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The Importance of Russell's Regress Argument for Universals

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1 Russell's Regress Argument for Universals

In his 1912 classic *The Problems of Philosophy*, Russell presented his famous regress argument against the nominalist denial of universals. In this paper I will explore the origin of the argument in Russell and its relevance in contemporary metaphysical debate. I will argue that a hundred years on, the argument still presents a powerful tool for realists in their debate with nominalists and trope theorists.

Russell introduces the regress as follows:

If we wish to avoid the universals whiteness and triangularity, we shall choose some particular patch of white or some particular triangle, and say that anything is white or a triangle if it has the right sort of resemblance to our chosen particular. But then the resemblance required will have to be a universal. Since there are many white things, the resemblance must hold between many pairs of particular white things; and this is the characteristic of a universal. It will be useless to say that there is a different resemblance for each pair, for then we shall have to say that these resemblances resemble each other, and thus at last we shall be forced to admit resemblance as a universal. The relation of resemblance, therefore, must be a true universal. And having been forced to admit this universal, we find that it is no longer worth while to invent difficult and unpalatable theories to avoid the admission of such universals as whiteness and triangularity. (Russell 1912: 96–7)

Thus, if a nominalist wants to avoid postulating universals such as *whiteness* and *triangularity*, she needs to find alternative ways of accounting for properties. One way of doing this is to pick out some particular d – a particular patch of white or a particular triangle – and then take the properties of whiteness and triangularity to consist in the ‘right sort of resemblance’ of particulars to the chosen paradigm d . This, in contemporary literature, is known as resemblance nominalism, or more specifically, as paradigm resemblance nominalism. Now, as there are many white and triangular things, there will be many pairs of things resembling each other in the relevant way. Multiple recurrence is a characteristic of universals and if one wants to avoid admitting resemblance as a universal, a way to do this is by saying that there is a *different* resemblance for each pair (a, d) , (b, d) , (c, d) , ... – $r(a, d)$, $r(b, d)$, $r(c, d)$... But if a nominalist says this, she finds herself again having to explain what makes all the resemblances $r(a, d)$, $r(b, d)$, $r(c, d)$... resemble each other. She may say that all of them resemble each other because each of them resembles some arbitrarily picked resemblance $r(x, d)$. In this way we get new pairs $(r(a, d), r(x, d))$, $(r(b, d), r(x, d))$, $(r(c, d), r(x, d))$, ... of resembling resemblances. And again, if in each case we ascribe the same resemblance there arises a risk for the nominalist of admitting a universal into her system. Therefore, she has to say that each of the new pairs of resemblances are *different* particular resemblances, and so on. The conclusion that Russell draws from this is that since the resistance to admit universals leads to an infinite regress of resemblance relations, a nominalist might as well have accepted the resemblance relation as a universal in the first place.

2 The Context of Russell's Regress Argument

Right after his presentation of the regress argument for universals, Russell notes that Berkeley and Hume failed to appreciate the force of this argument because they thought of *qualities* rather than *relations* as exemplars of universals. For Russell in the *Problems*, as well as in his paper from the same period – ‘On the Relations of Universals and Particulars’ (1911) – the opposite is the case: it is *relations* that are the main candidates for universals. Qualities can be treated, as the regress argument itself suggests, in terms of resemblance of one particular to another; relations, however, are irreducible. An attempt to rid oneself of relations leads to an infinite regress of further relations of *resemblance* or *likeness*. The argument thus proves very simply for Russell that an ontology that admits only particulars is flawed – it overlooks the fact that *relations* are ineliminable, and thus that universals are too.

It is difficult to determine when exactly Russell formulated the argument he perceived to be so powerful. Russell's discussion of the relation of ‘difference’ in his *Principles of Mathematics* (1903) can perhaps be seen as containing a proto-version of his later regress argument. In chapter IV, on ‘Proper Names, Adjectives, and Verbs’, §55, he discusses the view he attributes to Moore – i.e. a view that takes the *relation of difference* to be a different *instance* of a general ‘Platonic’ relation in various propositions in which it features.¹ Russell then argues that such a conception of a relation of ‘difference’ would *not*: 1) help reconstitute the proposition; and 2) show what all the different pairs have in common:

[T]he view that no two pairs of terms can have the same relation both contains difficulties of its own and fails to solve the difficulty for the sake of which it was invented. For even if the difference of A and B be absolutely peculiar to A and B, still the three terms, A, B, difference of A from B, do not reconstitute the proposition “A differs from B”, any more than A and B and difference did. And it seems plain that, even if differences did differ, they would still have to have something in common. But the most general way in which two terms can have something in common is by both having a given relation to a given term. Hence if no two pairs of terms can have the same relation, it follows that no two terms can have anything in common, and hence different differences will not be in any definable sense *instances* of difference. I conclude, then, that the relation affirmed between A and B in the proposition “A differs from B” is the general relation of difference, and is precisely and numerically the same as the relation affirmed between C and D in “C differs from D”. And this doctrine must be held, for the same reasons, to be true of all other relations; relations do not have instances, but are strictly the same in all propositions in which they occur. (Russell 1903: 51–2).

