Dual Categorization and the Role of Aristotle's Categories

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Abstract

In the *Categories*, Aristotle addresses two different cases of dual categorization, cases in which the same thing might appear in two different categories: relatives and secondary substances in the first case, qualities and relatives in the second. His treatment of these two cases is markedly different. Ackrill thinks dual categorization poses a dilemma for Aristotle's project as a whole, but I argue that there is a dilemma only on particular understandings of Aristotle's purpose in compiling the list of categories. I investigate various interpretations of the categories to find one that explains Aristotle's reactions to dual categorization, and suggest an interpretation of the peculiar four-fold system of classification in Chapter 2.

Can one thing appear in two separate categories? It seems to me that this question cannot be answered without determining the purpose for which the categories are established. If such dual categorization causes no problems according to the intended purpose of the categorial scheme, then there seems to be no reason for complaint. This is the approach that I take with regard to Aristotle's categorial scheme in the *Categories*. In this work, Aristotle addresses two separate instances of dual categorization with regard to his list of ten categories, but his reaction in these cases is surprisingly different, taking great pains to avoid dual categorization in one case, but showing a marked lack of concern in the other case. This indifference in the second case leads John Ackrill to criticize Aristotle's categorial project in general; however, it seems to me that if Aristotle's reaction to dual categorization in one case seems contrary to some conception of Aristotle's purpose in developing the categorial scheme, then perhaps that conception of the purpose of the *Categories* may not be a conception that Aristotle himself held.

In this paper I will review the two cases of dual categorization in the *Categories* and will examine Aristotle's reaction in each case. Against these reactions, I will examine several general contemporary interpretations of the purpose of the *Categories* within the Aristotelian corpus to show how Aristotle's reactions occasion such criticisms as Ackrill's. I next review specific interpretations

by Abraham Edel and Stephen Menn concerning the purpose of the list of ten categories in an attempt to avoid such criticisms with regard to dual categorization, arguing that Menn's account better explains Aristotle's reactions to dual categorization. Finally, I suggest that the four-fold scheme of classification that appears in Chapter 2 is a replacement system of categories for the list of ten, occasioned in part by the problems raised by dual categorization for Aristotle's broader projects.

1

Aristotle presents two separate definitions of relatives in Chapter 7 of the Categories. The first comes at the very beginning of the chapter. "We call relatives all such things as are said to be just what they are, of or than other things, or in some other way in relation to something else" (6a36).[1] The second definition is prompted by Aristotle's concern that some secondary substances might qualify as relatives on this initial definition. The problem is that certain secondary substances, such as heads and hands, seem to meet the criterion of relatives in this definition, since "a head is called someone's head and a hand is called someone's hand" (8a26). This would then clearly be a case of dual categorization. Consequently, Aristotle offers a second definition that seems both to avoid this problem and to address the nature of relatives more essentially: "if those things are relatives for which being is the same as being somehow related to something, then perhaps some answer may be found" (8a31).

The tentative way in which Aristotle presents this second definition is striking. He does not assert confidently that this definition will overcome the problems of the first definition, but seems rather to offer it as a mere suggestion of a solution. His subsequent discussion of this second definition seems to provide a good argument for its adequacy, so it seems unusual that Aristotle would present the definition so cautiously. For that matter, it is curious that Aristotle would offer an initial definition that he recognizes to be faulty and would discourse on the nature of relatives for several pages on the basis of that definition before addressing the inadequacy and offering a better definition. These considerations give this chapter of the *Categories* the flavor of a work in progress, rather than the appearance of a complete, polished theory.

Here in any case, it is clear that Aristotle takes the problem of dual categorization seriously enough to revise a definition to avoid the problem. It is not clear from this chapter, though, whether it is the problem of dual categorization itself or the special problems that dual categorization would cause for the notion of substance that prompts Aristotle's concern. In other words, is it something about the category of substance that Aristotle feels requires the avoidance of dual categorization of things within that category, or is it the problem of dual categorization in general that Aristotle needs to avoid? Aristotle offers no explicit explanation to answer this question, but he does address another instance

[1] I use Ackrill's translation in this paper. See Ackrill (1963).

of possible dual categorization in the following chapter against which his reaction in this instance may be compared, and his response there is distinctly different.

