectic, because dialectic would be either superfluous or virtually omnipresent. For this reason, Brito argues, a problem is dialectical in virtue of the way in which it is solved (*terminatur*), that is, through common and probable reasons.[15] As Brito points out, a problem is ethical in virtue of its subject matter, but it can also be dialectical insofar as it determined by means of common topical relations and probable premises.[16]

But what is meant here by "common" and "probable"? With "common", medieval scholars referred to argumentative schemata that could be applied to any scientific issue regardless of its specific subject-matter. These schemata are divided according to Aristotle's division of the predicables (i.e., accident, genus, definition, and proprium), presented and discussed in the central books (II-VII) of the *Topics*.

With "probable", they qualified (through the lens of Avicenna) a proposition which is conceded as true with the fear of its contradictory

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asked is dialectical insofar as its formulation is concerned. The minor <premise> is clear, because the assent of the answerer can be asked about any proposition, be it true, false, necessary or probable [*Omnis propositio in qua interrogatur de consensu respondentis quantum ad modum interrogandi est dialectica. Sed in propositione potest quaeri de consensu respondentis. Ideo, etc. Maior patet quia in propositione dialectica interrogatur de consensu respondentis, et ideo omnis illa propositio in qua sic interrogatur est dialectica quantum ad modum interrogandi. Minor apparet quia sive propositio sit vera sive falsa sive necessaria sive probabilis potest interrogari de consensu respondentis.*]

[15] Radulfus Brito, *Quaest. Top.*, q. 36, ms. Paris, BNF lat. 11132, f. 24vb: If we speak of a proposition in the second way, that is, insofar as it can be judged as true or false in virtue of probable signs, then every proposition is dialectical, since every probable proposition, insofar as it is probable, is dialectical (...) If it is solved through common topical dispositions, such a problem is dialectical, because the dialectician, qua dialectician, considers common second intentions applicable to any subject-matter. Therefore, a problem thus solved is dialectical. [*Si loquamur de propositione secundo modo, scilicet ut iudicatur vera vel falsa per aliqua signa probabilia, sic omnis propositio est dialectica, quia omnis propositio probabilis, ut probabilis est, est dialectica. (...) Si terminatur per habitudines locales communes, tale problema est dialecticum, quia dialecticus per se considerat intentiones secundas communes applicabiles ad quamlibet materiam. Ergo problema ut sic terminatum est dialecticum.*]

[16] Radulfus Brito, *Quaest. Top.*, q. 36, ms. Paris, BNF lat. 11132, f. 25ra: And when it is said that every proposition belonging to the natural or moral sciences is also dialectical, it is true insofar as they are solved through common topical dispositions; but if they are solved through the principles of their own science, then some propositions are natural, some moral, etc. [*Et cum dicitur quod omnis propositio naturalis vel moralis est dialectica, verum est ut terminatur per habitudines locales communes; si terminatur penes propria principia, sic quaedam sunt naturalia, quaedam moralia, et sic de aliis.*]

opposite being the case (Porro, 2015). This "fear of the contradictory opposite" (*formido oppositii*) is crucial in the medieval understanding of dialectical problems: A problem is dialectical if the question "Is it the case that *p* or not?" is decided in favour of one member of the contradictory pair (*p*, ~*p*) with the fear of the other member being true, this fear being an individual attitude towards *p* or ~*p*.

In the fourteenth century, John Buridan introduces another notion that helps demarcate dialectical problems and premises from non-dialectical ones, namely the notion of the margin of certainty (*latitudo certitudinis*):

> Fourth conclusion: likewise, not all premises are dialectical. This is proved, because some premises are so evidently true, that the assent by which we accept them is, without qualification, not below the margin of certainty, such as the first principle. And such a premise is not dialectical, since for a premise to be dialectical it is required that it be accepted, without qualification, below the margin of certainty. [17] (Green-Pedersen, 2008, p. 56)

For Buridan, what characterises the dialectical premise is that the assent given to it is below the margin of certainty (i.e. with the fear of its contradictory opposite being the case). The premises that are accepted above such a margin are those that are evidently true, and hence demonstrative. Below that margin, propositions are merely probable, and hence dialectical. It is noteworthy, then, that some propositions will *per se* force assent with a level of certainty above the margin, and some will not, so that the level of certainty that accompanies assent is at least partly due to an intrinsic epistemic quality of the propositions at stake (with the principle of non-contradiction as the usual example of self-evident proposition producing the highest degree of certainty).