It seems that for Russell in *The Principles*, if we are to properly explain what various pairs of different terms have in common, we need to do it with the help of a numerically identical *relation of difference*. Moorean various instances of ‘difference’ cannot do the job because something then has to further explain what makes those different instances instances of *difference* and not of something else. If we disregard the awkwardness of the example that Russell has chosen (with his insistence on the relation of *difference*), and add the additional steps that Moore would have had to take to explain what all the instances of difference have in common (i.e. that they would

¹Russell himself argued for this Moorean approach to relations in his unpublished manuscript ‘Do Differences Differ?’ (1899). For a detailed discussion of Russell's arguments in that paper and of what might have prompted him to move away from particularized relations see Foster 2009–10. For a thorough discussion of arguments for universal relations employed by Russell in *The Principles*, see Griffin and Zak 1981.

have to resemble some higher order difference relation, and so on *ad infinitum*), we seem to have Russell's regress argument for relational universals in its rudimentary form.

A version of the regress argument that seems to be even closer to the regress that appears in *Problems* has been recently uncovered by Bernard Linsky (2013). He found the following notes that Russell wrote circa 1903 on Meinong's 'Abstracting and Comparing' (1900):

Comparison-theory supposes similarity of *a* and *b* discovered by that of (*a,b*) and (*c,d*). Hence endless regress. (67)

This regress, unlike many, is objectionable, since its beginning, not its end, goes to infinity. (68)

It looks as if Russell was here thinking that taking resemblance between *a* and *b* to hold in virtue of their resemblance to another pair (*c, d*) would lead to a regress. The missing regress-generating step is the question: in virtue of what do the pairs (*a, b*) and (*c, d*) resemble one another? It would have to be in virtue of resemblance to some other pair of resembling pairs ((*e, f*), (*g, h*)); but then the question would arise again.

It is also possible, however, that Russell was taking the pair (*c, d*) as a paradigm of resemblance. The thought in that case would be that *a* and *b* resemble in virtue of their resemblance resembling the paradigm of resemblance (*c, d*). Without further clues from Russell, it is not clear which reading of these notes is correct. The fact that he thought that the regress he was describing would arise at its beginning, rather than its end, does little to dispel the mystery.

3 Is Russell's Regress Vicious?

At the time when Russell provided his regress argument for universals, infinite regresses were widely used and discussed. Bradley's regress arguments against relations in *Appearance and Reality* (1893) had certainly drawn the attention of Russell's contemporaries, as well as of Russell himself.² Furthermore, Russell was clearly sensitive to the fact that not all regresses or 'endless processes' are bad, as the following passage from *The Principles* illustrates:

...in the present work, it will be maintained that there are no contradictions peculiar to the notion of infinity, and that an endless process is not to be objected to unless it arises in the analysis of the actual meaning of a proposition. (Russell 1903: §55. 51)

With this in mind, it is all the more clear that Russell viewed his regress argument for relational universals as being of the objectionable kind, for it was meant to force the opponents of universals to admit at least one relational universal of *resemblance*. Was Russell right to think this way? Is his regress argument indeed as vicious and powerful as he seemed to assume?

Although charges of infinite regress are a fairly common occurrence in philosophical arguments, there are still no uniform criteria for determining which regresses should count as benign or vicious. Daniel Nolan (2001), in his article 'What's wrong with infinite regresses?', analyzes some well-known regresses and tries to individuate the intuitions involved in philosophers' decisions over whether a regress should count as vicious or not. He points out that most philosophers tend to agree that a truth regress is a perfectly benign regress: for any sentence *p*, if it is true, then so is '*p* is true', as well as "'*p* is true' is true', and so on, *ad infinitum*. Thus, given Tarski's schema and adequate substitution instances, a harmless regress can be generated so that to every truth corresponds an infinite number of truths.

