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Bradley's Regress and Ungrounded Dependence Chains: A Reply to Cameron

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ABSTRACT

A version of Bradley's regress can be endorsed in an effort to address the problem of the unity of states of affairs or facts, thereby arriving to a doctrine that I have called *fact infinitism*. A consequence of it is the denial of the thesis, WF, that all chains of ontological dependence are well-founded or grounded. Cameron has recently rejected fact infinitism by arguing that WF, albeit not necessarily true, is however contingently true. Here fact infinitism is supported by showing that Cameron's argument for the contingent truth of WF is unsuccessful.

1. Introduction

In his interesting 'Turtles All The Way Down: Regress, Priority And Fundamentality' (2008), Ross Cameron considers and rejects an approach to Bradley's regress as it arises for states of affairs or facts understood *à la* Armstrong (i.e., involving a universal and one or more particulars, depending on whether the universal is a property or a relation). This approach is basically the 'fact infinitism' that I have recently defended in previous publications (Orilia 2006, 2007).[1] Its basic idea is to accept the *externalist* version of the regress not only as benign, but instead as positively leading to an account of the unity of facts: the fact *Fa* exists (as a unity, in addition to its constituents *F* and *a*), because *another* fact, namely E^2Fa also exists (where E^2 is dyadic exemplification); in turn, E^2Fa exists, because the fact E^3E^2Fa, distinct form E^2Fa, also exists (where E^3 is triadic exemplification), and so on *ad infinitum*. It is important to note here that the *because* in question is one of *ontological* (as opposed to *causal*) explanation and that this regress must be distinguished from an *internalist* (vicious) one, wherein '*Fa*', 'E^2Fa', 'E^3E^2Fa', etc. are meant to be increasingly accurate representations of one and the same fact.

Call *Ontological Well-Foundedness* the thesis that all chains of ontological dependence are well-founded or grounded (*WF*, in short) and *Ontological Non-Well-Foundedness* its denial (*NWF*, for brevity's

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[1] Anna-Sofia Maurin has recently pointed out to me that something like fact infinitism can be attributed to Ivar Segelberg (see Segelberg 1999 and Maurin 2008 and 2008a).

sake), according to which there exist ungrounded chains of ontological dependence.[2] These are chains that run endlessly without ever reaching an ontological basis. Cameron notes (without using this terminology) that fact infinitism leads to NWF. Rightly so, for, arguably, *x* ontologically depends on *y* if and only if the existence of an entity *x* is ontologically explained by the existence of another entity *y*[3] (more below on the notion of ontological dependence). Cameron then examines a number of arguments purporting to show that WF is necessarily true and finds them wanting. This examination supports, one may say, Lowe's suggestion that we should take WF as an 'axiom' (1998, 158). Or alternatively, from the point of view of the fact infinitist, the examination backs up the option of upholding NWF rather than WF. In alternative to either avenues, Cameron rather concludes (2008, 12-13) that WF should be taken not as necessarily, but, more modestly, as *contingently* true. Clearly, if Cameron is right, fact infinitism is in trouble. I shall argue however that his argument in favour of the contingent truth of WF is far from convincing. My primary purpose here is to defend fact infinitism,[4] but my analysis of Cameron's argument is of course relevant for cognate approaches such as that put forward by Richard Gaskin (1995, 2008), who develops an account of the unity of propositions based on the acceptance of the externalist version of Bradley's regress. Although there are differences between Gaskin's theory and fact infinitism, most importantly because the latter admits states of affairs as distinct from propositions whereas the former reduces states of affairs to true propositions, it seems

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[2] Note that, just as set-theoretical infinite sequences may be ordered in such a way as to have a last member, WF is compatible with the existence of infinite chains of ontological dependence that terminate with an 'ontological basis' (see below) that grounds the previous members of the chain.

[3] This biconditional of course does not in itself provide an analysis of ontological dependence in terms of ontological explanation. Schnieder 2006 has recently defended the view, considered but not endorsed in Lowe 1998, that this analysis can be given. In other words, Schnieder has proposed that *x*'s ontological dependence on *y* can be analyzed as the fact that *x*'s existence is ontologically explained by the existence of *y*. This seems to lead to the conclusion that *x* ontologically depends on *y* because the proposition that *x* exists is explained by the proposition that *y* exists and thus perhaps puts the cart before the horse. For one might rather think that it is the other way around, namely, that the proposition that *x* exists is explained by the proposition that *y* exists, because *x* ontologically depends on *y*. But this is an issue that I shall not further explore here. For our purposes, it is enough to grant the biconditional in question, whether or not it is backed up by Schnieder's analysis.

