RESEMBLANCE NOMINALISM AND RUSSELL'S REGRESS

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In a famous passage Bertrand Russell argued that any attempt, like that of Resemblance Nominalism, to get rid of universals in favour of resemblances fails [20, p. 48]. More precisely, Russell thought that no resemblance theory could avoid postulating a universal of resemblance without falling into a vicious infinite regress. And he added that admitting a universal of resemblance made it pointless to avoid other universals. In this paper I shall defend Resemblance Nominalism, a theory which gets rid of universals in terms of resemblances, from both of Russell's points by arguing (a) Resemblance Nominalism can avoid the postulation of a universal of resemblance without falling into a vicious infinite regress (§V) and (b) even if Resemblance Nominalism had to admit a universal of resemblance, this would not make it pointless to avoid the postulation of other universals (§VI). But before doing so I shall briefly introduce Resemblance Nominalism (§I) and Russell's regress (§II), and then I shall consider some failed arguments and strategies against the regress (§§III–IV).

I. Resemblance Nominalism.

Resemblance Nominalism is a solution to the Problem of Universals. I have argued elsewhere that the Problem of Universals, strictly understood, is what I call the *Many over One*, rather than the traditional *One over Many* [17, pp. 269-70]. The Many over One is the problem of explaining how a single particular can have a multiplicity of properties [17, pp. 269-70]. Thus solutions to the Problem of Universals account for what it is for any thing or particular *a* to have properties **F**, **G**, **H** etc. How do solutions to the Problem of Universals explain how a single particular can have a multiplicity of properties? By giving the truthmakers of sentences attributing properties to them – that is, by giving the truthmakers of sentences like '*a* has properties **F**, **G**, **H** …'. Now, such sentences are short for conjunctions like '*a* has property **F** and *a* has property **G** and *a* has property **H** and … ' and the truthmakers of these are the truthmakers of their conjuncts. Thus, on my view, what a solution to the

Problem of Universals has to do is to give the truthmakers of sentences which, like '*a* has the property **F**', attribute a property to a particular [17, pp. 258-67]. Properties here must not be understood as whatever is expressed by a predicate: the properties with which solutions to the Problem of Universals are concerned are what David Lewis [12, p. 60; 13, pp. 191-92] calls *sparse* or *natural*, as opposed to *abundant* ones. Sparse properties are those which, among other things, have to do with the causal powers of particulars and such that science, or perhaps just physics, tries to make an inventory of. So when in the following I speak of properties I must be understood as speaking of *sparse* or *natural* properties.

On this view of the problem *Realism about Universals*, or *Universalism*, as I shall call it here, the doctrine prominently held by David Armstrong, has it that what makes it true that *a* is **F** (**G**, **H**, etc) is that it instantiates the universal **F**ness (**G**ness, **H**ness, etc). Thus, roughly, according to Universalism, what accounts for a particular having many different properties is that it instantiates many different universals. Similarly Trope Theory, which takes properties to be tropes, has it that what makes true that *a* is **F** (**G**, **H**, etc) is that it has an **F**-trope (**G**-trope, **H**-trope, etc) and so what accounts for a particular having many different properties is that it has many different tropes.

Resemblance Nominalism is a more radical theory which, of course, eschews both universals and tropes. Resemblance Nominalists, like most other philosophers, acknowledge the fact that particulars resemble each other if and only if they share properties, but they explain particulars' properties in terms of particulars' resemblances. They say, roughly, that for a particular *a* to have property **F** is for it to resemble all other **F**-particulars and for it to have the property **G** is for it to resemble all **G**-particulars and so on.[1] Thus a particular can have many different properties by resembling many different groups of particulars. Different properties are had in virtue of resembling different particulars.

Now, of course, the Many over One arises also for relations. Suppose that *a* is both bigger than *b* and to the right of *b*: how then can *a* and *b*, the same pair of particulars, be related to each other in two different ways? The general problem is to explain how the same group of particulars can be

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[1] Why 'roughly'? Because of the Imperfect Community, Companionship and Coextension Difficulties, which make the developed version of Resemblance Nominalism claim something more complex and sophisticated than that what makes something **F** is to resemble all **F**s. Nevertheless the sophisticated Resemblance Nominalism still explains particulars' properties in terms of their resemblances. For the purposes of this article the simpler claim that what makes a particular **F** is that it resembles all **F**s will do. For a solution to the Imperfect Community Difficulty see my [16]; for solutions to the

related in many different ways; and so solutions to the Problem of Universals must tell a story about relations (where the relations in question are Lewisian *sparse* or *natural* relations). What Resemblance Nominalism says about this is that what makes a group of *n* particulars stand in a certain relation **R** is that they form a *n*-tuple that resembles other *n*-tuples. Thus, in the case in which *a* is both bigger than and to the right of *b*, there are ordered pairs of particulars such that the first member is to the right of the second, and other ordered pairs of particulars such that the first member is bigger than the second, and the ordered pair of *a* and *b* resembles the ordered pairs of particulars *x* and *y* such that the first is to the right of the second and also resembles those such that the first is bigger than the second. So, in general, a group of *n* particulars stand in a relation **R** by forming an *n*-tuple which resembles other *n*-tuples, and so a group of *n* particulars can stand in different relations by their *n*-tuple resembling different groups of *n*-tuples. What makes a group of *n* particulars variously related is thus that their *n*-tuple resembles many different groups of other *n*-tuples.

