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RESEMBLANCE EXTREME NOMINALISM
AND INFINITE REGRESS ARGUMENTS

From Plato to the present, infinite regress arguments have been central to debates about universals. This is especially true in the twentieth century in which the analysis and employment of regress arguments reached a new level of sophistication. However, in spite of their prominence, there is wide disagreement about the effectiveness of certain regress arguments against one of the most promising versions of extreme nominalism—resemblance extreme nominalism (REN). Richard Aaron, D. M. Armstrong, Panayot Butchvarov and Michael Loux have sided with those who disavow the success of regress arguments in this context. I shall argue that they are wrong and that, in fact, properly understood, certain infinite regress arguments are successful against REN. To show this I shall provide a precis of REN and different infinite regress arguments, along with a brief statement of the classic version of the regress argument against REN made famous by Bertrand Russell and Edmund Husserl; state and rebut Loux's claim that the argument fails; use the insight gained in the dialectic with Loux to refute Armstrong's rejection of an object regress against REN. I select Loux because his argument is a clear representative of the strategy employed by Butchvarov, Aaron, and others.

1. RESEMBLANCE EXTREME NOMINALISM

Before turning to infinite regress arguments, it is important to state REN and explain the terminology I use in describing it. According to REN, some particular *a* has the property of being F just in case either a appropriately resembles a paradigm case (or paradigm cases) of an F thing or *a* is a member of the class of appropriately resembling F things. Each disjunct spells out a slightly different version of REN. I call this "resemblance *extreme* nominalism" instead of the more typical "resemblance nominalism" because I distinguish extreme nominalism from nominalism. According to the former, properties, understood along either realist (properties exist and are universals) or nominalist (properties exist and are abstract particulars) lines, do not exist and the phenomenon of predication is to be given a reductive analysis of this form:

a is F $\leftrightarrow$ Q

Different versions of extreme nominalism state Q differently: Predicate extreme nominalists analyze Q as "*a* falls under 'F'" or "'F' correctly applies to *a*." Concept extreme nominalists take Q as "*a* falls under the concept F" or "the con-

cept F correctly applies to *a*." Mereological or exploded object extreme nominalists understand Q as "*a* is a part of the aggregate of F things." Class extreme nominalists reduce Q to "*a* is a member of the class of F things."

By contrast, nominalists believe that properties exist and are not appropriately reduced in this way. According to nominalists, properties are abstract particulars. Campbell's trope ontology is an example of nominalism. In the literature, discussions of regress strategies and resemblance have been focused on the former school of thought and I shall use my terminology of "resemblance extreme nominalism" to describe the view under consideration.

2. INFINITE REGRESS ARGUMENTS

An infinite regress argument tries to show that some thesis, task, or state of affairs is defective because it involves a problematic "infinite regress." There are at least three forms of infinite regress arguments. Form one argues that a thesis is defective because it generates an infinite series that, in fact, does not exist. Form two argues that a thesis is defective because it generates an actual infinite ($\aleph_0$) number of entities (or tasks) and this is uneconomical. $\aleph_0$ may be defined as a set that can be put into one to one correspondence with either the set of natural numbers or with a proper subset of itself.

Form three involves claiming that a thesis generates a "vicious" infinite regress. How should "vicious" be characterized here? At least three characterizations have been offered. Roderick Chisholm says that "One is confronted with a vicious infinite regress when one attempts a task of the following sort: Every step needed to begin the task requires a preliminary step."[1] For example, if the only way to tie together any two things whatever is to connect them with a rope, then one would have to use two ropes to tie the two things to the initial connecting ropes, and use additional ropes to tie them to these subsequent ropes, and so on. According to Chisholm, this is a vicious infinite regress because the task cannot be accomplished.

D. M. Armstrong claims that when a reductive analysis of something contains a covert appeal to the very thing being analyzed, it generates a vicious infinite regress because the analysis does not solve anything, but merely postpones a solution.[2] No advance has been made. He says that this is like a man without funds who writes checks to cover his debts, and so on, forever.

