

Aristotle's Modal Syllogistic. Marko Malink. Cambridge Harvard University Press, 2013. Pp X -336. \$ 45,95 (hardback). ISBN: 978-0674724549.

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The aim of Malink's book is to provide a consistent model for interpreting all claims of validity and invalidity in Aristotle's modal syllogistic. The book is divided into three parts. Part I sets out a heterodox interpretation for the assertoric syllogistic, in which the key idea is to understand the *dictum de omni* as a primitive notion: a pre-order relation (reflexive and transitive) that does not involve quantification over sets of individuals in the zero-order, but only terms that are universally predicated of terms. Part II, which is the most substantial and controversial, interprets the theory of predicables and categories found in the *Topics* in terms of a semantic model able to explain all claims of validity and invalidity in Aristotle's apodeictic syllogistic. Malink's main motivation is to explain why Aristotle takes Barbara-NXN as valid but Barbara-XNN as invalid. In order to obtain his adequate model, he introduces a distinction between 'essence-terms' and 'nonessence terms': necessity predications are restricted to the former, for the latter lack an essence and are never essentially predicated of anything. Part III is focused on Aristotle's problematic syllogistic, especially the intricacies of modal opposition and the validity of XQM-moods.

As was said by several reviewers, Malink's book is a great achievement, not only for its results, but also for its clarity and sharpness in argument and philosophical discussion. One of the great merits of the book is to be pleasantly readable by those who are not trained in logic. The notation is always clearly explained and carefully introduced, and a more technical presentation is left to the

Appendices. The high qualities of the book have been praised by many reviewers and I would like to stress that I strongly agree with them. Now, since the main target of my review is not those who have not yet read Malink's book, I will leave aside a detailed description of its full content and go straight to the discussion of some troubles (for those who want such a description, I recommend Uckelman's review: Sarah Uckelman, *Aristotle's syllogistics*, *Metascience* (2014) 23: 573-579). Previous reviewers have focused on logical issues concerning Malink's interpretation of Aristotle's modal syllogistic (Beere 2015, Pakaluk 2014, Rosen 2014). Others have focused on the mismatch between modal syllogistic and Aristotle's theory of demonstration and discussed how Malink's view would accommodate Aristotle's essentialism (Bronstein 2015, Leunissen 2015). My concern, in turn, is the way Malink has explored the *Topics* to get his predicable semantics, which is the most important piece of his strategy to guarantee the validity of *Barbara-NXN*. My main target is Part II of the Book and, more particularly, Chapters 8-10 in which Malink builds his predicable semantics.

Malink's predicable semantics is structured as a series of Statements (S1 to S25). These statements were obtained from *topoi* presented and discussed in the *Topics*. My worry is that some of those *topoi* do not seem to be part of any serious theory of Aristotle's. In order to be justified in taking them as *Statements* of a semantic theory, one needs to provide careful arguments. The strongest reason for doubting that those *topoi* are parts of any serious theory of Aristotle's is the following: for many of those *topoi*, we can find a contrary *topos* in Aristotle's text. For instance, at *Topics* 121a5-9, we find what became Malink's S17 ("if A is a genus of B, then A and B are in the same category"):

- T1: the genus belongs to the same category as the species.

However, in 124b19-22, we find Aristotle recognising exceptions for that rule. From this the opposite *topos* can be derived:

- T2: the genus does not belong to the same category as the species.

T1 and T2 are not compatible with each other. Given Malink's purposes in his book, there is no need for him to go very deep into examining why Aristotle has advanced *topoi* contrary to each other. However, he must justify how he is entitled to take some of those *topoi* rather than others as 'Statements' in a theory. For instance, why T1 above instead of T2 is taken as a Statement in the predicable semantics? Someone might object that what we find in 124b19-22 is not a contrary *topos* but just some doubts about the universal truth of T1. But even this will be highly problematic for Malink, since the Statements of his predicable semantics are meant to be universally true with no exceptions.