The relation of resemblance invoked by the Resemblance Nominalist is primitive, in the sense that Resemblance Nominalism does not account for facts of resemblance in terms of any other, more basic kinds of facts. If *a* and *b* resemble each other, there is no other fact about them, except that they are *a* and *b*, in virtue of which they resemble, or that explains or accounts for their resemblance. (Resemblance is not, of course, a primitive in all theories of properties: Universalism explains the resemblance between *a* and *b* in terms of their instantiating the same universals, for example). In particular Resemblance Nominalists cannot explain the resemblance between particulars in terms of their properties, because they explain particulars' properties in terms of their resemblances. But that resemblance is a primitive in this sense does not prevent the Resemblance Nominalist saying informative and useful things about resemblance, namely that it is reflexive, symmetrical and non-transitive and that it comes by degrees: some particulars resemble each other more closely, to a higher degree, than they resemble other particulars.

Needless to say, there is much more to be said about Resemblance Nominalism, and I say it in my [18], but what I have said in this section should prove enough for what I have to say in this article, namely why and how Resemblance Nominalism can meet Russell's objection.

II. Russell's Regress.

Companionship and Coextension Difficulties see my [18] and, for the Coextension Difficulty only, see

In the following passage Russell [20, p. 48] put forward a famous objection against Resemblance Nominalism:

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 being forced to admit this universal, we find that it is no longer worth while to invent difficult and implausible theories to avoid the admission of such universals as whiteness and triangularity.

In this passage Russell is often presented as arguing that Resemblance Nominalism, or any attempt to get rid of universals in favour of resemblances, leads to a vicious infinite regress. In fact Russell makes just two points: (a) we cannot avoid universals since the relation of resemblance is itself a universal, and (b) a universal of resemblance makes it pointless to deny other universals, like whiteness and triangularity. If Russell is right on both points, or at least on the first of them, then Resemblance Nominalism must be given up. But, as I shall try to show in this article, Russell is wrong on the first point and, indeed, on both of them.

Assume the property of *being white* is sparse and suppose *a*, *b* and *c* are white, and so resemble each other. May the resemblances between *a* and *b* and between *b* and *c* not be as particular as *a*, *b* and *c*? Yes, but then we do get an infinite regress of resemblances, as Russell suggests in the passage above and explicitly recognizes elsewhere [19, pp. 346-7]. For then the question arises: are the resemblances between our original resemblances instances of a universal of resemblance or are they particular also? If the latter, the same question arises about them, and so on *ad infinitum*.

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also note 6 below.

The regress mentioned above arises, of course, only if the different resemblances resemble each other. But they do. For since *a*, *b* and *c* are white, so that every two of them resemble each other, the resemblances between *a* and *b* and between *a* and *c*, for example, resemble each other in being resemblances of white particulars. Similarly, the resemblances between these resemblances resemble each other, since they are resemblances between resemblances between white particulars, and so on *ad infinitum*. The regress is thus constituted by a hierarchical infinite series of orders of resembling entities, where the members of each order are the resemblances between the members of the previous order:

Order 0: Resembling entities.

Order 1: Resembling resemblances between entities of order 0.

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Order *n*: Resembling resemblances between entities of order *n*−1.

For this regress to start we do not need the concrete particulars usually used to illustrate it. Indeed, since the regress has an infinite number of orders, entities of any order *n* in some regress of resemblances might equally well be the entities of order 0 in another such regress.

As has been noticed by many, the regress also arises for other theories like Universalism and Trope Theory.[2] For, in the case of Universalism, if *a*, *b* and *c* share the universal *whiteness*, then they resemble each other. But then their resemblances resemble each other, and similarly for the resemblances between their resemblances and so on *ad infinitum*. Similarly, if *a*, *b* and *c* have respectively the exactly resembling tropes *t*, *t′* and *t″*, then there are resemblance tropes r_1, $r_1′$ and $r_1″$ holding between each two of them, resemblance tropes r_2, $r_2′$ and $r_2″$ holding between each two of r_1, $r_1′$ and $r_1″$, and so on *ad infinitum*. However, since these theories are all different, the regress may be vicious in one but not in another. Here, of course, what matters is whether the regress is vicious for Resemblance Nominalism, or whether Resemblance Nominalism is really committed to anything like it.