Aristotle defines qualities at the beginning of Chapter 8 as follows: "By a *quality* I mean that in virtue of which things are said to be qualified somehow" (8b25). Immediately Aristotle notes that quality has several different senses, which he proceeds to distinguish. At the end of the chapter, the issue of dual categorization arises again with regard to the category of relatives. "We should not be disturbed lest someone may say that though we proposed to discuss quality we are counting in may relatives (since states and conditions are relatives)" (11a20). Aristotle in fact has two separate responses to this case of dual categorization, but his tone in presenting the problem indicates immediately that this case of dual categorization is not a matter of concern for him.

The first response is to make further distinctions concerning what is offered as a putative case of dual categorization. "For in pretty well all such cases the genera are spoken of in relation to something, but none of the particular cases is" (11a23). The genera may indeed be relatives, but the particulars are qualities. Aristotle offers the example of knowledge, which as a genus seems to be a relative, since it is knowledge of something, but any specific case of knowledge, such as grammar, is not relative. This sort of response could not have been adopted in the case of secondary substances and relatives, although since the particulars of secondary substances are primary substances, such primary substances do not fall into the first definition of relatives. However, since the genera of secondary substances are themselves secondary substances, the distinction between genus and particular does not necessarily solve the problem, because it is precisely the genera that are problematic in this case.

Note that Aristotle does not assert absolute confidence that all cases of putative dual categorization can be handled in this way, only that "pretty well all such cases" are open to such a solution. Consequently, Aristotle offers a second response, which is strikingly blatant in its indifference. "Moreover, if the same thing really is a qualification and a relative there is nothing absurd in its being counted in both the genera" (11a37). Unfortunately, Aristotle does not explain the grounds for this lack of absurdity. Here it does not seem to be ambiguity in categorization that prompts Aristotle's indifference, since such an ambiguity would be capable of disambiguation as Aristotle had attempted in his first response to this case of dual categorization. If such were the case, there would not seem to be any need for a second response, since some distinction would serve to disambiguate the apparent dual categorization. Rather, in this response Aristotle considers the circumstance of the same thing *really* belonging in two different categories, not of it merely appearing that way.

Here again, it is not clear from Aristotle's reaction whether it is the peculiar nature of qualities and relatives that makes such dual categorizations permissible, or whether the problem of dual categorization itself is not a concern of Aristotle's at all. However, coupled with his response to the case of dual categorization with regard to relatives and secondary substances, it seems that if Aristotle is going to be consistent in his approach to these two cases, then ei-

ther (1) dual categorization in general is not a problem, but it causes specific problems for secondary substances, or (2) dual categorization in general is a problem, but the specific nature of qualities and relatives permit a loophole to escape the problem. The second option seems suggested by Aristotle's first response to the dual categorization of qualities and relatives, since as noted, the distinction between genera and particular was not an available option to solve the dual categorization of relatives and secondary substances. Yet the first option here might be supported by the consideration of the role that the category of substance plays within the investigations into being qua being in the *Metaphysics*. Even if other categories may permit dual categorization, for substance to do so in any way would seem to compromise the foundations of being, particularly if the dual categorization with regard to substance were to involve relatives. Again, it is not absolutely clear to me how to understand Aristotle's reactions in these two cases of dual categorization solely on the basis of the textual evidence. As suggested at the beginning of this paper, it seems to me that this question cannot be addressed without considering the purpose for which Aristotle created the list of categories.

2

Robin Smith summarizes three common interpretations of the list of categories: (1) "*types of predicates*, that is, types of expression that can be predicated of something else" (p. 55), (2) "*highest genera*" (p. 55), and (3) "*types of predication*: each category gives one possible relationship between predicate and subject" (p. 56). Depending upon which of these interpretations one may adopt, or indeed some alternative interpretation, Aristotle's reaction to the two cases of dual categorization may appear in a different light.