Late Medieval thinkers such as Thomas Aquinas distinguished essentially ordered and accidentally ordered series, and claimed that infinite regresses involved in the former are, while those involved in the latter are not vicious.[3] An essentially ordered series is one with a structure characterized by at least two features: 1) It is not just a list of members, but an ordering of members in the sequence precisely in virtue of the members being related to each other in a way essential to the nature of the series. 2) The existence or operation of each member in the series qua member depends upon the next member. The relationship among the members

of the series is transitive. If *a* stands in R to *b* and *b* in R to *c*, the *a* stands in R to *c*, and so on.[4] Essentially ordered regresses, or *per se* regresses, are expressions of ontological dependency among the members of the regress such that one member has a relevant feature (e.g., existence, efficient causality) in virtue of, as determined by, grounded in another member of the series, and so on. A description of each member of the series or an explanation of its role in the series cannot stay at one level in the regress. Rather, each item of the series qua member of the series is what it is because of the item at the next location in the series, so a regress of explanations or descriptions keeps moving across the series until an ultimate explanation for the series is reached. If there is not a first member in the series that simply has the relevant feature in itself, no other member of the series will have that feature since each subsequent member can only "pass on" that feature if it first receives it.

A standard example of an essentially ordered series is a series of simultaneous efficient causes such as a stone being moved by a brick which is moved by a broom which is moved by a hand which is moved by a person.

An accidentally ordered series fails to satisfy these conditions. Most important for our purposes, in such a series, the existence or operation of each member of the series qua member of the series does not depend upon the next member. The relationship between the members fails to be transitive. Aquinas uses a series generated by the "father of" relation to illustrate a *per accidens* regress. In such a series, there is no essential connection between the grandfather and the grandson. The grandfather plays no role in explaining his son's production of the grandson. An explanation of the existence of the grandson is given with respect to his father and it stops there. There is no need to appeal to the grandfather to explain the coming-to-be of the grandson; indeed, the grandfather could be deceased when the grandson comes-to-be.

Recently, some philosophers have argued that an essentially ordered infinite series is impossible because it involves traversing an actual infinity and that cannot be done. To illustrate, one cannot count from one to actual infinity for no matter how far one has counted, he will still have an infinite number of items to count. Such a task can begin, but it cannot be completed. Moreover, trying to count from actual infinity to 0, say, by running through all the negative integers and arriving at 0, can neither be completed (it involves the same number of tasks as going from one to actual infinity) nor begun for the reasons given above by Chisholm: trying to reach any number in the past will itself require an infinite traversal as a preliminary step.

A series generated by counting from negative infinity to 0 is characterized by two features relevant to our current discussion. First, the members of the series are

counted numbers and, as such, do not form a mere list but, rather, are related to each other as sequentially counted numbers. Counted number n+1 (e.g, –566) is located in the series as such precisely after counted number n (e.g., –567). Second, the members of the series stand in a dependency relation to earlier members. A counted number cannot be the nth member of the series without the counted number just prior to it occupying location n – 1. Thus, any counted member of the series depends for its membership in the series on both its location relative to the earlier members of the series and on those earlier members having already obtained. Now in the same way, in a *per se* regress, the transitivity of the relation ordering the regress implies that the dependence among members runs from the earlier to latter members. In these ways—the members do not form a list but are ordered in a way relevant to the series, and there is a dependency of each member on earlier members—such regresses are like traversing from infinity to 0.

Besides different characterizations of the viciousness of infinite regresses, D. M. Armstrong has drawn attention to an important distinction between two types of regresses—an object and a relation regress. In clarifying the distinction, it may be helpful to consider them as tools for evaluating predicate extreme nominalism (PEN) according to which *a* is F if and only if the predicate 'F' correctly applies to (is satisfied by, has falling under it) *a*. Armstrong argues that PEN falls victim to both regresses.

First, the object regress. According to PEN, each red thing is red because it falls under *the* predicate 'red'. As the italicized words bring out, PEN analyzes one type (a property) in terms of another type (the predicate). The redness of red things is constituted by their relations to tokens of the word type 'red', all tokens of this word type are so in virtue of falling under a second order word type, an so on to infinity. Armstrong claims—correctly in my view—that this regress is both uneconomical and vicious, since it merely postpones but does not solve the problem of removing types from the EN framework. Note that in the object regress, the entities in the regress are objects of some sort, in this case, predicates.

