ARGUMENT BETWEEN LOGIC AND DIALECTIC IN ANTIQUITY

1st July 2023

HU Main Building, Room 2249a

9.45–10.00am: Welcome

10.00–11.00am: Anna Pavani (Bochum)

The Logic of Dialectic in Plato's *Sophist* and *Statesman*

11.20–12.20pm: Fabian Ruge (Bochum)

Aristotle on Syllogism and Redundancy

2.20–3.20pm: Benjamin Wilck (Jerusalem)

Are Dialectical Arguments *reductiones ad absurdum*?

3.25–4.25pm: Johanna Schmitt (Tübingen)

Is Assent to Kataleptic Impressions Voluntary?

4.45–5.45pm: Marko Malink (New York)

Keynote: **Refutative Enthymemes in Aristotle's *Rhetoric***

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The Logic of Dialectic in Plato's *Sophist* and *Statesman*

In the prologue of the *Sophist*, the *xenos* from Elea claims that whereas it is easy to say that the sophist, the statesman, and the philosopher are three *genê*, it is not a small nor an easy task to determine clearly (διορίσασθαι σαφῶς) what each of them is (*Sph*. 217b1–4). To do so, the interlocutors of the "diptych" *Sophist–Statesman* employ a "new" dialectical method, i.e. the so-called Method of Collection and Division, which has been interpreted highly differently – it has been taken to have either Forms or particulars as its objects; to operate either analytically or taxonomically; to be also or preferably dichotomous; and to either reach or miss the alleged target, which either corresponds to or differs from a definition.

In this paper, I shall provide a careful analysis of the seven Divisions carried out in the "Outer Part" of the *Sophist* (interrupted at 237b6 and resumed at 264b11) and the one long Division carried out in the *Statesman* to show why the models which interpreters usually resort to, such as the Porphyrian tree, the line model, the triangle model, and the body related model, fall short of accounting for their non-disjunctive and non-linear logical structure. In a second step, I shall compare the results of my analysis of the "actual divisions" to the "prescriptive passages," i.e. to the "hidden" methodological reflections we find both along the Divisions (such as *Sph*. 264d12–265a2 and *Stm*. 262c8–263a1), and to the description of the dialectical science in the Core Part of the *Sophist* (*Sph*. 253d1–e2) in order to show that and why the actual employment of the Method*s* of Collection and Division does not always respect its own procedural criteria.

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Aristotle on Syllogism and Redundancy

In two places in the Organon, Aristotle discusses the so-called non-cause fallacy, the *Sophistici Elenchi* and the *Prior Analytics*. This fallacy afflicts *reductiones ad impossibile* and consists in the presence of a redundant premise in the syllogistic derivation of an impossible result (which then leads to removing that irrelevant premise due to the impossible result). My paper focuses on *APr* 2.17. Previous scholarship (most recently Castagnoli 2016) has interpreted the redundant premises as unused premises. But I argue that not every unused premise is also redundant as there are arguments that count as syllogisms but in which one premise can be removed and a necessary inference with one premise remains. Instead, a proposition is redundant with respect to a syllogism iff either one or both of its terms are not subjects or predicates in a chain of terms that connects the major to the minor term. This is motivated through a terminological parallel between *APr* 2.17 and a result concerning chains of terms from *APr* 1.23. This criterion of redundancy avoids the counterexamples for the wider notion of redundancy. There is evidence that redundant premises are to be avoided due to the phrase 'due to these things being so' in the definition of the syllogism. I show that Mignucci's (2002) and Frede's (1974) interpretations of that phrase account for the exclusion of redundant premises as understood by the predicative criterion.

Castagnoli, Luca. 2016. "Aristotle on the Non-Cause Fallacy." *History and Philosophy of Logic* 37 (1), 9–32.

Frede, Michael. 1974. "Stoic Vs. Aristotelian Syllogistic." *Archiv für Geschichte der Philosophie* 56 (1), 1–32.

Mignucci, Mario. 2002. "Syllogism and Deduction in Aristotle's Logic." In *Le Style De La Pensée: Recueil De Textes En Hommage À Jacques Brunschwig*, edited by Monique Canto-Sperber and Pierre Pellegrin. Paris, 244–66.

Benjamin Wilck

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Are Dialectical Arguments *reductiones ad absurdum*?

It is a widespread, indeed the prevailing, view among scholars on ancient philosophy that (i) dialectical arguments are a kind of *reductio ad absurdum*, or (ii) *reductio ad absurdum* is a kind of dialectical argument. For instance, (i) Bolton (2012) argues that Aristotelian dialectic is aimed at establishing the falsity of the respondent's proffered proposition because dialectical refutation is a kind of *reductio ad absurdum*. In turn, (ii) Szabó (1956; 1960; 1962; 1965) and Knorr (1981) take Greek mathematics to originate in dialectic because Greek mathematical proofs employ *reductio ad absurdum* and therefore dialectic.