As I said, Malink's purposes in his book do not require him to explain why Aristotle has presented inconsistent *topoi* in the *Topics*. However, one explanation for that problem – the one I prefer – generates a great difficulty for Malink's strategies. I argue that contrary *topoi* found in the *Topics* are not intended as serious pieces of any consistent theory endorsed by Aristotle, even if some of them *coincide* with some thesis Aristotle endorses at the end of the day. *Topoi* can be treated as *endoxa*: they are acceptable assumptions on which an argument can be built, in the sense of being inference-permits which a questioner might use if his opponent (i.e., the answerer) buys them. Now, some kind of opponent might swallow T1, while another kind of opponent would rather swallow T2. For a dialectic questioner, it is open to pick up either T1 or T2 in order to construct a line of argument leading his opponent to a contradiction. But this does not commit the questioner with either T1 or T2. From this, it is likely to expect that neither T1 nor T2 is intended in the *Topics* as a serious piece of Aristotle's theory about the predicables. Aristotle considers both T1 and T2 because his aim is to furnish a handbook of argumentative patterns enabling a dialectical debater to discuss with any answerer from opinions accepted by that answerer, including the opinions that work as inference licenses. Since some answerer will accept T1 and another will accept T2, the handbook (i.e., the *Topics*) must contemplate both *topoi* if it aims at being all-embracing.

Of course, Malink does not need to adopt this way of explaining why Aristotle has presented *topoi* incompatible with each other. However, if this is a correct explanation, then it will be precipitate to take the *Topics* as presenting a theory about the predicables in the way Malink needs. On this view, what Malink has taken as Statements in his predicable semantics were meant by Aristotle as parts of an embracing collection of acceptable *topoi*. Thus, any appeal to the *topoi* to build a predicable semantics must have relied on a justification much stronger than the one Malink has provided.

There is a more serious worry, related to a mismatch between Malink's predicable semantics and the nature of Aristotle's *Topics*. There has been much discussion about the *Topics* recently, focused on what dialectic is, what *endoxa* are etc. There are many rival views concerning these issues, but I believe that there is some common agreement on minimal points. Whatever *endoxa* are, they are related to opinions that most people (or the most wise etc.) would accept. Whatever dialectic is as a method of argumentation, it must by definition take *endoxa* as its starting-points and as its target-fixing boundaries. Now, if at least some *topoi* are advanced as *endoxa* concerning the predicables (as I have argued), then these *topoi* would encapsulate statements that most people (or the most wise etc.) would accept. But in the predicable semantics as construed by Malink, the notion of *Topics*-predication seems to depart from common use of predicative statements, i.e., from the kinds of predication that most people would straightforwardly accept.

Malink says (127–8) that *Ax*-predication cannot be the same as *Topics*-predication because:

(i) no genus is predicated of its differentia, i.e., no genus is *Topics*-predicated of its differentia;

but

(ii) animal is *Ax*-predicated of biped.

Actually, Malink recognises that, if a semantics for modal syllogistic is not at stake, there is nothing wrong with a sentence such as 'every biped is an animal'. I would add that such a sentence is a good example of sentence any one can use in everyday life to express one's beliefs. More

importantly, it is a good example of sentence that most people would accept and, therefore, being an *endoxon*, qualify as an ingredient for the kind of dialectical discussion the *Topics* is codifying. Actually, the *Topics* is designed to give a theory about the sort of discussion (namely, dialectical discussion) in which such sentences will be normally used. However, Malink's contention that *Topics*-predication is not the same as *Ax*-predication seems to imply something different. According to the rules of *Topics*-predication, no one would be allowed to say that 'animal is *Topics*-predicated of biped', even if one is allowed to say that 'all bipeds are animals' (which is equivalent to 'animal is *Ax*-predicated of biped'). Now, how can a theory designed to provide rules or *topoi* for dialectical discussion depart so much from what is common practice in the everyday language? How can the notion of *Topics*-predication depart so much from what is the belief accepted by most people about bipeds and animals? Suppose a questioner in a dialectical discussion asking whether animal is predicated of biped. It is not plausible to suppose that the rules Aristotle is codifying in the *Topics* will entitle the answerer to say 'well, it is true to say that all bipeds are animals, but nevertheless animal is not *Topics*-predicated of biped'.

In short: the *Topics* is designed to furnish *topoi* for a kind of discussion which any common man will be able to follow; and any common man would be inclined to say that all bipeds are animals, which is equivalent to 'animal is *Ax*-predicated of biped'; but, on Malink's view, the *topoi* from the *Topics* will not allow the common answerer to say that 'animal is (*Topics*-)predicated of biped'.