Second, the relation regress. Consider all pairs of red things and predicate tokens of 'red'. In each pair, the red thing stands in *the* falling under relation to its word token, and this relation is itself a type of relation. The predicate extreme nominalist may leave the falling under relation unanalyzed in which case he is stuck with a type or he may claim that each first order falling under token is of the same type because a second order relational predicate correctly applies to it. But this generates both a new object regress (the second order predicate "falling under" itself, and so on) and the regress relation within our purview (since each first order falling under relation stands in the same type of relation—a first or second order falling under relation—with respect to the second order predicate, and so on.) Either way, a type is part of the analysans and the regress is vicious. Note that the relation regress involves relata standing in a type of relation.

3. THE CLASSIC REGRESS ARGUMENT AGAINST REN

There is a classic regress argument against REN made famous by Bertrand Russell, Edmund Husserl, and others.[5] Since we shall analyze the argument in more detail below, the purpose here is to state it briefly as an introduction to the dialectic to follow. To understand the argument, suppose we have before us three exactly similar round, red spots called Plato, Socrates, and Aristotle. According to one version of REN, each spot is red in virtue of standing in *the* exact similarity relation to each other. Now this seems to be both a type of relation and the same relation multiply exemplified by each pair of relata. Thus, the argument goes, it is a universal. To avoid this conclusion, one could say that there are three different exact similarity relations, each standing between one of the three pairs of spots. Unfortunately, these three exact similarity relations all stand in *the* exact similarity relation to each other, and so on, to infinity. Not only is this an uneconomical situation, at each stage of analysis there is a type, and thus, the regress is vicious. The REN proponent cannot say that at each stage of analysis the type is just a collection of tokens because that does not accurately capture the situation. Rather, at each stage, the collection of tokens is a collection of tokens of a new type, and thus, type occurs at each level of analysis. The only way to avoid the regress is to admit at least one universal, viz., the exact resemblance relation.

Setting aside Armstrong's latter views of the ontological status of internal relations, it is clear that, considered in itself, he took the relation regress to be effective against REN:

> "The original type, the property of *whiteness* is got rid of, but at the cost of installing another type, the relation of resemblance. . . . At each stage, therefore, the right-hand side of the analysis involves an unanalysed *type*. This type raises the same problem for the Resemblance [Extreme] Nominalist as did the original type."[6]

4. AN EVALUATION OF LOUX'S REJECTION OF THE ARGUMENT

I mentioned above that Michael Loux has proffered a widely employed strategy against the classic regress argument. Loux argues that while uneconomical, this regress is not, in fact, vicious:

> "The question, however, is whether Russell is right in supposing the infinity of resemblance relations to be vicious. Clearly, it would be vicious if the [Extreme] Nominalist were precluded from *providing an account* of any particular case of attribute-agreement without regressing

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back through the infinite hierarchies. But is it, in fact, true that the [Extreme] Nominalist's *success in handling* particular cases of attribute-agreement presupposes any such regress? I think not. Given any instance of attribute-agreement, the [Extreme] Nominalist will *point out* that the objects or n-tuples of objects in question exemplify resembling individual attributes." [Italics mine][7]

In the same vein, Richard Aaron claimed that "the regress is there, but we can know the resemblance in question without observing the infinity of resemblances. Consequently, the argument does not refute the Resemblance theory."[8] Finally, Butchvarov is typical in taking the regress to involve only a potential and not an actual infinity: "We are faced with an infinite regress. But, again, there is nothing vicious about it. At worst, it too is like the infinite divisibility of space, and certainly is only potential."[9]

To understand Loux's argument and my assessment of it, let us form a diagram using superscripts to stand for the level of being at which an entity exists and is related in the hierarchy and subscripts for the entities related within a level of being.
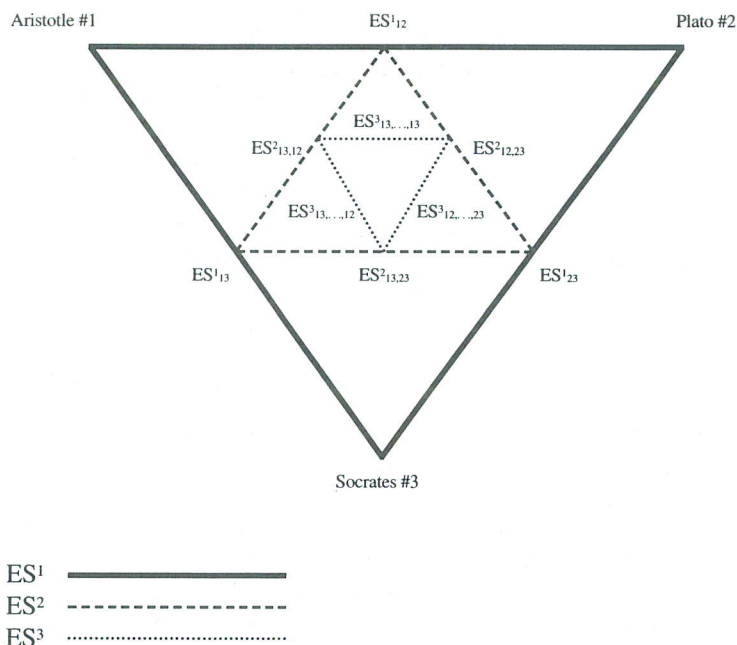
As the quote above makes evident, Loux's justification for rejecting the regress argument resides in his assertion that the regress is epistemic/explanatory.