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[2] That the regress arises for Universalism has been noticed by, among others, Price [15, pp. 23-4], Armstrong [2, p. 56], Campbell [6, p. 36] and Daly [7, p.150]. That it arises for Trope Theory has been noticed, among others, by Küng [10, pp. 167-68], Campbell [6, pp. 35-6] and Daly [7, pp. 148-53].

Some philosophers, like Armstrong [1, p. 196; 2, p. 56], think that the regress, by positing the *infinite* number of resemblances it imports, shows Resemblance Nominalism to be committed to a 'gross lack of economy'. But this depends on the sort of ontological economy in question. Is it *qualitative* economy, where a theory is more or less economical depending on the number of *kinds* of entities it introduces? Or is it *quantitative* economy, where a theory is more or less economical depending on the number of entities, of any kinds, it introduces? If the economy in question is *qualitative* then there is no loss of economy, for the regress only introduces particular resemblances and so only one *kind* of entities: particulars. And if the economy in question is *quantitative* then, at least for Resemblance Nominalism, the regress represents no loss of economy for, as we shall see in §V, Resemblance Nominalism is not committed to an infinite regress of resemblances.

But philosophers have more often argued that the regress is vicious in a different sense, namely that it stops Resemblance Nominalism accounting for all properties in terms of resembling particulars. Thus, Armstrong [2, p. 56] says, 'the $n + 1^{th}$ level of resemblances has to be postulated in order to explain what needs explaining: the unity of the set of resemblances at the nth level.' And this regress, Armstrong believes, is vicious, because

> [a]t each step in the analysis there is something left unanalysed which, since the something left
> is a type, requires a resemblance analysis. Successive applications of the analysis never get rid
> of this residue [1, p. 196].

Armstrong says that the regress arises because the fundamental relation of resemblance used by Resemblance Nominalism must be used again: by being applied to tokens of itself. But then it must be analysed again, and so on *ad infinitum* [3, p. 54]. Thus, if the regress is vicious, it is vicious because it prevents Resemblance Nominalism from accomplishing its explanatory project of accounting for all properties in terms of resembling particulars: such a project remains forever incomplete.

I shall argue that there is no such regress. But since others have argued that there is a virtuous or non-vicious regress, let us first consider their arguments and see why they fail.

III. Supervenience and the Regress.

Price [15, pp. 23-6] and Küng [10, p. 168] believe that the fact that the resemblances in the above regress are of different orders stops it being vicious. But, as Daly [7, p. 151] says, the mere fact that the resemblances form a hierarchy does nothing to show the regress to be virtuous. Campbell [6, pp. 35-6], defending Trope Theory from its own resemblance regress, argues that the regress is not vicious because it proceeds in a direction of 'greater and greater formality and less and less substance'. However, as Daly [7, p. 151] argues, each stage of any vicious regress can also be characterised as being 'more formal' and 'less substantial' than its predecessors; so this in no way marks the virtuousness of a regress.

Campbell also appeals to supervenience in order to show that the regress of tropes is not vicious by claiming that as each member of the regress supervenes upon – because it follows from – its predecessor, none constitutes an 'ontic addition'. This argument is endorsed by Simons [22, p. 556]. The supposed link between the supervenience of resemblance upon its relata and the non-viciousness of the regress is also invoked by Armstrong in his [3], where he changes his mind and argues that the regress of resemblances is *not* vicious, appealing precisely to the supervenient character of resemblance. The motivation for this change of mind is that all theories of properties, and in particular Armstrong's own Universalism, are subject to a similar regress. Since Armstrong makes a powerful case for stopping the regress by invoking resemblances, I shall consider his case specifically.

Armstrong believes that Resemblance Nominalism must take resemblance to flow from the *particularized natures* of the resembling particulars. What is the particularized nature of a particular? For Armstrong a particularized nature is a single grand, but particular, property which conjoins all the properties of a thing and within which no differentiation can be made [3, p. 45]. But invoking particularized natures does not fit the spirit of Resemblance Nominalism. 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 *a* and *b* resemble each other in virtue of their properties rather than having their properties in virtue of their resemblances. Thus endowing particulars with particularized natures means abandoning Resemblance Nominalism.[3]

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[3] No doubt Armstrong thinks Resemblance Nominalism needs particularized natures to solve certain problems, like the internal character of resemblance and the possibility of a property had by only one particular. But, as I argue in [18], the Resemblance Nominalist can account for the internal character of

But let us grant Armstrong, for the sake of argument, that the Resemblance Nominalist needs particularized natures. Why does Armstrong think these natures make the resemblance regress virtuous? He thinks so because he believes that the resemblance to degree *n* between *a* and *b* supervenes upon the natures of *a* and *b*. According to Armstrong if resemblance supervenes upon natures it is therefore not distinct from what it supervenes upon. The ontological ground, that which makes resemblance obtain in the world, is just the natures of particulars. Resemblances are not something extra and, therefore, it does not matter whether they instantiate a universal of resemblance or are mere resembling particulars. Either way, Armstrong concludes, the regress is harmless [3, p. 56].