John Ackrill, for example, says of the dual categorization of qualities and relatives, "there is a nasty dilemma, and its existence points to a weakness in the foundations of Aristotle's theory of categories" (p. 109). In developing an interpretation of the *Categories*, Ackrill considers two possible methods for generating categories, evidence for both he finds in the *Topics* (Ackrill, p. 79–80). The first method corresponds to the first interpretation that Smith summarizes, namely classifying "predicate expressions", whereas the second method ultimately corresponds to the second of Smith's interpretations, generating highest genera by a consideration of "subject-expressions" (p. 79). That the two methods seem to result in the same list is explained by Ackrill as follows: "The assumption that a given question determines a range of answers that does not overlap with any range determined by a different question corresponds to the assumption that no item when defined *per genus et differentiam* will be found to fall under more than one highest genus" (p. 80). Here Ackrill explicitly acknowledges that he takes Aristotle to be working under the assumption that there will be no overlap between the categories, an assumption which seems hard to reconcile with Aristotle's equally explicit assertion that there is no absurdity if something can appear in two genera, at least with regard to qualities and

relatives (11a37), unless there is something special about qualities and relatives that makes certain cases of overlap in these two categories excusable.

However, Ackrill does not seem to recognize any such excuses. The specific dilemma that Ackrill sees with regard to Aristotle's explanation of the dual categorization of qualities and relatives relies directly on the putative assumption on Aristotle's part that there will be no overlap in categories. Recall that Aristotle's first response to cases of dual categorization of certain qualities and relatives depended upon placing the genus in the category of relatives but the particulars in the category of qualities. Ackrill complains, "The claim that a genus that is a relative may have species that are not relatives seems to conflict with Aristotle's whole idea of a genus-species classification and categorial ladders. So too does the suggestion (11a37) that the same 'thing' may be in two categories" (p. 108). If a project of strict classification into genus and species arrayed in a strict hierarchy in which the categories appear at the top is indeed Aristotle's intention, then there does not seem to be any room for exceptions in the hierarchies topped by qualities and relatives.

As I suggested at the beginning of this paper, if the interpretation that Ackrill adopts leads him to posit a dilemma for Aristotle, then perhaps the first way to resolve the dilemma is to doubt whether Aristotle himself held the assumptions with which Ackrill credits him. As noted earlier, Ackrill explicitly saddles Aristotle with a view that there must be no overlap in the categories. It is not clear from the text, however, that Aristotle himself makes this assumption. When the list of categories is introduced in Chapter 4 of the *Categories*, Aristotle does not indicate that these categories are to be considered as highest genera at all. He merely indicates that these are significations of things that are "said without any combination" (1b25). Ackrill's notes two interpretations of this phrase. The first is "(a) The necessary and sufficient condition for an expression's being 'without combination' is that it should signify just one item in some category" (p. 73). This is an interpretation that seems to underwrite Ackrill's assumption that Aristotle aimed at a list of non-overlapping highest genera; however, Ackrill himself immediately criticizes this interpretation based on the "misleadingly selective" examples in Chapter 2, "since on this criterion a single word could be an expression involving combination and a group of words could be an expression without combination" (p. 73). In any case, Ackrill acknowledges a second interpretation that seems preferable, "(b) The distinction in Chapter 2 is, as it looks, a purely linguistic one between single words and groups of words (or perhaps sentences)" (p. 73). Consequently, the way in which Aristotle introduces the list of categories does not definitively indicate that he is treating them as a list of highest genera.

It is true that this introduction immediately follows statements in Chapter 3 concerning differentiae of genera and species, so the context may indicate that the list of categories is an enumeration of genera. Yet Ackrill himself places the first three chapters in a different thematic part than the chapters that specifically address the ten categories (p. 69). It is not certain that it was Aristotle himself rather than an ancient editor who placed the first three chapters in conjunction with the next six such that the presentation of the

list of categories falls in the context of the discussion of genera and species. Furthermore, according to Ackrill's own translation, Chapter 3 addresses "the differentiae of genera which are different" (1b16). If the ten categories are indeed viewed as genera by Aristotle, it is not certain that Aristotle is yet prepared to claim that they are different genera. In the case of the dual categorization of relatives and secondary substances, Aristotle does take great pains to redefine relatives so that it does become a different genera than substance, but in the case of quality and relatives, his denial of the absurdity of placing the same thing in these two genera may merely be an indication that Aristotle has not yet decided whether the genera of quality and relatives are really different. This again would suggest that the *Categories* is still a work in progress, rather than a final, polished theory. Ackrill's criticisms might still hold in that case, if Aristotle was attempting to distinguish different genera, since Aristotle would need to resolve Ackrill's dilemma to complete his categorial theory.