According to Loux, the REN advocate can explain the fact that the three spots are all red by pointing out that they all stand in an exact similarity relation (ES) at level one. If asked, he can go on to account for the resemblances among these relations in terms of ES relations at level 2, and so on. For Loux, the entities that occupy the various levels in the regressive hierarchy are acts of explanation, of providing an account of something, of handling a specific problematic case. Two features of this claim stand out.

First, Loux believes that this regress is only a potential and not an actual infinity. If asked for an explanation of resemblances at some level, one can explain it be appealing to the next level. If the need arises, one can then handle the resemblances at the higher level by providing an account in terms of the next level. The series of explanations can increase forever if a questioner continues to raise explanatory problems, and it can increase without limit, but the series of explanations will always be finite in number. This is precisely what is meant by claiming that the series is a potential infinity: It can increase forever by adding a new explanation to the series of explanations when the need arises, but it will always be finite. Through time, new explanations are added to the series as the need arises.

Second, at each level in the hierarchy, the correct description of the entity in question treats it as complete without needing to include reference to the next highest level. This is often thought to be true of explanatory regresses in general. If x is explained in terms of y, then x is what it is with or without y. This can be seen from the fact that x would remain in tact if y', not y were the adopted explanation. One way to put this is to note that the need for y depends on x actually being a datum and, in general, in explanatory regresses, the order of dependency runs from lower to higher levels in the hierarchy. A datum must be accepted *before* an explanation is required, that explanation must be accepted, before it requires explanation, and so forth.

Moreover, y can explain x even if we don't have an explanation for y. If we seek such an explanation in terms of z, then we treat y as a new datum which remains the same whether z or z' is adopted.

As an analogy, consider a chain of people borrowing a typewriter. Whether or not the chain is vicious depends on one's view of the correct description of entities at each level in the chain. Suppose a goes to b to borrow a typewriter and b complies, claiming to have just what a needs. If asked how b has a typewriter to loan, he claims to have borrowed it from c who, having already borrowed one from d, has one to give to c. Allegedly, at each stage in the chain, the relevant entity can be described as "a possessor of a typewriter who can loan it to another." Thus, it is alleged, the regress is not vicious. The same point is being made regarding the resemblance regress. At each stage in the chain, the relevant entity can be

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described as a self-contained entity—an exact similarity relation—which can serve as a datum for an explanation at the next level.

Does this argument successfully rebut the claim that the resemblance regress is a vicious one? It does not. First, the regress depicted in the chart above is onto-logical, not epistemological. After all, the three spots exist, they actually stand in the first order ES relations, as do the first and higher order ES relations. The regress is not primarily a matter of explaining anything; rather, it is a ontological hierarchy of entities in the world. Understood ontologically, there is nothing potential involved in the hierarchy because Socrates, Plato, and Aristotle are all there as exactly similar entities and whatever is needed in the world to make this the case is likewise there prior to any attempt to explain anything. Either the regress is actual and finite or actual and infinite. Clearly, it cannot be the former since that would require postulating at some level a triad of ES relations that either do not resemble each other which is both question-begging and absurd or that all stand in the *same* ES relation which is a universal. Thus, the regress is an actual infinity.