The problem with all this is that, even if resemblances supervene upon the natures of particulars, they may still be distinct from what they supervene upon. To infer that they are not, as Armstrong does, is a *non sequitur*, for although identity entails supervenience, in no normal account of supervenience does supervenience entail identity. More to the point, Armstrong's own version of supervenience does not entail identity, as is clear from this passage:

> I favor, and will use, a definition [of supervenience] in terms of possible worlds. Entity Q supervenes on entity P if and only if every possible world that contains P contains Q. This definition allows particular cases of supervenience to be symmetrical: P and Q can supervene on each other [3, p. 56].

Furthermore, it is not true that the resemblance between *a* and *b* is not distinct from *a* and *b* having the natures they have. For if *a*'s resembling *b* to degree *n* were *identical* to *a* and *b* having natures **F** and **G**, then resembling to degree *n* would entail having those natures. But it does not entail this, as Armstrong himself recognizes: '(...) it would be possible for them [*a* and *b*] to resemble to that exact degree yet have different natures' [3, pp. 55-6]. Thus appealing to supervenience does not help the Resemblance Nominalist to stop Russell's regress.

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resemblance and the possibility of a property had by only one particular without invoking particularized natures.

IV. Resemblances as Particulars.

It might seem that Russell's regress is non-existent, rather than vicious or virtuous. For, to adapt some comments of van Cleve [23, p. 578], this regress begs the question against Resemblance Nominalism, for it assumes that if *a* and *b* resemble each other then there is some entity like 'the resemblance between *a* and *b*'. But to accomplish its explanatory task, Resemblance Nominalism needs only suppose that particulars resemble each other, not that there are any resemblances. Thus the Resemblance Nominalist need not worry about any regress of resemblances: there are none.

But if the problem which concerns Resemblance Nominalism is the Many over One, must it not, for the sake of ontological completeness, account for what it invokes to solve the Many over One, namely resemblance facts? In other words, must not Resemblance Nominalism explain what it is for a pair of particulars to resemble each other? Yes, it must. That is, Resemblance Nominalism must say what makes sentences like '*a* and *b* resemble each other' true. These are made true of course by *a* and *b* resembling each other to some specific degree *n*. But then the question becomes: What makes *a* and *b* resemble each other to degree *n*? or What makes sentences like '*a* and *b* resemble each other to degree *n*' true? This question, I think, is the fundamental one, analogous to the question 'In virtue of what does *a* instantiate the universal **F**-ness?' for Universalism.

But since Resemblance Nominalism only admits particulars, what can make it true that *a* and *b* resemble each other to degree *n* if not a particular? And what particular could this be if not the resemblance–between–*a*–and–*b*? Understood in this way, resemblances would be relations linking different particulars, but they would be as particular as the particulars they link.[4]

One might think that taking resemblances as particulars in this way is a poor strategy, precisely because it regenerates the regress of resemblances. Thus if *a*, *b* and *c* all resemble each other, then it is the particulars the resemblance–between–*a*–and–*b*, the resemblance–between–*a*–and–*c* and the resemblance–between–*b*–and–*c* which make this true. But these three resemblance–particulars also resemble each other and what makes this true are the resemblances between them, which in turn resemble each other, and so on *ad infinitum*. Thus at no point in the regress have the Resemblance

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[4] From now on I shall often, for ease of exposition, drop the reference to the degree to which particulars resemble and talk just of particulars resembling each other, on the understanding that whenever two particulars resemble each other at all they do so to some specific degree *n*. Indeed if they resemble each other at all, they do so in virtue of resembling each other to some degree *n*.

Nominalists completed their explanation of what makes '*a* and *b* resemble each other' true. Resemblance Nominalism seems then a defective theory.