Yet this interpretation still assumes that Aristotle aims at a list of non-overlapping highest genera, and even if the *Categories* is a work in progress, it is still not clear that Aristotle is aiming at such a list of highest genera, rather than adopting an aim represented by one of the other interpretations that Smith summarizes. While it is true that Ackrill notes the equivalence of results between the method of seeking types of predication and the method of identifying highest genera by classifying subject expressions, this equivalence is based upon Ackrill's assumption that the range of answers in the kinds of predication do not overlap with any other range of answers (p. 80). If Aristotle is indeed identifying types of predication, it is not clear from the text that he demands that there be no overlap. Indeed, these predication types may depend upon different senses of the predicates themselves, and Aristotle notes that "quality is one of the things spoken of in a number of ways" (8b26). In this way it does not seem unusual for Aristotle to argue in his first response to the dual categorization of certain qualities and relatives that what is so categorized must be distinguished as genus or as particular, such that the genus and particular would fall into different types of predicates. There is thus overlap only when this distinction is not made. This suggests a difference in aim that would avoid Ackrill's dilemma, which arises only when these types of predicates are taken as genera within the same series as the genera and particulars of what are falling within those types. This requirement of a single series of genera seems to follow if the aim of the categories were to provide a list of highest genera, but if the aim were to identify types of predicates, it seems that this series of types does not need to be part of the series of genera of what falls within the types, not in the sense of predicates as such, but in the sense of being what they are essentially. The two series of genera would thus be distinguished by the purpose to which the series are applied. If applied ontologically, then Ackrill's dilemma seems to arise; if applied linguistically, then the series remain separate, and Aristotle's first response seems plausible. If there is overlap within a purely linguistically oriented series of types of predicates, this overlap might be explained by further distinctions within the pragmatics of predication. Depending upon the purpose for any given act of predication, the predicate itself may fall under one type or

another.

This response to Ackrill seems even clearer under the third interpretation summarized by Smith, namely that the list of categories represents types of predications. The relations between subject and predicate need not fall within the same ontological hierarchy of genus and species as the things which enter into such relations, particularly since the categories themselves under this interpretation are understood ontologically as relations. The series of predicative relations would seem to be addressing a different explanatory need than a series of genus and species relations understood ontologically. Again, if there is overlap in these types of predications, that overlap might further be explained away in terms of the purpose for which the subject was placed in a predicative relation with the predicate. In this way, Aristotle's two responses to the dual categorization of certain qualities and relations seem to avoid Ackrill's dilemma. Consequently, it seems that of the three interpretations of the categories that Smith offers, it is the interpretation of categories as highest genera that is least able to be reconciled with Aristotle's reactions to dual categorization, so perhaps that interpretation should be avoided.

3

As I suggested above, either (1) dual categorization in general is not a problem, but it causes specific problems for secondary substances, or (2) dual categorization in general is a problem, but the specific nature of qualities and relatives permit a loophole to escape the problem. If my current line of argument is feasible and dual categorization is not a problem in general under one of the more linguistically oriented interpretations, particularly if two separate series of genus and species hierarchies are recognized, then it seems that there must be something special about secondary substances that makes Aristotle wish to avoid dual categorization in that case. Yet it is not clear to me what this special problem might be under the two predicative interpretations recently considered. For if dual categorization in such cases may be explained by distinguishing the purpose for which the predication was made, it is not clear why secondary substances as predicate types or predicative relations would cause a special problem that qualities do not cause. If Aristotle had the kind of approach in mind that I am suggesting here, then why would he not take advantage of this strategy with regard to relatives and secondary substances without bothering to reformulate the definition of relatives to avoid dual categorization? He seems much more satisfied with his second definition of relatives than with his first, not merely because it avoids dual categorization, but because the first definition "is not what their being relatives is" (8a34). As I understand Aristotle here, he prefers the second definition over the first because the first seems to rely on an incidental feature of relatives, whereas the second seems to capture the nature of relatives more essentially. Thus it seems to me that Aristotle's aim in putting the list of categories is not merely pragmatic or linguistic, as suggested in my treatment of the two predicative interpretations, but does involve ontological

considerations, thus seeming to collapse the proposed distinction between two series of genus and species relations into one, thus resulting in a single series in which the categories form the highest genera. However, the interpretation of the categories as highest genera resulted in Ackrill's dilemma, so it seems that another interpretation of Aristotle's aim is needed.