Second, at each level in the ontological regress, the entity in question must exist and be self-identical to do the ontological work required of it. It is widely agreed that, in general, for all entities e, e exists if and only if e is identical to e. Now, given the reality of the three spots, at least part of what makes them the enti-ties they are is that they are exactly similar to each other. There is no possible world in which they exist and are not exactly similar to each other; it is essential to each entity that it be exactly similar to the others.[10] Thus, part of the description of each spot must include its exact similarity to the others and, on the REN analysis, this requires reference to the first level ES relations. "Aristotle is red" is incomplete and a more adequate description would be "Aristotle is a red spot that by nature stands in the relevant ES relations to Plato and Socrates."

The same point could be made about level one ES relations. They must exist or else the three spots could not exist, since part of the nature of the latter is to be so related to each other. That is part of what it means to call ES an internal relation. Moreover, in order for level one ES relations to exist, they must be self-identical, and part of what makes them the entities they are is their exact similarity to each other, i.e., (on the REN view) their standing in the relevant ES relations at the next level. Indeed, it is not clear what it would mean to say that in all possible worlds in which these three red spots exist, they would be exactly similar in color in some but not in other worlds. Thus, at each level, an entity is what it is (partly) in virtue of, in dependency on the entity at the next highest level.

Returning to the typewriter analogy, it is incomplete to describe each person as "a possessor of a typewriter who can loan it to another." Rather, each person is "a possessor of a typewriter who can loan it to another who first had to borrow it from another." At each level, the persons qua lenders depend on being borrowers from another and this means that, given the nature of the series, each level cannot be adequately described without reference to the next level.

Understood in this way, the typewriter regress and, more importantly, the resemblance regress is vicious because (1) Entities at each level in the hierarchy are incomplete and require reference to entities at the next level to be adequately described so as to capture everything needed to make the entities self-identical. (2) The dependency among members in the hierarchy is both transitive and runs from higher to lower levels in the hierarchy, not vice versa. (3) An ontological traversal through the dependency hierarchy is a *per se* regress, not a *per accidens* one, and it requires traversing not a mere potential infinity, but an actual infinity analogous to counting from infinity to 0. It seems, then, that the regress is vicious contrary to Loux's contention and the key issues surface once the regress is correctly identified as ontological and not epistemological.

5. ARMSTRONG ON REN AND THE OBJECT REGRESS

D. M. Armstrong claims that, whereas the relation regress is successful against REN because it is both vicious and uneconomical, the object regress fails.[11] To understand Armstrong's position, let us examine it in light of that version of REN that makes appeal to paradigm case entities. Now, says Armstrong, the realist could argue that saying *a* is F if *a* resembles a paradigm requires either the paradigm to be F simpliciter (which commits one either to accepting a property or to reducing REN to another version of extreme nominalism) or it requires the introduction of a second paradigm for the first one, and on to infinity.

Armstrong says this argument won't work because a REN advocate could loop things back into a circle, e.g., the first set of paradigms are F in virtue of the second set and vice versa:

> "But it seems that the regress can be stopped in the following way. The first set of paradigms must be provided with a second set of paradigms, but after that, it seems, the regress can come round on its own tail. The first set of paradigms are all Fs in virtue of their resemblance to a second set of paradigms. But then it can be said that the second set are all Fs in virtue of their resemblance to the first set. The position is this. We start with a finite set of sets of particulars, made up, for example, of two of Price's paradigm sets. The *nature*, the F-ness, of each member of one sub-set is determined by its resemblance to each member of the *other* sub-set. The F-ness of *other* Fs is then given by their resemblance to the members of the paradigm sets. The only disadvantage I can see in this is that it makes the F-ness of members of the paradigm set somewhat different from the F-ness of other Fs. But perhaps even this can be accepted. Paradigm Fs are Fs in a somewhat special sense. No doubt the

standard metre is a metre long. But it is in a special position among the class of metre-long particulars. I conclude that [REN] survives the Object regress."[12]

Unfortunately, this response won't work for the following reason. While a normal treatment of exact similarity correctly depicts it as symmetrical, the work exact similarity is required to do in REN as stated above requires it to be asymmetrical in an important sense. Other particulars are F "in virtue of" or as "determined by" (Armstrong's terms) the paradigm(s). Now Armstrong (correctly) intends these phrases to express a metaphysical dependence or grounding relation of one entity with respect to another and, thus, Armstrong's depiction generates a *per se* regress. As such, it is, in fact, vicious. One way to see this is to note that such a metaphysical dependence is transitive, so that if a is F in virtue of standing in R to b and b is F in virtue of standing in R to c, then a is F in virtue of standing in R to c. Applied to Armstrong's argument we would have the following: If a is F in virtue of standing in R to b and b is F in virtue of standing in R to a, then a is F in virtue of standing in R to itself. Briefly put, this amount to treating a's being F as either a sort of "self-causation" which is impossible or else as a primitive fact about a which is contrary to REN.