There is also a broad consensus over straightforwardly vicious regresses such as Plato's *Third Man Argument*, as reconstructed by Vlastos (1954), and the regress generated by the assumption that $\forall 2$ is rational.³ These regresses are caused by (and are *symptoms* of) inconsistencies or even outright contradictions in the premises and they often function as *reductio* arguments.

Some regresses, however, are neither straightforwardly benign, nor vicious; they are more difficult to pin down. Regresses that Nolan (2001) calls 'non-reductive' can be problematic in this way. They involve no apparent contradiction. Their main fault, as the name indicates, is that they do not succeed in explaining the phenomenon in question in terms of something more fundamental, but keep relying on the very terms that need explaining. If a theory promises a reductive explanation of a phenomenon and then falls into an infinite 'non-reductive' regress, the regress is considered *vicious* and the theory a failure. However, what happens if such a regress appears in a theory (or part of the theory) that does not aim to be reductive, or at least that does not aim to reduce the phenomenon that is at the center of the non-reductive infinite regress? The truth regress above is a case in point: it is only considered benign because it is not used to reductively explain the notion of the truth of a sentence in terms of something more fundamental. In other words, if Tarski ran into such a regress while trying to explain what the truth of *p* in *L* consists in (and ended up saying that '*p* is true if and only

²For Russell's initial response to Bradley, see *The Principles*, chapter IX, §99.

³See Nolan 2001 for a detailed discussion of these examples.

if 'p is true' is true', and so on ad infinitum) then he would be in serious trouble.

Thus, it seems that the 'viciousness' of certain regresses depends largely on contextual factors. Russell's regress argument appears to be such a context-sensitive regress - it emerges in an explanatory context in which a nominalist attempts to explain away properties in terms of resemblance to some paradigm instances of those properties. In this context, the regress seems to show that no amount of particular resemblance relations will ever give the nominalist the explanation she was after.

But does a nominalist have to commit herself to such an infinite regress in the first place? Can she stop short of attempting such an explanation? And would this kind of strategy work well against Russell's challenge? The next section addresses these questions.

4 Recent Nominalist and Trope Theorists' Responses to Russell's Regress Argument

In contemporary metaphysical debate, 'nominalism' is usually taken to refer to an ontology that admits only of particulars. Properties and relations are, according to such theories, constructed out of particulars as natural classes of particulars, resemblances between particulars, etc. Nominalists not only reject the existence of universals (be it universal properties or universal relations) but also deny the ontological reality of properties and relations as anything else but constructions out of particulars.

Trope theorists, on the other hand, tend to agree with nominalists in their rejection of universals, but unlike them, they take properties and relations to be ontologically real. Some trope theorists - such as bundle trope theorists - take properties and relations to be their most fundamental entities out of which they attempt to construct ordinary particulars. Their main divergence from realists about universals lies in taking such properties and relations as *particularized* rather than universal multiply repeatable entities.

Due to their rejection of universals, both trope theorists and nominalists have been sometimes referred to as 'nominalists', with the former called 'moderate nominalists' and the latter 'extreme nominalists'. Here, however, I reserve the term 'nominalism' for theories that completely reject the ontological reality of properties and relations - that is, I will not be applying the term to trope theories.

Now, Russell's regress argument is aimed at *all* those who reject universals, which is why in the sections that follow I will examine how some contemporary nominalists and trope theorists have responded to Russell's

argument. If their responses are found wanting, perhaps Russell's argument against the rejection of universals can be treated as a forceful positive argument for their acceptance.

4.1 Paradigm Resemblance Nominalism and Russell's Regress

Paradigm resemblance nominalism is the primary target of Russell's regress argument in *Problems*. This kind of nominalism avoids postulating universal properties such as *whiteness* and *triangularity* and relations such as *north of* and *two feet apart* by analyzing them away in terms of resemblance of particulars (or pairs of particulars) to a given paradigm particular (or pair of particulars). Thus, particular *a*'s being white is nothing more for a paradigm resemblance nominalist than particular *a*'s resemblance to some chosen paradigm of *whiteness* - say, a particular piece of white chalk. Similarly, *a*'s being north of *b* is nothing more than the resemblance of the pair (*a*, *b*) to some chosen paradigm of *north of* relation - say, a pair of cities (*Edinburgh, London*).