Fortunately other interpretations are available, since the three interpretations that Smith summarizes are not logically exhaustive. One such interpretation comes from Abraham Edel, who offers the following interpretation of the list of categories: "They are concepts that grew out of a variety of problems in a variety of domains of Aristotelian (and general earlier philosophic and scientific) inquiry and take on a key role in the formulation of questions and in guiding the mode of resolution" (pp. 52–3). According to Edel, Aristotle arrives at his specific list of categories "in a sweeping inductive way" (p. 53). Edel himself arrives at this conclusion by "track[ing] down more systematically the uses of the categories in the various parts of the Corpus", and he suggests that "Aristotle's own theory of the causes (*aitia)* itself would suggest such an approach" (p. 49). As fundamental concepts, the list of categories thus seems to make absurd the question concerning what the single purpose of the categories would be, since they are fundamental across a number of different inquiries, but rather seem to suggest a series of questions concerning the role of the categories within a specific inquiry, such as metaphysics or ethics. Indeed, Edel has traced the appearance of the list of categories as a whole as well as the development of specific categories across a variety of Aristotle's works. I do not feel especially competent to evaluate Edel's specific results; rather I intend merely to follow up on his interpretive suggestion and to investigate how this interpretation may help address the issue of dual categorization as I have presented it.

In taking the list of categories to be fundamental concepts, Edel's interpretation does not automatically preclude any of the three other interpretations that Smith summarizes when these fundamental concepts are considered within the context of the logical investigations in the works that form the *Organon*. It may happen that one of these interpretations turns out to represent the key role that the fundamental concepts play within the *Organon*. Edel himself notes of the categories as fundamental concepts that "It follows as a secondary matter in the Aristotelian way of doing things that they will be regarded as the appropriate classification of terms or as designating the forms of being" (p. 53). However if such is the case, then Edel's view does not seem to help with regard to the issue of dual categorization, since in either of these roles, Ackrill's dilemma seems to arise as I have just argued.

Still, Edel's interpretation may seem to provide some way to understand these cases of dual categorization, since if his characterization of categories as concepts is taken seriously, there does not seem to be any reason to suppose that the application of these concepts in any specific instance must not involve any overlap of categories, as Ackrill has assumed. Why should any given thing or notion involve one and only one fundamental concept? Rather anything that may be investigated will likely involve many of these concepts. However, this approach to answering the problem of dual categorization does not seem to

square very well with the text of the *Categories*. Why would Aristotle even raise the issue of something falling under more than one category if he recognized that any given notion will involve many concepts, and in particular, why would he bother to revise the definition of relatives to avoid dual categorization if he recognized that heads and hands might involve both the concepts of substance and relatives? Taking categories as concepts may seem to provide a quick answer to the problem of dual categorization, but the answer seems to require ignoring the very textual evidence that posed the problem in the first place. Furthermore, this textual evidence seems to pose an additional problem for Edel's interpretation itself, since if Aristotle recognizes the problem of dual *categorization* sufficiently well to address the problem twice, then it seems necessary to credit Aristotle thereby with recognizing a problem with dual *conceptualization*, which seems not to be a problem at all under Edel's interpretation. Because this sort of blatant confusion on Aristotle's part seems unlikely, it therefore seems unlikely to attribute to him an understanding of the categories merely as concepts. Edel's interpretation of the categories as fundamental concepts may indeed represent Aristotle's thinking about them at an early point in time, by the time of the writing of the text of the *Categories*, Aristotle seems to have begun to think about them differently, as evidenced precisely by his reactions to cases of dual categorization.