To elaborate, the second horn of the dilemma—a's being F is just a primitive fact about a—is clearly unacceptable to REN and would amount to a reductio against it because the entire point of this version of extreme nominalism is to analyze predication in terms of resemblance to certain particulars.

The first horn—a's being F is a sort of "self-causation"—is also a problem in a way that Armstrong himself acknowledges as troublesome in other areas of the debate about universals. Recall his analysis of vicious infinite regresses. Armstrong claims that when a reductive analysis of something contains a covert appeal to the very thing being analyzed, it generates a vicious infinite regress because the analysis does not solve anything, but merely postpones a solution. No advance has been made. He says that this is like a man without funds who writes checks to cover his debts, and so on, forever.

In the typewriter case, the task is to explain how it is that some person P_1 has a typewriter. The reason there is an issue here is that it seems obvious that P_1's having a typewriter is a contingent state of affairs that did not have to obtain. P_1 is not just a typewriter owner, he is a borrowing typewriter owner. The problematic feature of P_1 that starts the regress is that he is a possessor who must first borrow. Now if we explain P_1's having a typewriter with respect to P_2 and if P_2 is also a borrower, then in Armstrong's own terms, no advance has been made. Moreover, if we make the regress "come round on its own tail," we get a situation in which P_1 has a typewriter by borrowing it from P_2 who had to get it from P_1 first before he could give it to P_1. Assuming it is not a primitive fact about P_1 that he just has a typewriter without needing to borrow it, we have a sort of "self-causation" in which no advance has been made.

Now in precisely this sense, Armstrong's first characterization of the object regress for REN seems to imply that it is a vicious infinite regress. That first characterization reads this way: "The first set of paradigms must be provided with a second set of paradigms, but after that, it seems, the regress can come round on its own tail. The first set of paradigms are all Fs in virtue of their resemblance to a second set of paradigms. But then it can be said that the second set are all Fs in virtue of their resemblance to the first set." Suppose we have two sets A and B of paradigmatic F things, $\{x^A_1, x^A_2, x^A_3\}$ and $\{x^B_1, x^B_2, x^B_3\}$, respectively. Superscripts indicate the set to which the member belongs and subscripts stand for the individual member in the set. On this characterization, it would seem that the members of set A are each F in virtue of, in dependence upon its resemblance to the paradigms is set B. Each may be described as "an F thing in virtue of resembling the F things in B." But the same observation can be made of the members of B. Each is "an F thing in virtue of resembling the F things in A." Given this characterization of the situation, it is hard to see how it differs substantially from the typewriter case. If I am right about this, then the looping strategy employed to avoid a vicious regress fails.

But there may be a way out for Armstrong. His remarks about REN and the object regress contain what seems to be a slightly different characterization than the one just examined. Admittedly, the exegesis of the passage is difficult and Armstrong was not as clear as one would like. Here is the relevant passage: "We start with a finite set of sets of particulars, made up, for example, of two of Price's paradigm sets. The *nature*, the F-ness, of each member of one sub-set is determined by its resemblance to each member of the *other* sub-set. The F-ness of *other* Fs is then given by their resemblance to the members of the paradigm sets. The only disadvantage I can see in this is that it makes the F-ness of members of the paradigm set somewhat different from the F-ness of other Fs."

A paradigm set for Price is simply a small group of F exemplars such that an F object is any object that resembles the exemplars as closely as they resemble each other. Price was clear that several different sets of exemplars could do the trick and, in fact, different people most likely work with different paradigm sets. Now Armstrong invites us to imagine a finite set of sets of particulars made up of two of Price's paradigm sets. Let us take sets A and B above to be the subsets of this finite set of sets. There appear to be two different cases relevant to our analysis:

Case 1: Members of set A are all F in virtue of resembling members of set B and conversely.