But this is not so. The requirement that the Resemblance Nominalist give the truthmakers of all sentences like '*a* and *b* resemble each other' can easily be met as follows. Suppose for any particulars *x* and *y* we let '*x*/*y*' abbreviate 'the resemblance–between–*x*–and–*y*'. Then the Resemblance Nominalists must *not* say

the truthmakers of '*a* and *b* resemble each other', '*a* and *c* resemble each other' and '*b* and *c* resemble each other' are, respectively, *a*/*b*, *a*/*c* and *b*/*c*; and the truthmakers of '*a*/*b* and *a*/*c* resemble each other', '*a*/*b* and *b*/*c* resemble each other' and '*a*/*c* and *b*/*c* resemble each other' are, respectively, *a*/*b*/*a*/*c*, *a*/*b*/*b*/*c* and *a*/*c*/*b*/*c*; and the truthmakers of ....

but they must say rather something like:

For every x and y, if 'x and y resemble each other' is true then this is made true by x/y.

As this single general statement covers all the infinity of cases in the regress, Resemblance Nominalism need not go through the regress step by step. And since the Resemblance Nominalists can account for every member of the hierarchy of resemblances at once, they can give a complete explanation of what makes sentences like '*a* and *b* resemble each other' true.

But can Resemblance Nominalism really treat resemblances as particulars, as this answer to the regress objection requires? In particular, what kind of particulars can these resemblances be? Certainly, the resemblance–between–*a*–and–*b*, if a particular, would be a particular of the same kind as the redness–of–*a* would be. That is, the only way to make sense of resemblances as particulars would be to treat them as *tropes*. Yet in Resemblance Nominalism there are no tropes, and so it cannot take resemblances as particulars.

V. Particulars as the Truthmakers of Resemblance Sentences.

The question which needs an answer is: what makes the resembling particulars *a* and *b* resemble each other? One would like to say that *a* and *b* resemble in virtue of their sharing some property, but this would turn Resemblance Nominalism on its head, for Resemblance Nominalism says that what makes *a* and *b* share a property is their resembling each other. Could the Resemblance Nominalist say that what makes *a* and *b* resemble each other is that they both belong to some one class? Apparently not, for any two particulars both belong to *some* class, even though not every two particulars resemble each other, since not every two particulars have some property in common. But is it true that some pairs of particulars share no properties? Goodman [9, p. 443] and many others think not. And in a sense, the sense in which Goodman intended it, they are right: if properties are just what predicates mean, then every two particulars must indeed share some property. For example, for any two particulars *a* and *b*, the predicate '___ is identical to *a* or identical to *b*' applies to both *a* and *b*, and so both of them share the property of *being identical to a or identical to b*. Indeed, there is no doubt that every two particulars share infinitely many *abundant* properties. But, as I said in §I, the properties to which solutions to the Problem of Universals must apply are *sparse* properties.

But perhaps the Resemblance Nominalist can say that what makes any two resembling particulars resemble each other is that the pair of them belongs to the class R of all pairs of resembling entities (i.e. particulars or ordered *n*-tuples)? Thus every two resembling entities *x* and *y* (whether they are particulars or ordered *n*-tuples) resemble *because* the ordered pairs ⟨*x,y*⟩ and ⟨*y,x*⟩ belong to R. Belonging to R would, of course, be a brute fact in the sense that it cannot be explained further. For how could one explain that a certain pair belongs to R? The only thing a Resemblance Nominalist could say is that it is a member of that class if and only if it resembles all the other members. But resembling anything at all would just be being a member of some ordered pair in R.

This story will not do, I think. For according to it *a* and *b* resemble each other in virtue of something about the ordered pairs ⟨*a,b*⟩ and ⟨*b,a*⟩, namely the fact that those two ordered pairs belong to the class R. This seems to reverse the order of explanation, since what makes those pairs belong to the class R is that *a* and *b* resemble, not the other way round. And then one cannot patch things up by saying that *a* and *b* resemble each other because ⟨*a,b*⟩ and ⟨*b,a*⟩ resemble other ordered pairs in R, for

that would be to explain resemblance by resemblance, i.e. to explain the resemblance between *a* and *b* by the resemblances between ⟨*a,b*⟩ and ⟨*b,a*⟩ and ⟨*c,d*⟩ and ⟨*d,c*⟩, say.

What then makes it true that *a* and *b* resemble each other? The Resemblance Nominalist's answer is: just *a* and *b* together. In general any two resembling entities *x* and *y* (whether they are particulars or ordered *n*-tuples) resemble each other in virtue of being the entities they are. If *a* and *b* resemble each other then they do so because of their being the entities they are, and so *a* and *b* are the sole truthmakers of '*a* and *b* resemble each other'. There is then no need to postulate extra entities to account for facts of resemblance: the resembling entities suffice to account for them.[5] And so no regress of resemblances arises, since there are only resembling particulars and no resemblances at all.

Is this line of thought acceptable? One may complain that saying that *a* and *b* resemble each other in virtue of being the entities they are is to give a poor answer to an interesting question. But, as Campbell aptly points out, 'it is important to remember that such answers arise at some point in *every* system' [6, p. 30]. As he says, the Universalist must answer in a similar way the question in virtue of what the presence of the universal *electric charge* is necessary and sufficient for something's having charge. Indeed the answer given by the Universalist must be: in virtue of being what it is.