A trouble for Malink is the fact that the predicate in the sentence 'animal belongs to all bipeds' does not seem to satisfy the definition of any predicable; this is why the sentence could not be taken as a *Topics*-predication. However, this trouble depends on the construction of *Topics*-predication that Malink has proposed in S1 (116-7):

S1: "A is predicated of B if and only if A is a genus, differentia, definition, proprium, or accident of B" (116).

There is an exegetical problem with S1. Malink is probably following many scholars who argued that both definitions of ‘accident’ in *Topics* 102b4-9 coincide. However, I don’t think this is the right interpretation. There are two different uses of ‘accident’ and, consequently, two definitions given in 102b4-9: one definition defines the standard notion of contingent accident – like tanned in relation to Socrates etc.; the other definition of accident, however, which is only negative (‘what is not either a definition or a genus or a proprium’), is intended to cover cases like ‘white’ being attributed to ‘snow’ (see 120b21-22), which cannot be taken as contingent accidents. And there are several uses of ‘*sumbebekos*’ according to the first, broader notion (for instance, 115a4). In other words, if a given predicate is not either a definition or a genus or a proprium of its subject, it is an accident (according to the first definition), but it does not follow that it is a standardly contingent accident: it might be a predicate necessarily true of every instance of its subject (like white predicated of snow). (Note that this interpretation about the definitions of ‘accident’ in the *Topics* is also consistent with Aristotle’s uses of ‘*sumbebekos*’ and ‘*sumbainein*’: see for instance 1003a25, 194a3 for ‘*sumbebekos*’; and 110b24, 981a20 for the verb ‘*sumbainein*’).

Thus, if this is the right interpretation about the double definition of accident, then ‘animal belongs to all bipeds’ might still be accommodated as a genuine sort of predication recognized in the *Topics*. But Malink’s notion of *Topics*-predication as presented in S1 does not accommodate it.

Another trouble concerns the notion of nonessence terms. Malink (138) appeals to *Topics* II.1, 109a37-b9 to argue that ‘no paronymous term can be the genus of anything and hence also not of another paronymous term’. But I doubt whether that statement flows from what Aristotle says at that passage. The *topos* discussed by Aristotle does not support any complaint against ‘being coloured’ as the genus of ‘being white’ (or simply ‘coloured’ as the genus of ‘white’). The *topos* is rather arguing that one should not say:

- “(the action of) walking has moved”;
- “whiteness is coloured” (109b3-4).

Now, Aristotle's point is obscured by the fact that he takes up the case with 'white' (*leukon*), not 'whiteness' (*leukoteta*) at 109b8, but this occurrence of 'white' (*leukon*) is one of those in which what is meant is rather the abstract quality, whiteness (Malink agrees, 138). Thus, Aristotle's point at *Topics* II.1, 109a37-b9 is a warning against a plain category-mistake: if you start with the abstract term as subject (or at least if what you meant to take as subject is the abstract term), you must stick to abstract terms as predicates too. Or, if you start with a concrete term as subject, you must stick to concrete terms as predicates too. But you cannot mix both sort of terms in the same predication. Thus, you should not say:

- "whiteness is *coloured*" (you should rather say "whiteness is *a colour*");

Nor should you say:

- "the white thing is *a colour*" (you should rather say "the white thing is *coloured*").

Malink agrees with these points. But it is unclear how he believes that this discussion gives evidence for the thesis that no paronymous term can be the genus of anything and hence also not of another paronymous term. Actually, Aristotle's recommendation against the category-mistake tells nothing against saying that "the white thing [*leukon*] is coloured", or that "walking is moving" in the sense of "the action of walking is a kind of moving". (More on this below).

The source of the problem is Malink's S7:

"S7: If A is a genus of B, and B is predicated of C, then B is predicated essentially of C" (123).

There are clear counter-examples to S7. For instance:

White (B) is predicated of snow (C), but it is not predicated of it essentially. Yet, there is a genus (A) of white *qua* cross-categorical predicate of snow: coloured is the genus of white, and note that coloured can be cross-categorially predicated of snow too. Now, white *qua* cross-categorical predicate of snow does not say what snow essentially is. But from this it does not follow that white *qua* cross-categorical predicate of snow cannot in turn be the subject of an essential predication.