Case 2: Members of set A are all F in virtue of resembling members of set B and members of set B are F in virtue of resembling each of the other members of B.[13]

Now as it stands, Cases 1 and 2 fail to capture the second description of Armstrong's thought experiment. Two things need to be noted. First, Armstrong is careful to say that the situation "makes the F-ness of members of the paradigm set somewhat different from the F-ness of other Fs." Second, it is not clear just what set Armstrong refers to as "*the* paradigm set" and similarly for the identity of the "other Fs."

The second issue is not critical. We can take the larger set of subsets to include more subsets than the two paradigm subsets. This goes against Armstrong' use of the singular "the paradigm set" (since on this interpretation there are two, not one paradigm sets), though he also uses the plural and "the paradigm set" could be taken as a set formed by the union of A and B. In this first interpretation, the members of set A are F in virtue of the resemblance to the members of set B, and vice versa, and the members of other F subsets are F in virtue of resembling the members of A and B (which now becomes *the* paradigm set.) Or we can take the larger set of subsets to include only A and B as subsets. This could naturally be interpreted to mean that the thought experiment is about a possible world in which only these F things exist. This is consistent with an exclusivist interpretation of "a finite set of sets of particulars, made up [entirely], for example, of two of Price's paradigm sets." In this case, we then (arbitrarily) select B as *the* main paradigm set, stipulate that members of set A are F in virtue of resembling the members of B, and take the "other Fs" to be those left, namely, the members of B itself. These, then, will be F in virtue of their resemblance to other members of B itself. I don't think anything turns on which interpretation we adopt, since the points to be made shortly could, with slight adjustments, be made with equal effectiveness in connection with either interpretation. For this reason, I have stated case B above in light of the second interpretation.

The first issue is more critical. Given that different senses of being F are involved, we should amend Cases 1 and 2 as follows:

Case 1′: Members of set A are all F^B in virtue of resembling members of set B and members of set B are all F^A in virtue of resembling members of set A.

Case 2′: Members of set A are all F^B in virtue of resembling members of set B and members of set B are F^{BB} in virtue of resembling each of the other members of B.

Here superscripts are used to make clear that very different senses of being F are involved. In case 1′, members of set A are F-relative-to-set-B-paradigms and members of B are F-relative-to-set-A-paradigms. In case 2′, members of set A are F-relative-to-set-B-paradigms and members of B are F-relative-to-other-members-within-B. The predicates "F^A", "F^B", and "F^{BB}" are primitives.

Now each case provides a way out of the sort of self-causation that results from the looping strategy adopted to avoid a vicious regress. But there is a price for this move and Armstrong either misidentifies or minimizes that price. In each case,

the predicate "being F" is used equivocally for the various F things and, more generally, not only does it become critical which paradigm set one adopts, contrary to what REN advocates say, but there are now as many different sorts of "being F" as there are paradigm sets and sets of F things resembling them. The various sorts of "being F" are now classic examples of contrived predicates which Armstrong himself has eschewed in connection with other areas of the debate about universals.

This seems a pretty high price to be paid for avoiding regress difficulties and one may well ponder if it is too high. In any case, this price is not the one intimated by Armstrong's analogy with the peculiar status of paradigms such as the standard meter. We may set aside debates between Kripke and Wittgenstein about whether or not the standard meter is a meter, since in different ways Armstrong's own version of realism and REN are united in affirming that the standard meter is, indeed, a meter. On this assumption, a way out of the difficulty that arises for REN regarding different senses of "being F" is to say that, as with the standard meter, paradigms are in a special position regardless of the debate about REN. But is this really so in a sense relevant to the problem? It seems not. The standard meter is special in an epistemological and not an ontological sense. Given that the standard meter and other meter sticks are all one meter, there is no ontological difference between the standard meter and the others. The difference is simply epistemological. The way we know the standard meter is one meter is different, and perhaps better justified, then is the way we know other meter rods are one meter by reference to the standard meter. But the REN equivocation about "being F" is ontological, not epistemological, and the comparison with the standard meter is both misleading and has the rhetorical effect of weakening the severity of the problem for REN. Cases 1′ and 2′ may offer REN advocates a way out of a vicious regress problem, but the regress argument is what forced the REN proponent to adopt this solution, and if Cases 1′ and 2′ are judged inadequate, we have the regress argument to thank for the outcome.

[1]Roderick Chisholm, *A Realistic Theory of the Categories* (Cambridge: Cambridge University Press, 1996), p. 53.