But another objection comes almost immediately to mind: the conjunction of '*a* exists' and '*b* exists' does not entail '*a* and *b* resemble each other' and therefore *a* and *b* are at most *parts* of the truthmaker of '*a* and *b* resemble each other'. Some think of the relation between truthmaking and entailment as an equivalence. For these philosophers certain entities are the truthmakers of a sentence 'S' if and only if sentences asserting their existence entail 'S'. But I have argued that only one side of this equivalence should be kept. That is, if certain entities are the truthmakers of a sentence 'S' then sentences asserting their existence entail 'S' [17, pp. 261-62]. What the present objection tries to show is that making *a* and *b* the truthmakers of '*a* and *b* resemble each other' would violate the acceptable conditional that if certain entities make true a sentence 'S', then sentences asserting that those entities exist entail 'S'.

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[5] Note that this does not make Resemblance Nominalism collapse into what Armstrong calls *Ostrich Nominalism* [2, p. 16]. According to the latter *a* is sufficient to make it true that *a* is green while according to the former other particulars are necessary. Also, according to Ostrich Nominalism *a* and *b* are sufficient to make it true that *a* is bigger than *b*, while according to Resemblance Nominalism other pairs of particulars are necessary. A referee suggested that the collapse into Ostrich Nominalism would be an improvement for Resemblance Nominalism, since the former seems more intuitive than the latter. But it seems to me the failure of the collapse is a good thing for Resemblance Nominalism, since Ostrich Nominalism, as I have argued, does not provide a satisfactory solution to the Many over One

But there is a way out of this. First, in order to avoid the difficulty posed by coextensive properties, Resemblance Nominalism is clearly committed to Realism about Possible Worlds.[6] Once Realism about Possible Worlds is on board there are strong reasons to adopt also Counterpart Theory and its claim that no particular exists in more than one possible world [12, p. 194].[7] And this claim of Counterpart Theory makes it possible to answer the truthmaker objection. For if *a* and *b* exist only in one possible world and they resemble each other, then '*a* exists' and '*b* exists' *do* entail '*a* and *b* resemble each other', for then the former cannot be true and the latter false. Thus the Resemblance Nominalist can perfectly well maintain that the truthmakers of a sentence like '*a* and *b* resemble each other' are just *a* and *b* without abandoning the entailment between '*a* and *b* exist' and '*a* and *b* resemble each other' required by truthmaking.[8]

[17, pp. 267-70]. (Incidentally, I think intuitiveness should not be overweighed when choosing between alternative theories)

[6] Coextensive properties are those had by exactly the same particulars (a common example, not completely satisfactory to my mind, of coextensive properties are the properties of *being renate* and *being cordate*). If **F** and **G** are coextensive properties then resembling all **F**s is resembling all **G**s. But then Resemblance Nominalism must say that what makes something **F** is the same as what makes it **G**. This is a problem, for how can different properties be had in virtue of the same thing? How can something be a renate, say, in virtue of the same which makes it a cordate? The answer is to adopt Realism about Possible Worlds, let particulars in different possible worlds resemble and say that what makes something **F** is that it resembles all possible **F**s and what makes something **G** is that it resembles all possible **G**s. No doubt this move faces the problem of allegedly necessarily coextensive properties – but what I have said so far about coextensive properties and how Resemblance Nominalism deals with them is enough for the purposes of this article. Many would think that its commitment to Realism about Possible Worlds makes Resemblance Nominalism lose its appeal, since much of it derives from Resemblance Nominalism's ontological economy while Realism about Possible Worlds seems to be distinctively uneconomical. My reply is double. First, the appeal of Resemblance Nominalism derives not only from its ontological economy – it also derives from *not* appealing to, for instance, universals, which are *ad hoc* entities in the sense that the main or only reason to believe in them is that they would solve the Problem of Universals. Second, as I say in §VI below, although both quantitative and qualitative economy matter, the latter is more important in this context than the former. But since, as Lewis emphasises, other possible worlds and particulars are of a kind with the actual ones [12, p. 2], the admission of *possibilia* does not amount to reducing qualitative economy. I say more about all matters touched in this footnote in [18].

[7] It has been pointed out by a referee that one can adopt Counterpart Theorist while refusing to admit the existence of other possible worlds. But this independence of Counterpart Theory from Realism about Possible Worlds does not save Resemblance Nominalism from its committal to the latter since, as I say in the text and in the previous footnote, Resemblance Nominalism needs Realism about Possible Worlds to deal with the problem of coextensive properties.