Stephen Menn has argued that the *Categories* provides a preliminary investigation for the *Topics* by providing tests for genera that thereby support the rules outlined in the *Topics* (p. 318). If there is confusion between two or more genera, then certain rules concerning the application of genus and species, or even concerning predication, will likely be violated. Since Aristotle focuses on the rules themselves in the *Topics*, he needs to provide tests to avoid such confusion elsewhere, namely in the *Categories*. This interpretation seems plausible to me (though see Leszl, p. 92 for difficulties), and it also seems to provide some explanation for Aristotle's differing reactions to the cases of dual categorization, since if what Aristotle provides with his list of categories are tests to support the rules in the *Topics*, then the categories do not necessarily need to form a completely exclusive list of genera, so long as there are additional rules by which dual categorizations may be managed to avoid certain fallacies. Aristotle's first response to the dual categorization of qualities and relatives seems to represent such an additional rule, since the distinction between genus and particular will provide a guide to whether one should place something in one genus or the other. As noted above, this option was not available in the case of secondary substances and relatives, so the definition of relatives needed to be revised. If this response does not cover all cases of dual categorization of qualities and relatives, then perhaps Aristotle's second response, that there is nothing absurd in having something in both of these genera, can be understood as an explicit claim that these odd cases of dual categorization do not result in any of the fallacies outlined either in the *Topics* or in *Sophistical Refutations*. Perhaps the confusion of secondary substances and relatives would in fact result in one or more fallacies, but the confusion of qualities and relatives would not. Since the main point of the categories is to support the avoidance of fallacies,

according to Menn's view, then a difference that makes no difference is not a cause of concern for Aristotle.

Here at last there seems to be an interpretation of the *Categories* that may adequately address the issue of dual categorization. It acknowledges that the ten categories are indeed understood as genera, which I had questioned earlier, but allows that this list of genera may indeed be overlapping ones, provided that these overlaps in the form of dual categorizations do not result in any fallacies.

Yet I noted earlier that in revising the definition of relatives to avoid categorizing secondary substances as relatives, Aristotle seems to display an interest in the nature of the categories themselves, not merely as pragmatic or linguistic tools. So again, at the time of the writing of the *Categories*, Aristotle may indeed have been considering the list of ten categories in terms of his investigations in the *Topics*, but it may be that in the process of writing the *Categories* his thinking about them began to change. They begin to point beyond his early logical investigations toward the considerations of the *Metaphysics* and, it seems to me, toward the later logical developments in the *Prior Analytics*.

Edel argues with regard to his interpretation of the categories as fundamental concepts of Aristotle, "Such concepts rarely exhaust the full inventory of his basic ideas; they are usually set in a background of other concepts, but the spotlight or focus is on them because they *are* the functioning network in terms of which proposed answers to philosophic questions are formulated and answers sought" (p. 59, emphasis in the original). Yet if these fundamental concepts themselves come into focus against a broader conceptual background, then in any given consideration of the concepts within a particular inquiry, it seems possible that one or more of these concepts may come into focus against the background of the list of categories themselves, as seems to be the case in the *Metaphysics* where the category of substance becomes the focus of inquiry into the nature of being. Further, it seems to me that if one category or concept may come into focus within a given inquiry, then also relationships between certain categories may also come into focus. As such, that sort of inquiry might not explicitly reference one or more categories, as does the *Metaphysics*, but the use of those concepts might be merely inherent in the overall discussion. In effect, those concepts would recede into the background of discussion as the relationships themselves take focus.

4

I suggest that such a situation does occur within part of the *Categories*. Ackrill notes that this work is divided into three parts, Chapters 1–3, Chapters 4–9, and Chapters 10–15 (Ackrill, p. 69). The middle part contains a detailed discussion of many of the ten categories. This and the third part of the *Categories* seem likely to be related to the *Topics* in the way that Menn suggests. The first part as well may be seen to have some relevance to the *Topics*, but its curious discussion of the four-fold classification of things based upon predication and inherence seems to go beyond any considerations required in the *Topics*. "Of

things there are: (a) some are *said of* a subject but are not *in* any subject ... (b) Some are in a subject but are not said of any subject ... (c) Some are both said of a subject and in a subject ... (d) Some are neither in a subject nor said of a subject" (1a20). The relation of this four-fold classification to the list of ten categories is likewise curious, since Aristotle only explicitly links the category of substance to one of these four classifications, for primary substance "is that which is neither said of a subject nor in a subject" (2a12).

From the placement of this four-fold classification before the discussion of the ten categories, it seems as though this four-fold system is intended to be an overarching classification into which the ten categories can be placed. If primary substance is nether predicated of nor inherent in a subject, then likewise it seems that all the other categories can be classified according to their relations of predication and inherence with regard to a subject. Indeed this is the way it may have seemed to whomever ordered the chapters of the *Categories* as they appear, but then it is not clear that it was Aristotle himself who arranged the chapters according to their traditional order.