In the way that the paradigm nominalist position is presented, it is usually taken for granted that the very pairing of the paradigm with the particular that resembles it is unproblematic. And yet it is not clear what grounds the particular pairings. What grounds the pairing of a white ball and a white piece of chalk as opposed to a white ball and a red ball? Taking a white ball as a paradigm does not automatically determine what it is a paradigm of - whether it is the paradigm of the property 'white' or the paradigm of the property 'round'. And since there is no ordinary particular with just one property, the paradigm resemblance nominalist seems to be making use of the notion of resemblance-with-respect-to-a-certain-property such as resemblance-with-respect-to-whiteness or resemblance-with-respect-to-roundness in the very analysis of properties such as *whiteness* and *roundness*. Thus, there is an explanatory circularity that the paradigm resemblance nominalist must address before tackling Russell's regress proper.

One way that a paradigm resemblance nominalist may choose to respond is by claiming that the pairings of paradigms and particulars do not present an ontological problem. The pairings are based on *our recognition* of respects of resemblance and this *recognition* - a paradigm resemblance nominalist might insist - has nothing to do with the *analysis* of properties. The trouble with this line of response, however, is that it moves away from resemblance nominalists' declared goal, which is an account of properties and relations in terms of objective mind-independent resemblances of particulars and paradigms. It cannot therefore be part of the notion of a paradigm that it be picked out by us.

Another problem for the paradigm resemblance nominalist is presented by the question of what happens if there were only one object left in the universe. Would such an object still have properties such as being white and if yes, what would be the ontological ground of its whiteness? It could not be the resemblance of the remaining object with itself, since every object resembles itself. Could it then be the resemblance of the object with its proper part, the proper part being taken as a paradigm of whiteness? And if this were possible, what would happen if there were only one atomic white particular left, without any proper parts?⁴

But crucially, how might a paradigm resemblance nominalist respond to the charge of infinite regress of resemblance relations brought about by Russell's argument? James Cargile (2003) has argued that paradigms actually help avoid Russell's regress, and that without them it could not be avoided. Paradigms, according to him, gradually reduce the number of resemblances at each level in the regress until only one resemblance is left. Thus Russell's infinite regress turns finite. Cargile suggests that this can be done by considering only the resemblances between non-paradigms and paradigms. For example, if we have three resembling particulars *a*, *b*, *c*, one of which, say *a*, is taken as a white paradigm, and the other two, *b* and *c*, resemble *a*, this gives us two resemblances – between *a* and *b* and between *a* and *c*. Now, one of them is the paradigm resemblance between white things, say the one between *a* and *b*. The other resemblance, the one between *a* and *c*, is resemblance in virtue of resembling the paradigm resemblance. This then results in a further resemblance, a second order resemblance, between the paradigm resemblance holding between *a* and *b*, and the resemblance between *a* and *c*. But at this point there are no other second order resemblances and the regress is stopped (Cargile 2003: 555–6).

As Rodriguez-Pereyra (2004) rightly points out, this proposal has two flaws: first, it seems to simply assume that there must be a finite number of white particulars; and second, even with a finite number of white particulars, considering just the resemblances between paradigms and non-paradigms at one level does not by itself reduce the number of resemblances at the next. In the previous example of three white particulars *a*, *b*, *c* what makes *b* and *c* white is their resemblance to the paradigm *a*. This, however,

⁴If a paradigm resemblance nominalist makes an appeal here to white objects in other possible worlds, then she will be embracing Lewisian inflated ontology of possibilities, discussed in more detail below. An alternative that has been suggested to me is to invoke *merely possible* white objects. However, I struggle to see how such 'merely possible' objects can solve the problem if they are not fully fledged white objects. But if they are then indeed fully fledged white objects, what makes them *merely possible*?

does not mean that *b* and *c* do not resemble each other – just not considering their resemblance does not make it fail to exist. Thus, it seems that the reduction of the number of resemblances does not go as planned. And the same seems to happen at the next level too: even if what makes the latter two resemblances first order resemblances is that they resemble the resemblance between *a* and *b*, the resemblances between *a* and *c* and between *b* and *c* resemble each other and so we have three second order resemblances rather than two, and so on. In short, it appears that the infinite regress has not been avoided.