[8] Thus that if certain entities $e_1,\ldots,e_n$ are the truthmakers of 'S' then sentences asserting their existence entail 'S' means that 'If $e_1,\ldots,e_n$ exist then S' is necessarily true – not that $e_1,\ldots,e_n$ are necessarily such that if they exist, then S. The latter is a *de re* modal assertion and, according to Counterpart Theory, it means that in every possible world *w*, if the counterparts of $e_1,\ldots,e_n$ exist in *w*, then S in *w*. But the Resemblance Nominalist cannot avail himself to this *de re* modal assertion because it is surely false that all counterparts of *a* and *b* resemble each other. But all the Resemblance Nominalist is committed to, and all he needs, is the *de dicto* assertion that 'If *a* and *b* exist then they resemble each other' is necessarily true. To be more precise, given his commitment to Realism about Possible Worlds, and given that *a* and *b* may not exist in the same possible world, what the Resemblance Nominalist asserts, assuming for the sake of example that *a* exists in world w_1 and *b* exists in world w_2, is that 'If *a* exists in w_1 and *b* exists in world w_2 then they resemble each other' is necessarily true.

But does not Resemblance Nominalism's solution to the Many over One show that just *a* and *b* cannot be what makes '*a* and *b* resemble each other' true? For not only do *a* and *b* resemble each other but they also, let us suppose, are contiguous to each other and repel each other. The Many over One demands an explanation of the variety of relations between these pairs of particulars, given that something different must make each of '*a* and *b* resemble each other', '*a* and *b* are contiguous to each other', '*a* and *b* repel each other' true. And the explanation offered by Resemblance Nominalism is that what makes *a* and *b* so variously related, in general, is that the pair of *a* and *b* resembles many other groups of pairs of entities. But this of course will not work for resemblance itself. Saying that what makes it true that *a* and *b* resemble each other is that this pair resembles other pairs explains nothing, as we have seen above.

What then can one say? I say that the answer given by Resemblance Nominalism about the truthmakers of other relational sentences need not apply to resemblance. What makes it true that *a* and *b* resemble each other can be just *a* and *b* provided this does not make true any other relational sentence about *a* and *b*. With that proviso, the insight that what makes *a* and *b* **R**-related must be different from what makes them **R***-related is not violated by having just *a* and *b* as what makes them resemble each other.

But can that proviso be met? Is not '*a* exists and *b* exists' a counterexample given that, as I follow Simons [21, p. 163] in supposing, *a* and *b* respectively make true '*a* exists' and '*b* exists' and hence the truthmakers of the conjunctive sentence '*a* exists and *b* exists' are *a* and *b*? But here *a* and *b* *together* make the conjunctive sentence true by *separately* making its conjuncts true. In other words, '*a* exists and *b* exists' is true in virtue of *a* and *b* because '*a* exists' is true in virtue of *a* and '*b* exists' is true in virtue of *b*. The rôles of *a* and *b* as truthmakers of '*a* exists and *b* exists' are therefore different. But this is not so in the case of '*a* and *b* resemble each other' or '*a* and *b* resemble each other to degree *n*'. Here *a* and *b* play exactly the same rôle in making these sentences true: *a* and *b* together do not make '*a* and *b* resemble each other' true by separately making anything else true.

What about '*a* and *b* are numerically different'? Are not just *a* and *b* the truthmakers of this sentence too? I, like Armstrong [4, pp. 87, 89] and Simons [21, p. 163], think they are. I think moreover that *a* and *b* make '*a* and *b* resemble each other' true in the same way in which they make '*a* and *b* are numerically different' true. But this, I think, is no objection to Resemblance Nominalism. For the Many over One is a problem about *sparse* properties and relations, and so it requires that the

truthmakers of sentences like '*a* **R** *b*' and '*a* **S** *b*' be different provided **R** and **S** are sparse relations. But numerical identity and difference are not sparse relations. And resemblance, although not an abundant relation, is not, in Resemblance Nominalism, a sparse relation either: for it is in terms of resemblance that the theory accounts for what makes a particular have any sparse property **F** or bear any sparse relation **R** to any particulars. The fundamental insight of the Many over One is not violated if what makes '*a* and *b* resemble each other' true is the same as what makes '*a* and *b* are numerically different' true.

Finally, I should note that saying that what makes it true that *a* and *b* resemble each other is just *a* and *b* together does not require endowing particulars with particularized natures. A particularized nature is still a property and what the Resemblance Nominalist says is not that *a* and *b* resemble each other in virtue of how they are, or in virtue of some property of them (whether a particularized nature or not), but that they resemble in virtue of being *a* and *b*. Saying that *a* and *b* are what makes true that they resemble each other does not require endowing *a* and *b* with particularized natures any more than saying that *a* and *b* are what makes true that they are numerically different does. Does this mean that Resemblance Nominalism is committed to so-called *bare particulars*, particulars with no properties? No, Resemblance Nominalism is committed to the claim that particulars have their properties in virtue of their resemblances but it is not committed to the claim that there are particulars that resemble no particulars. Therefore Resemblance Nominalism is not committed to bare particulars.