It is also noteworthy that in these medieval accounts the difference between dialectical problems and premises, clearly introduced by Aristotle in terms of social disagreement, vanishes; for any scientific statement can become a dialectical problem or premise, depending on its formulation and a given enquiring context. For instance,

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[17] John Buridan, *Quaestiones Topicorum*, q. 13: *Quarta conclusio: similiter non omnis propositio est dialectica. Probatur, quia aliqua est ita evidenter vera, quod assensus, quo ei assentimus, non est infra latitudinem certitudinis simpliciter, sicut est primum principium; et talis non est dialectica ex eo, quod ad hoc, quod aliqua sit propositio dialectica requiritur, quod ei assentiatur infra latitudinem certitudinis simpliciter*. In the *sed contra* section of his discussion, Buridan acknowledges that one can deny the certainty of the first principle only sophistically.

in medieval psychology the proposition "Intellection is a kind of affection" (*intelligere est quoddam pati*) is, on the one hand, often introduced as premise of a discussion. On the other hand, it is introduced just as often as the problem to be discussed, notably in question-commentaries on Aristotle's *On the Soul* that raise the question "Whether intellection is a kind of affection or not" (*utrum intelligere est quoddam pati*).[18] So, a probable proposition (whether in terms of fear of the opposite or of margin of certainty) can be turned into a matter of disagreement, hence of inquiry, if formulated as a problem (notably through the apposition of '*utrum*'); or introduced as a premise, if formulated as such. The difference between a premise and a problem is, thus, functional. As a result, in the medieval dialectical practice any proposition which has not been proved through demonstration can still be turned into a problem and submitted to scientific scrutiny.

This brings us back to where we started: In the late Middle Ages the dialectical discussion is understood as a tool for the production and dissemination of scientific knowledge. As such, it is mainly a scientific discussion that takes place in a social institution, the medieval university, by means of an exchange between master and students following strict formal and contextual rules (i.e., ways of formulation, time limits, etc.). Many medieval readers of the *Topics* noted indeed structural similarities between the dialectical discussion and the different forms of the *quaestio* which give a format to some medieval scientific debates.[19] In this framework, suitable problems and premises are crucially related to individual epistemic attitudes towards certain scientific propositions which are at least partly due to intrinsic qualities of those propositions. This focus on the scientific enterprise, in opposition to Aristotle's focus on gymnastic training in the *Topics*, explains, then, the medieval departure from Aristotle's characterisation of dialectical problems and premises in socio-epistemic terms.[20]

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[18] For some medieval commentaries on Aristotle's *On the Soul* that raise this question, see Mora-Márquez (2014).

[19] Angelus of Camerino and the anonymous compiler of the Ripoll-Compendium (both from ca. the middle of the 13th century) are among the earliest commentators who equate a dialectical problem with the *quaestio*-form, in which the particle *utrum* is the mark of an opposition between two contradictory stances (Fernández Walker, 2017, pp. 321–322).

[20] There are of course medieval readings of the *Topics* that focus on gymnastic training (it is, after all, one the three goals explicitly stated by Aristotle at the beginning of the treatise). One example is the type of scholarly debate known as *obligatio*, which some medieval authors (Boethius of Dacia and the author of the commentary transmitted in ms. Firenze, BNC, Conv. soppr. B.4. 1618, pp. 95a–151b, here p. 145b) find directly derived from the rules stated by Aristotle in *Topics* VIII. For a discussion on Medieval *obligationes*, see Dutilh Novaes,

The scientific use of the dialectical discussion is still at the centre in the late fourteenth century, and clearly illustrated in the commentary on the *Topics* by Hartlevus de Marca, a follower of Buridan and the first rector of the University of Cologne. Hartlevus' characterisation of the dialectical problem is as follows:

> In this question, it must be noted first that 'problem' can be understood in three ways: in a common way, in a proper way, and in a more proper way. Taken in a common way, [a problem] is the enunciation of a proposition and its contradictory in the form of a disjunction. And, thus, one can build a problem from a first principle, for instance, "whether a whole is bigger than its part or not", just as a problem can be built from a false proposition, or a proposition evidently impossible. A problem in a proper sense is the enunciation of a *doubtful* proposition and its contradictory in the form of a disjunction, and thus a problem not determinable by human understanding is still a problem, for instance "whether the number of all the stars is even or not". But more properly, a problem is the enunciation of a *doubtful* proposition *determinable* by dialectical arguments and its contradictory proposed as a disjunction, and this is how 'problem' is considered here.[21]

In a first sense, *problema communiter acceptum*, 'dialectical problem' refers to the formulation, and it involves virtually any problem (cf. Radulfus Brito's *modus interrogandi*). This, as we have seen, is not a characterisation at all, since it involves all possible questions with the form "Is *p* the case or not?". This sense covers even the problems raised in the context of obligational disputations, which may be useful for gymnastic, but not for scientific purposes (he even introduces as an

Uckelman (2016); Dutilh Novaes (2011); Keffer (2001); Yrjönsuuri (1993). It is worth mentioning however that, even when the gymnastic approach of the *Topics* is acknowledged by medieval authors commenting on Book VIII, it always remains ancillary to the main goal of dialectic, namely epistemic enhancement.

[21] Hartlevus of Marca, *Quaestiones libri Topicorum*, I, q. 9, ms. Erfurt, Universitätsbibliothek, Dep. Erf. CA. 4° 270, f. 88ra: In ista questione est primo notandum quod problema capitur tripliciter: communiter, proprie et magis [proprie]. Communiter acceptum [problema] est enunciatio propositionis cum suo contradictorio disiunctive. Et sic ex primo principio potest fieri problema, scilicet an totum est maius sua parte vel non, sicut etiam ex propositione falsa vel evidenter impossibili potest fieri problema. Problema proprie acceptum est enunciatio propositionis dubie cum suo contradictorio disiunctive, et sic problema quando non est terminabile per humanam considerationem est problema, scilicet an omnia astra sunt paria vel non. Problema magis proprie est enunciatio propositionis dubie terminabilis per argumentationem dialecticam cum suo contradictorio disiunctive proposito, et sic accipitur hic problema.

example the problematization of the axiomatic statement "the whole is bigger than its part"). Thus, Hartlevus introduces a proper sense, *problema proprie acceptum*, which covers all problems involving probable statements, including also those not determinable by human understanding (here the example is the number of stars being odd or even). But problems that cannot be possibly determined within the limits of human reasoning are scientifically irrelevant. So, he arrives at the most proper sense, *problema magis proprie acceptum*: Dialectical problems are most properly those involving exclusively scientific propositions, and which can be determined through probable premises. In other words, a problem is most properly dialectical when it is relevant for the current scientific practice.

3. CONCLUSION

A quick glance at medieval readings of Aristotle's *Topics* shows that, for the most part, commentators stressed the importance of dialectic for the scientific practice. While in Aristotle a social disagreement was at the bottom of any dialectical problem, in the Middle Ages any proposition not yet proved through demonstration was susceptible of problematic treatment, regardless of the social stance towards it.
　　　　This does not necessarily mean that Aristotle's text was misread. While we argue that Aristotle's main focus in the *Topics* was the gymnastic aspect of dialectic, medieval readers focused on the scientific use Aristotle himself considers in *Topics* I.2.101a25–26, where he says:

> Next in order (...) would be to state the number and kinds of things our study is useful for. There are, then, three of these: exercise, encounters, and the philosophical sciences." (Smith 1997, p. 2)

Some Aristotelian scholars today also focus on dialectic as a scientific tool, among which Barnes 1980 and Bolton 1990 are notorious. We hope to have shown that their view has a venerable precedent in the medieval tradition of commentaries on the *Topics*, where dialectic is understood mostly as a method for the scholarly discussion, through probable arguments, about the *endoxa* of the medieval sciences.

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