4.2 Non-paradigm Resemblance Nominalism and Russell's Regress

Now what about non-paradigm resemblance nominalism? Does it do any better than the paradigm resemblance nominalism in countering the Russell's regress argument? Gonzalo Rodriguez-Pereyra (2002) has endorsed what he calls 'Egalitarian Resemblance Nominalism' (as opposed to 'Aristocratic' or paradigm resemblance nominalism discussed above) which accounts for a particular having a property in terms of its resemblance to *all* the other particulars having the same property; i.e., for a particular *a* to have a property *F* is for it to resemble *all* other *F*-particulars. So, if we have three white particulars *a*, *b*, and *c*, *a*'s whiteness is due to its resemblance to *b* and *c*. But then, what makes the resemblances between *a* and *b*, *a* and *c*, and *b* and *c*, resemble one other? Each one of them resembles the other two resemblances. And what makes these new resemblances resemble one other? Russell's regress is looming again and no amount of higher order resemblances will give us what the egalitarian resemblance nominalist had promised – an explanation of what the having of the property 'white' of particulars *a*, *b*, and *c* consists in. This account appears to do no better than the one provided by the paradigm resemblance nominalist above.

There is, however, a strategy that may be used to block Russell's regress and it is to maintain that particulars resemble one another just in virtue of being the particulars that they are. Rodriguez-Pereyra puts this position as follows:

What makes it true that *a* and *b* are both white is that they resemble each other but this does not mean that there is an extra entity, the resemblance between *a* and *b*. What makes *a* and *b* resemble each other? Simply *a* and *b*. So if there are resembling particulars but no resemblances there is no regress of resemblances ... Resemblance Nominalism can avoid the regress by refusing to reify resemblances. (Rodriguez-Pereyra 2004: 645)

Rodriguez-Pereyra is careful to point out that he does not mean that it is the *intrinsic natures* of *a* and *b* that ground the resemblance between the two.⁵ If resemblance were taken to be an internal relation that supervenes on the *particularized natures* of particulars, the regress could be avoided – but potentially at a high price. For how should particularized natures be understood? Armstrong (1989) sees them as a number of properties (taken as particulars, of course) somehow ‘sealed’ together into one grand property within which no differentiation can be made. The problem with this suggestion, as Rodriguez-Pereyra notes, is that it goes against the very spirit of Resemblance Nominalism.⁶ Namely, a position that starts off by explaining away properties in terms of resemblance would do better to then not proceed to explain resemblance in terms of specific combinations of properties.

So what then does Rodriguez-Pereyra suggest in the passage above? Apparently, all he wishes to claim is that particulars themselves – not their intrinsic or particularized natures – are what is needed for grounding of resemblance. But if the answer can be this simple, was Russell wrong all along in believing that the resemblance nominalist has a problem where there isn’t one? It doesn’t seem so. Russell might have been wrong to assume that a nominalist would want to explain resemblance in terms of an *additional* entity of some sort. As we have seen in the case of Rodriguez-Pereyra’s resemblance nominalism, there is no such further ontological commitment going on. There are just pairs of particulars, and nothing else. However, Russell did seem correct in his insistence that if an explication of properties was going to run in terms of resemblances, some sort of story about what resemblances *are* ought to be given. Otherwise, why promise an explanation and then at the very first step not deliver?

Thus, the resemblance nominalist is faced with an unpalatable choice between an infinite vicious regress if he tries to explain resemblance, and the inexplicability of resemblance if he doesn’t. And if he chooses the latter, what grounds the groupings of particulars into the ones that have a certain property and the ones that do not? Resemblance nominalists may still call upon ‘resemblance’, but there is not much more that can be said about it. As Rodriguez-Pereyra puts it: ‘What is the resemblance invoked by Resem-

blance Nominalism? It is an objective, ontological, primitive, reflexive, symmetrical, non-transitive “relation” that comes by degrees and can obtain between no more than two entities’ (Rodriguez-Pereyra 2002: 62).

By saying that resemblance is *primitive* Rodriguez-Pereyra means ‘that Resemblance Nominalism does not account for the facts of resemblance it invokes in terms of any other, more basic kinds of facts. If *a* and *b* resemble each other, there is no other fact to which the resemblance between *a* and *b* reduces’ (2002: 64). Thus, facts of resemblance are themselves to be taken as a brute fact.

Still, Rodriguez-Pereyra’s primitive resemblance is an odd primitive. It is supposed to refer to an ontological *relation* that is reflexive, symmetrical, and non-transitive; yet the relation is not to be understood with ontological seriousness, as is indicated by the quotation marks in the above quote (If it were taken seriously, we would have Russell’s regress all over again.) So, it is not the resemblance *relation* that is primitive. What is primitive is the predicate ‘resemblance’ and its application that we should take as a given. Such a predicate refers (or applies) to facts of resemblance, which in their own right should be taken as obvious and irreducible. Hence, what Rodriguez-Pereyra seems to be suggesting is that resemblances are to be taken as brute ontologically-non-committing facts: in this way the resemblance nominalist’s ontology stays economical, containing nothing but particulars. The trade-off though is that a primitive *predicate* of resemblance needs to be accepted and, as we will see in more detail below, it is a very complex one.