[2]D. M. Armstrong, *Universals & Scientific Realism Vol. I: Nominalism & Realism* (Cambridge: Cambridge University Press, 1978), pp. 19-21.

[3]Thomas Aquinas, *Summa Theologica* I, Q. 46, Art. 2, Reply Obj. 7; cf. *Summa Contra Gentiles* I, Chapter xiii. I am thankful to Joshua Blander for his helpful insights on the difference between essentially and accidentally ordered series.

[4]This is true at least for those essentially ordered series in which it is not the case that different things are going on at different levels (e.g., efficient causality at one level, final causality at another level), for example, an essentially ordered series of simultaneous efficient causes. As we shall see in the next section, this qualification is not necessary, however, since the regresses involved in debates about different ver-

sions of nominalism are such that the same thing is going on at each level in the regress.

[5]Bertrand Russell, *The Problems of Philosophy* (Oxford: Oxford University Press, 1959), pp. 96-97; Edmund Husserl, *Logical Investigations*, 2 vols., tr. by J. N. Findlay (London: Routledge & Kegan Paul, 1970), Vol. I, pp. 410-411.

[6]Armstrong, *Universals & Scientific Realism Vol. I: Nominalism & Realism*, p. 55.

[7]Michael Loux, *Substance and Attribute* (Dordrecht, Holland: D. Reidel, 1978), pp. 46.

[8]Richard I. Aaron, *The Theory of Universals* (Oxford: Clarendon, 1967), p. 156.

[9]Butchvarov, *Being Qua Being* (Bloomington, Indiana: University of Indiana Press, 1979, p. 198. Butchvarov's comment is made in connection with taking the regress to be ontological. But that does not matter for our purposes. He also analyzes the regress as epistemological and as linguistic. In all three cases, he claims that the regresses are potential and not actual infinities, and for our purposes, this is the critical claim and, thus, the ontological and linguistic regresses may be assimilated to the epistemic regress.

[10]More accurately, it is essential to each that it be exactly similar to others of the same sort, since if two other exactly similar spots existed in place of Socrates and Plato, it would be essential to Aristotle to exactly resemble them. Obviously, describing the situation in this way makes explicit appeal to *sorts* of entities and for two reasons I have chosen to leave out this qualification in my description of the situation: (1) The appeal to sorts of entities involves appeal to universals and REN strategies to handle this problem seem to run afoul of an object and a relation regress. I will examine this dialectic below in my discussion of Armstrong. (2) The realist has a way of making sense of the fact that Aristotle's redness is ontologically independent of the existence of Socrates or Plato (Aristotle's redness is a monadic universal it exemplifies).

But things are not so clear for advocates of REN. For them, Aristotle is not red simpliciter. Rather, Aristotle's being red requires analysis in terms of resemblance to other particulars. As I will argue below, according to REN, it may well be that there are as many different senses to Aristotle's being red as there are paradigm cases or similarity sets selected as analysans. If I am right about this, then REN does, indeed, imply that a proper analysis of Aristotle's being red requires the existence of Plato and Socrates. If this implication seems counterintuitive, the fault lies with REN and not with my analysis of it.

[11]See *Universals & Scientific Realism Vol. I: Nominalism & Realism*, pp. 53-54. Cf., pp. 18-21. Subsequently, Armstrong has rejected the force of certain regress arguments, specifically, those that involve supervenient entities that are entailed by subvenient entities in every possible world in which the latter exist. Cf. *Universals: An Opinionated Introduction*, 36, 53-57, 108-109. Unfortunately, Armstrong's view of supervenient entities is not clearly correct and, indeed, seems false. It is not clear why some entity, e.g., being colorful, is not a self-identical, real entity even if it is entailed by being red in every world in which the latter is exemplified. Thus, his rejection of these sorts of argument will appeal only to those who accept his take on how we should view entities that, as he puts it, are ontological free lunches. Moreover, as far as I can tell, Armstrong as never rejected his earlier depiction and use of the object and relation regresses for reasons other than his views about the ontological status of supervenient entities. Thus, the regress arguments are valuable objects of study in their own right.

[12]Armstrong, *Universals & Scientific Realism Vol. I: Nominalism & Realism*, p. 54.

[13]Obviously, case 2 could have reversed the roles of A and B to generate case 3, but cases 2 and 3 are indistinguishable for my purposes, so I set this aside.