Thus Resemblance Nominalism can and must maintain that particulars resemble each other just in virtue of being the particulars they are, so that what makes a sentence like '*a* and *b* resemble each other' true is just *a* and *b*. The fact that *a* and *b* also make '*a* and *b* are numerically different' true is no more problematic than the fact that *a* makes '*a* exists', '*a* is identical to *a*' and '*a* resembles *a*' true.

VI. How wrong was Russell?

So far I have argued that Resemblance Nominalism needs admit no resemblances at all and so Russell was wrong in thinking that Resemblance Nominalism needed to postulate at least one universal, namely a universal of resemblance, to avoid falling into a vicious infinite regress. But, as we saw in

§II, Russell also thought that admitting resemblance as a universal would make it no longer worthwhile to avoid the admission of other universals such as whiteness and triangularity [20, p. 48].

One might think that Russell's second thought is wrong because of considerations of economy. In §II I distinguished two kinds of economy: *qualitative*, measured by the number of *kinds* of entity postulated by a theory, and *quantitative*, measured by the number of *entities*, of any kinds, postulated by a theory. Some philosophers, like Lewis [11, p. 87], Ellis [8, p. 55] and Bacon [5, p. 87], think only qualitative economy matters. But Daniel Nolan [14] has argued persuasively that quantitative economy matters too and that we should try to minimise the number of entities of each kind postulated. I think that, in metaphysics, qualitative economy takes precedence over quantitative economy, although both sorts of economy matter. But then a theory that postulates just one universal is preferable to one that postulates many of them. So even if Resemblance Nominalism had to admit a universal of resemblance, it would still be an advantage that it need postulate no others.

But actually Resemblance Nominalism could not admit only one universal. For if n is the number of degrees to which any two particulars can resemble then it must admit n different universals of resemblance, one for each degree.[9] For resemblance, to some degree or other, is a determinable universal, the resemblances to specific degrees being the determinates. But even then, a theory admitting n universals of resemblance would be quantitatively more economical than a full-blooded Universalism postulating a universal for each determinate property.

Indeed the only universals admitted by such Resemblance Nominalism would be universals of resemblance, and such Resemblance Nominalism would say that what makes a have any property **F** (or a and b stand in any relation **R**) is a's instantiating with every other **F**-particular the resemblance universal (or the ordered pair $\langle a,b \rangle$'s instantiating with every other **R**-related pair the resemblance universal). Such a version of Resemblance Nominalism, call it *Resemblance Nominalism$_2$*, *is* a substantive theory to which it cannot be objected that, having admitted some specific universals, it lacks reasons for denying others.

But is Resemblance Nominalism$_2$ a version of Resemblance Nominalism? Should Resemblance Nominalism$_2$ not be called 'Resemblance Universalism' instead? Putting the trivial terminological question aside, Resemblance Nominalism$_2$ is clearly more like Resemblance Nominalism than Universalism. For a start resemblance is still a primitive. For even if on Resemblance

Nominalism$_2$ when two particulars resemble each other this is in virtue of the fact that they instantiate a universal, this is a universal of resemblance and so resemblance is still a primitive in the same sense as resemblance is a primitive in Resemblance Nominalism (§I). Things are different in Universalism, where resemblance is not a primitive, but is reduced to the instantiation of one or more *other* universals. But in Resemblance Nominalism$_2$ there are no other universals apart from resemblance universals, and facts about particulars having properties and (other) relations are reduced to facts of resemblance. Furthermore Resemblance Nominalism$_2$ faces most of the problems faced by Resemblance Nominalism: it must account for the axioms of resemblance and for the internal character of resemblance, and solve the *Coextension*, *Imperfect Community* and *Companionship* difficulties. These are the typical problems of a Resemblance Nominalist theory, none of which arises for any sort of Universalism. Thus Resemblance Nominalism$_2$ is a version of Resemblance Nominalism.

But whether or not Resemblance Nominalism$_2$ is a version of Resemblance Nominalism the important point about it is that, since it postulates fewer universals than Universalism, Resemblance Nominalism$_2$ is preferable to Universalism. Thus the mere admission of one or more universals might still make it worthwhile to avoid the admission of other universals. And so Russell was wrong on both points he made in his famous criticism of Resemblance Nominalism.[10]

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[9] Since the properties resemblance accounts for are sparse, of which each particular has only a finite number, the universals of resemblance could be no more than a finite number.

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