4.3 Class Nominalism and Russell’s Regress

Russell’s regress is not just aimed at resemblance nominalism but at any account of properties that avoids universals. Class nominalism is no exception. According to class nominalism, properties are constructed as classes of particulars, and having a property comes down to being a member of a class of things that all have that property. For instance, for a particular to be white is for it simply to be a member of the class of white things.

To this, Russell could respond by pointing out that *being a member* is a relation that needs explaining. If a class nominalist attempts to explain it without appealing to universals he will have to do it in terms of membership of a class of things that are members. But then we are already caught up in Russell’s regress, explaining away a membership relation in terms of further higher order membership relations.

To their advantage, class nominalists can say that membership relation is a primitive of their theory which does not need any further analysis, be-

⁵This proposal was made by Armstrong (1989: 44).

⁶Rodriguez-Pereyra writes: ‘For if that *a* and *b* resemble each other is determined by their natures, then their natures are not determined by their resembling each other, and so what is doing all the work is their natures, not their resembling each other. Indeed, if in the case of one-instance properties what grounds the attribution of the property to the instance is its nature, why appeal to resemblances in the cases of multiple-instance properties?’ (Rodriguez-Pereyra 2002: 88).

cause it is sufficiently familiar from set theory. But even if this is granted, there is a different problem that the class nominalist needs to address. Namely, very few classes of particulars make for genuine properties, i.e. for properties whose members genuinely resemble one another. David Lewis famously traced the difference between such genuine, sparse properties, and abundant ones in terms of the notion of *naturalness*. For him, natural classes are the ones that in a realist theory would be picked out by universals. But how does a class nominalist, who doesn't have universals at his disposal, pick out natural classes? Lewis explains as follows:

Instead of employing universals [a nominalist theory] could draw primitive distinctions among particulars. Most simply, a Nominalist could take it as a primitive fact that some classes of things are perfectly natural properties; others are less-than-perfectly natural to various degrees; and most are not at all natural. Such a Nominalist takes "natural" as a primitive predicate, and offers no analysis of what he means in predicating it of classes. (Lewis 1983: 14)

According to this, a property such as *whiteness* would be analyzed away in terms of a perfectly natural class of white things, where perfect naturalness is understood to be a primitive predicate. This is rather unsatisfactory as far as analysis goes, but what are the alternatives? Lewis suggests that natural properties could perhaps be defined in terms of 'the mutual resemblances of the members of their class and the lack of resemblance between their members and their non-members'. The trouble with this strategy is that it is not fine grained enough – that is, mutual resemblance of the members of a certain class may not be due to the sharing of any *one* property.⁷

Lewis thus suggests a predicate of resemblance that is contrastive and variably polyadic and which ought to be taken as understood without any further analysis: ' x_1, x_2, \dots resemble one another and do not likewise resemble any of y_1, y_2, \dots ' (where the strings of variables can be infinite) (Lewis 1983: 14–5). Then, to get from such a primitive predicate of resemblance to perfectly natural properties Lewis suggests to define N , another variably

polyadic predicate, so that it turns out that $\lambda x_1, x_2, \dots$ iff x_1, x_2, \dots are all and only the members of some perfectly natural property (this, again for possibly infinitely many x s). The definition of $\lambda x_1, x_2, \dots$ then runs as follows: ' $\exists y_1, y_2, \dots \forall z (z, x_1, x_2, \dots R y_1, y_2, \dots \equiv z = x_1 \vee z = x_2 \vee \dots)$ '. And a perfectly natural property would then be defined as a class such that, if x_1, x_2, \dots are all and only its members, then $N x_1, x_2, \dots$ (Lewis 1983: 15).

Lewis concludes his discussion of these nominalist alternatives as follows: 'if an adequate Nominalism requires us to choose between this [a primitive, contrastive, and a variably polyadic predicate of resemblance] and a primitive predicate of classes, we might well wonder whether the game is worth the candle' (1983: 15). One might wonder the same thing not only on the basis of having to choose between excessively complex primitive predicates and primitive *naturalness*, but also on the basis of quantitative extravagance – the infinite concrete *possibilia* – that both contemporary versions of resemblance nominalism and class nominalism are committed to.