In any case, I suggest that the four-fold classification scheme is not a more general framework for classifying the ten categories. After all, Aristotle only classified primary substance in terms of predication and inherence. If he had intended the four-fold classification to provide an overarching system of classification, it seems strange that he did not complete the task and indicate where the remaining categories fall within the four-fold system. Furthermore, consider the way that Ackrill understands the four-fold system of classification based on predication and inherence: "(a) species and genera in the category of substance; (b) individuals in categories other than substance; (c) species and genera in categories other than substance; (d) individuals in the category of substance" (p. 74). For a category to be placed within this four-fold scheme, then either that category would have to consist entirely of species and genera or entirely of individuals, or that category would have to be separated into primary and secondary parts, as Aristotle does with the category of substance. Ackrill asks, "Why does Aristotle not speak of primary and secondary qualities, &c., as he does of primary and secondary substances?" (p. 76).

My suggestion in response to this question is that the four-fold classification is a later development from the articulation and investigation of the ten categories. It is not an auxiliary scheme for understanding the ten categories. It is in fact a replacement system of categories. The problems with dual categorization may indeed have troubled Aristotle as much as they troubled Ackrill. While the system of ten categories could support his investigations in the *Topics*, the issues prompted by the instances of dual categorization may have raised problems for his more ontological concerns. Having already characterized primary substance in terms of predication and inherence, it may then have seemed natural for Aristotle to develop the four-fold system of categories based on affirmation and denial of predication and inherence with regard to a subject, which would have the advantage over the system of ten categories in that this system was logically exhaustive and it would not leave openings for dual categorization so long as the principle of non-contradiction held.

Furthermore, it seems to me that a categorial scheme devised in terms of predication and inherence would then provide support for the development of the syllogism in Aristotle's *Prior Analytics*, since the relation of logical consequence that obtains in the valid syllogistic figures is determined by two factors: (1) the relation between the terms, and (2) the scope of that relation between the terms. The latter factor is comprehended under modern quantification theory, and seems to govern which specific syllogistic figures are valid according to whether the scope of certain terms subsumes or excludes other terms. The former factor, however, provides the essential grounding for the soundness of the syllogism in principle, since if there were no relation between the terms separate from purely quantificational concerns, nothing would follow at all from a syllogism under any figure. These two relations of predication and inherence seem sufficient for Aristotle to establish the soundness of the syllogism, primarily because they are relations ultimately dependent upon primary substance as subjects (2a24–2b6). This dependency relation seems to provide a critical link between the language in which the syllogism is presented and the ontology represented in the statements. Once the dependency is established for primary substances, the extension to secondary substances as subjects seems trivial, since the difference between primary and secondary substances according to the four-fold system of categories is that secondary substances can be predicated of a subject, including subjects that are primary substances for which the dependency is already established. In other words, this four-fold system of categories seems to provide the essential groundwork for the semantics of Aristotle's syllogism.

So while the list of ten categories presented in the *Categories* may indeed be understood according to Menn's interpretation as being part of a preliminary investigation to support the rules in the *Topics*, it seems to me that the *Categories* as a whole represents a broader development of fundamental concepts, as Edel suggested, not only with regard to the earlier style of logic as embodied in the *Topics*, but also the later syllogistic style developed in the *Prior Analytics*. It seems to me that this later development is supported primarily by the four-fold system of categories rather than the system of ten categories. Both the earlier and the later categorial schemes have responses to the problem of dual categorization. The ten-fold categorial scheme supports dual categorization by the inclusion of additional rules to prevent fallacies in cases where dual categorization appear, whereas the four-fold categorial scheme based on predication and inherence prevents dual categorization on purely logical grounds given the law of non-contradiction.

It would be helpful if there were additional textual evidence to support my interpretations of the two systems of categories in the *Categories*. Still, even without such evidence, I think these speculations tell a nice story, one that captures the development of Aristotle's thought from the *Topics* through the *Categories* to the *Prior Analytics*. Other stories may be told, but the challenge is to find some different way of understanding Aristotle's reactions to the two cases of dual categorization that likewise explains the role of the four-fold categorial scheme based on predication and inherence within the *Categories*

and the *Organon* as a whole.[2]

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`http://www.markressler.com/doc/Dual-Categorization-and-the-Role-of-Aristotles-Categories.pdf`

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