Malink's way of dealing with this counter-example is to deny that paronymous terms have essences, but I believe there is no textual evidence for this claim.

This point is related to a more general worry I have with Malink's notion of T-category of essence. On my view, the T-category of essence rather corresponds to essential predication in general as depicted in Malink's Figure 2 (116): 'to say what it is' is the predication in which the predicate says what the subject is, no matter which category subject and predicate belong to. Now, this has nothing to do with categories as a list of items in the furniture of the world. If we assume – as I think it is reasonable to do – that the list of C-categories are intended as an enumeration of items in the furniture of the world, it sounds misleading to talk about a T-category of essence. The employment of the expression 'T-category of essence' just suggests that both category lists, the C-categories and the T-categories, are on the same level. Why this is misleading? My point is simple: T-categories are *relational* in the way Malink has taken the predicables to be relational (119). But C-categories are not relational in this way, and this is an important asymmetry and difference between the two lists.

Thus, there is no sense in asking whether a given term 'A' is in the T-category of essence without providing a predicational context in which 'A' occurs. For instance, suppose someone asks (think of A, B and C as presented in Malink's S7):

- Does virtuous (A) belong to T-category of essence?

Such a question is incomplete and misleading, since there will be different answers for different predicative contexts. Thus, on the one hand, if virtuous is predicated of man (C), it does not belong to T-category of essence, since it does not say what the subject essentially is (the same applies to courageous (B) if it is predicated of man (C): it does not belong to the T-category of essence either, for the same reason). But, on the other hand, if virtuous (A) is predicated of courageous (B), why anyone should deny that virtuous (A) belongs to the T-category of essence in relation to courageous

(B)? Is it not true that the predicate virtuous is telling what its subject, courageous, essentially is? Why Aristotle would be so far away from this reasonable view?

This leads me back to the claim that paronymous terms do not have essences. According to Malink, accidents such as being virtuous would not have an essence. Now, I don't believe that this is true for the whole metaphysical picture that stems from Aristotle's *Metaphysics*, since the 'logical standpoint' adopted in some steps of *Metaphysics* VII.4-6 would give support for the thesis that the predicate in the sentence 'the courageous is virtuous' is in the T-category of essence, for it says what the subject essentially is and so qualify as an essence (*to ti en einai*) even if it is not a primary essence. Malink has been very careful in putting these metaphysical issues out of his picture. However, I don't believe that his story stands even for the *Topics*, where we find Aristotle talking about the essence of relatives in *Topics* 146b3 (and relatives are accidents) and giving definitions for paronymous terms (see 143b34-5; 146a22; 146b21ff.) In several of these passages, Aristotle is blaming a bad definition, but he is never questioning the possibility of giving a correct definition; on the contrary: the blame presupposes that a correct definition, stating the *what it is* in terms of genus and differentia, is attainable.

A similar story will apply to the differentiae. Malink (150) is worried about taking 'man is biped' as *essential + cross-categorical*, a combination he would like to get rid of. His solution consists in saying that biped cannot be in the T-category of essence, being rather in the T-category of non-essence. Now, biped in that sentence is *saying what man (essentially) is*, and Malink accepts this. But he denies that biped is in the T-category of essence, because he denies that T-category of essence is merely the category of predicates that says what the subject essentially is no matter which category subject and predicate belong to. However, Malink accepts that bipedness will be in the T-category of essence. Now, I wonder whether this result is not an inversion of Aristotle's ontology: on the one hand, '*bipedness*', *which names a quality*, is in the T-category of essence, which implies that *bipedness* has an essence; on the other hand, '*biped*', *which names a class of*

substances (namely, the class of animals that have bipedality), is not in the T-category of essence, which implies that *bipeds* (i.e., animals belonging to that class) do not have an essence. Thus, abstract qualities (bipedness) have essences, but substances (picked up according to essential features of them) do not have essences. This is a very high price to pay for a consistent model explaining all the validity and invalidity claims in Aristotle's modal syllogistic.¹

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