4.4 The Coextension Problem and Possibilia

Class and resemblance nominalists' rejection of universals makes them also susceptible to the *coextension problem*. The problem arises in an attempt to distinguish between coextensive properties (like 'renate' – the property of having a kidney, and 'cordate' – the property of having a heart). If all the F particulars are G and all the G particulars are F , neither class nominalist nor resemblance nominalist has the resources to distinguish between these two properties. The way Lewis's class nominalism gets around this problem is by introducing *possibilia*. The most recent version of resemblance nominalism developed by Rodriguez-Pereyra does the same. Possibilia appear to solve the coextension problem: the two types of nominalism can say that what grounds a particular's having the property F is that it resembles all actual and *possible* F particulars, and the same with G particulars; or, that what grounds a particular's having of the property F is that it is a member of the class of all actual and *possible* F particulars, and the same with G particulars. Then the contingently coextensive properties F and G become distinguishable, since all the *possible* F s will not be all the *possible* G s and vice versa.

This solution, however, comes at a high price: the entire possible world ontology, with all its possible inhabitants, has to be admitted. Nominalists like Lewis and Rodriguez-Pereyra have tried to minimize this boost in ontology by arguing in favor of distinctions between *qualitative* and *quantitative* ontological economy; qualitative economy is measured by the number

⁷Take for instance three particulars a, b, and c, each of which has only three properties – color, shape, and temperature. Now, let a be red, round, and hot, b, red, square, and cold, and c blue, square, and hot. It is easy to see that each pair a and b, b and c, and a and c resemble each other in being red, square, and hot respectively. However, although they resemble each other, it doesn't make them have any common property. As this example illustrates well, it is not enough to have a group of properties that resemble one another to say that they all have the property F : they could resemble each other in different respects without it being the case that all share the same property. The problem is about delimiting the proper resemblance classes – letting in the particulars that resemble in such ways that make for properties and leave out those that do not.

of kinds of postulated entities, quantitative economy is measured by the number of *entities*, of any kind, postulated by a theory (Rodríguez-Pereyra 2002: 204–10). Lewis has argued that only qualitative economy matters – a position that allows him to claim that his ontology is more economical than the realist's. Rodríguez-Pereyra, on the other hand, argues that both sorts of economy matter but that *qualitative* economy 'takes precedence' over the quantitative one. This would make the boost in ontology caused by admitting concrete *possibilia* only a quantitative gain, and therefore a not very important one. The qualitative economy of the resemblance nominalist would still remain sparse.

It is hard not to see both Lewis's and Rodríguez-Pereyra's interpretations of ontological economy as *ad hoc*. They assume that it is obvious that the admission of *possibilia* is just a gain in the number of particulars. And yet, it is not at all clear that possible talking donkeys, flying pigs, unicorns, gods etc. are indeed just 'more of the same sort of thing', more of the same ontological category of plain old particulars. Lewis and Rodríguez-Pereyra need to offer more substantive arguments to dispense the suspicion that an addition of possible particulars is as ontologically innocuous as they seem to suggest.

4.5 Tropes and Russell's Regress

Like realists about universals, trope theorists treat properties with ontological seriousness; but unlike realists, they take them to be particulars, not universals. Thus, trope theorists can explain a particular's *being white* in terms of that particular's possession of a white property trope w_1 (a response which is not available to a nominalist). But at this point Russell could press on with his regress argument: for what makes all the white tropes $w_1, w_2, w_3, \dots, w_n$ instances of white? A trope theorist cannot appeal to a universal of *whiteness* to unite the class of white tropes.

One line of response is to claim that the class of white tropes is closed under exact resemblance.⁸ The trouble with this response is that a trope theorist ought to be able to explain what exact resemblance amounts to. If this is done in terms of tropes, then Russell could step in again and demand an explanation of what all the different relational resemblance tropes have in common. What makes them instances of resemblance? Do they resemble one another? If so, we are off to a regress of higher order relational tropes of resemblance, a regress which appears to be of the non-reductive vicious kind (for it never delivers an explanation of resemblance in terms of some-

thing more fundamental; rather, it keeps introducing higher order resemblance tropes). Alternatively, a trope theorist can insist on taking exact resemblance to be a primitive predicate of the theory. Such a predicate, however, would then have to be construed along the lines of Lewis's contrastive and variably polyadic predicate we saw in section 4.3 above; thus, it would have to be a very complex and to that extent unattractive kind of primitive.