Against this, I maintain that dialectic and *reductio ad absurdum* are mutually exclusive. *Reductio ad absurdum* is in fact a kind of scientific proof. While the premises of scientific proofs must be either true (in the case of probative proofs) or false (in that of *reductio ad absurdum* proofs), dialectical premises may be true or false, given that they are nothing but the respondent's concessions. That is, *reductio* premises must be false, whereas dialectical premises need not be false. Therefore, (i) *reductio ad absurdum* is not a dialectical mode of reasoning, and (ii) dialectical arguments are not a kind of *reductio ad absurdum* either.

As an upshot of this, I suggest that (i) dialectical refutation is not aimed at establishing that the respondent's proffered proposition is false, but rather at detecting inconsistencies among the respondent's premises, and (ii) Greek mathematics does not originate in dialectic, but rather in a didactic context.

Bolton, R. 2012. The Aristotelian Elenchus. In: J.L. Fink, ed. 2012, *The Development of Dialectic from Plato to Aristotle*, Cambridge: Cambridge University Press, 270–295.

Knorr. W. 1981. On the early history of axiomatics: The interaction of mathematics and philosophy in Greek antiquity. In: J. Hintikka, D. Gruender, E. Agazzi, eds. 1981, *Theory change, ancient axiomatics, and Galileo's methodology*: *Proceedings of the 1978 Pisa Conference on the History and Philosophy of Science, Volume I*, Dordrecht/Boston:/London: Reidel, 145–186.

Szabó, A. 1956. Wie ist die Mathematik zu einer deduktiven Wissenschaft geworden? *Acta Antiqua Academiae Scientiarum Hungaricae* 4, 1956, 109–152.

Szabó, A. 1960. Anfänge des euklidischen Axiomensystems. *Archive for History of Exact Sciences* 1, 37–106.

Szabó, A. 1962. Der älteste Versuch einer definitorisch-axiomatischen Grundlegung der Mathematik. *Osiris* 14, 308–369.

Szabó, A. 1967. Greek Dialectic and Euclid's Axiomatics. In: I. Lakatos, ed. 1967, *Problems in the Philosophy of Mathematics: Proceedings of the International Colloquium in the Philosophy of Science, London, 1965, Volume 1*, Amsterdam: North-Holland, 1–27.

Johanna Schmitt

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Is Assent to Kataleptic Impressions Voluntary?

Many scholars think that assent to kataleptic impressions—correct and reliable mental representations of external objects—is voluntary, where "voluntary" means with deliberation. This view gains support from discussions in our sources that describe situations in which sages—the Stoic ideal for how to reason and act—withhold assent to kataleptic impressions. This finding is thought to decisively show that the opposing view cannot be right, according to which everyone always assents to kataleptic impressions because assent to kataleptic impressions is involuntary or forced.

In this essay I will argue that we should not conclude from this finding that assent to kataleptic impressions happens with deliberation. Instead, I will argue that both assent and suspension of assent to kataleptic impressions happen without deliberation. There are conditions which, if fulfilled, rationally require suspension of assent to kataleptic impressions. Even though both the act of assent and the act of suspension of assent to kataleptic impressions happen without deliberation, deliberation plays an important role in acquiring dispositions necessary for assent and (if certain conditions are fulfilled) suspension of assent to kataleptic impressions. It is such a disposition that allows ideally rational agents to withhold assent to certain kataleptic impressions, in circumstances in which withholding assent is appropriate. The view I develop thus allows us to explain both the testimonies according to which the Stoics took assent to be forced as well as those reporting that the Stoics thought it was rationally required to suspend judgment to certain kataleptic impressions.

Marko Malink

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Refutative Enthymemes in Aristotle's *Rhetoric*

In *Rhetoric* 2.22, Aristotle distinguishes two kinds of enthymeme: the probative (*deiktikon*) and the refutative (*elegtikon*) enthymeme (1396b22-7). According to Aristotle, refutative enthymemes have a greater reputation than probative ones because they are clearer to the audience (2.23 1400b26-9, 3.17 1418b1-4). There is, however, no agreement in the literature as to what refutative enthymemes are. Some scholars take them to be refutations (*elenchoi*), others take them to be dissolutions (*lyseis*), and others have suggested that they are destructive arguments (*anaskeuastikoi*). In this paper, I argue for a different interpretation of refutative enthymemes, according to which they should be understood as arguments by *reductio ad impossibile*.