Perhaps a more promising line of response to Russell's regress argument for the trope theorist is to take resemblance to be an internal relation that simply supervenes on the natures of tropes that resemble one another. For instance, Peter Simons argues that it is 'plausible that the resemblance (exact or not) between two tropes is an internal relation, deriving from the separate natures of the two tropes themselves' (Simons 1994: 558). In a similar vein Campbell writes: 'if ... resemblance is an internal relation grounded in particular natures in the terms, then the red tropes a, b , and c will generate the whole edifice of supervening resemblance triples' (Campbell 1990: 37). Resemblance would thus not present an ontological addition of any kind. However, although Russell's regress is avoided in this way, it is done at the high cost of not illuminating resemblance at all: particulars have properties and stand in relations to one another in virtue of property tropes and relational tropes that they have; but what makes those property and relation tropes the tropes of whiteness, triangularity, etc. is left unexplained and the resemblance between different property and relation tropes ontologically ungrounded.

5 Russell's Regress as a Positive Argument for Universals?

Our exploration of Russell's regress argument against the rejection of universals has led us to consider a number of challenges that nominalists and trope theorists face in attempting to respond to Russell. We have seen that these challenges are not small and that the ontological economy that nominalists and trope theorists attempt to achieve with their avoidance of universals comes at a high cost. Nominalists tend to take either resemblance or naturalness as primitive predicates – both of which, as we have seen, have to be quite complex. Furthermore, to avoid universals, both resemblance and class nominalists commit themselves to infinite concrete *possibilia* which present a significant ontological addition.

Trope theories enjoy an advantage over nominalists in being able to provide an ontological ground for properties; but they fall short of explaining what unites classes of exactly resembling tropes. Recourse to a primi-

⁸See Williams 1953: 118 and Campbell 1990: 30–2 and 43–5 for this approach.

tive predicate of resemblance or internal resemblance relations does little to illuminate the issue.

Does this show Russell to be right when he thought to have shown that 'it is no longer worth while to invent difficult and unpalatable theories to avoid the admission of such universals as whiteness and triangularity' (Russell 1912: 96–7)? This conclusion is perhaps too quick. What Russell's regress argument certainly shows is that avoidance of universals comes with its own set of problems and that such problems should not be underestimated. Avoiding universals leaves nominalists and trope theorists without a satisfactory account of what having properties and relations amounts to, and it commits them to some very odd entities (*possibilia*) and primitive predicates.

One of the most prominent realists of our time – David Armstrong – made use of Russell's regress argument in his *Universals and Scientific Realism* (1978) as an argument against resemblance nominalism. However, in his later *Universals: An Opinionated Introduction* (1989) he had a change of heart and considered Russell's regress argument still a 'brilliant argument' but no longer effective against nominalists. The reasons for this change of heart are two: 1) Armstrong came to think that all solutions to the problem of universals – including the realists' – face a version of Russell's argument; and 2) he found the resemblance nominalist's treatment of resemblance relations as internal, and thus supervenient on the natures of particulars, satisfactory. I disagree with both 1) and 2). I have said enough about the criticism of 2) above, so let me say a few words about 1).

A realist about universals like Armstrong postulates universals as genuine ones that provide the ontological ground for the having and the sharing of genuine properties and relations. A particular *a*'s being white and triangular is thus due to its having the universals of *whiteness* and *triangularity*. Now, this *having* or *instantiation* has been thought of as a relation that automatically gives rise to Bradley's infinite and vicious regress of relations. I, however, disagree with such a treatment of Bradley's regress and favor a view according to which all relations – including the relation of instantiation, if such is postulated – unproblematically relate their relata.⁹ I find that contemporary discussions of Bradley's regress contain a series of confusions and that as a result, the threat of this regress to realists has been overstated. Armstrong, on the other hand, by equating the two regresses, and even taking Bradley's regress to present a greater threat to realists than Russell's

regress presents to nominalists and trope theorists, has contributed to the perception that Russell's regress argument is no longer relevant in contemporary ontological discussions.

In conclusion, contemporary realists should keep using Russell's regress argument and its versions in their disputes with nominalists and trope theorists to pinpoint the difficulties in their theories. For those convinced of the drawbacks of those theories, and convinced of the importance of providing a substantial ontological ground for properties and relations, the argument may even present a positive case for universals. For those who have nominalist tendencies, the argument at least needs to be addressed. Either way, the argument appears to be still extraordinarily relevant, one hundred years after its publication in Russell's *The Problems of Philosophy*.

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⁹For my detailed treatment of Bradley's regress see Perovic 2014.