[4] One might suspect that the fact infinitist could simply ignore Cameron's argument by reasoning as follows. The externalist Bradley's regress shows *a priori* that NWF is a metaphysically necessary truth. Hence, WF cannot be contingently true and thus any argument that purports to show that it is such must have some fault and can therefore be disregarded without further ado. The problem with this is that the fact infinitist may well acknowledge that the motivations in favour of his/her account of the unity of states of affairs are highly contentious and that accordingly this account is subject to be evaluated in a process of theory comparison with rival views (cf. Castañeda 1980), including views that deny that there are facts and admit tropes instead (cf. Simons 1997, Dodd 1999, Maurin 2008a) or that deny that an account of the unity of facts can be given (as perhaps in Van Inwagen 1993, 37; see Vallicella 2002 and Orilia 2007 for two critical surveys of different theoretical options and Meinertsen 2008 and Betti and Wieland 2008 for two recent new standpoints). Once matters are seen in this perspective, an argument in favour of the (contingent) truth of WF can obviously count against fact infinitism and in favour of its rivals and thus the fact infinitist had better try and counter it. At any rate, even for the fact infinitist who is convinced that there are indefeasible *a priori* reasons on behalf of the metaphysical necessity of NWF, it may be instructive to see where Cameron's argument goes wrong.

clear that Cameron's argument can be directed against both. By the same token, my rejection of the argument, if successful, can be seen as rescuing both. Here however, in line with Cameron (2008, 2), we shall concentrate on facts understood as distinct from propositions and thus on fact infinitism.

Before going ahead, it is worth noting that one could end up embracing NWF, or at least its possibility, for reasons that have nothing to do with the problem of the unity of either facts or propositions. Cameron himself considers some of these reasons, e.g., the desire to counter a Leibnizian version of the cosmological argument for the existence of God or the desire to argue for the thesis that our world may happen to contain *gunks*, namely material wholes that can be infinitely decomposed into parts. Accordingly, the present assessment of Cameron's argument may be of interest to whoever is tempted by such reasons.

2. *Cameron's argument*

Let us review some of Cameron's assumptions and terminology, which we can take for granted for present purposes (see his 2008, 4, for further details). *Ontological dependence* is transitive, irreflexive and asymmetric, just as its converse, namely *ontological priority*. *Direct* ontological dependence links x to y when x depends on y and, intuitively, there is no 'intermediate' z such that x depends on z and z depends on y. This relation is irreflexive, asymmetric and non-transitive. An entity is ontologically *independent* or *fundamental* if and only if it does not depend on any entity. Further, an entity x has its *ultimate ontological basis* in the entities y_1, ..., y_n, or, we may also say, is *grounded* on the latter, if and only if the latter are ontologically independent and for each y_i (i = 1, 2, 3, ..., n) there is a chain of ontological dependence linking x to y_i.[5] In the following, I shall usually neglect the qualifier 'ontological', as it can be supplied from context.

Let us now move to Cameron's relevant contentions. Given the failure of the arguments on the market in favour of the necessity of WF, we are asked by him to acquiesce to:

C1. WF is not a necessary truth.[6]

In view of C1, rather than led to NWF, we are instead offered a retreat to:

[5] There are of course in the literature many notions of ontological dependence compatible with the present assumptions and even notions that do not comply with them (cf. Correia 2005, 2008 and Lowe 2008). For present purposes, following Cameron, we need not take a stand on the available options, as long as they are compatible with what I and Cameron are presupposing in the present context.

[6] C1 is of course welcomed by the fact infinitist. We noted above the link between ontological dependence and explanation. Given this link, the objections that I have raised elsewhere (Orilia 2006, 2007) against the attempts to show the untenability of ungrounded infinite explanatory chains provide additional support for C1.

C2. WF is a contingent truth.

The idea is to argue for WF on methodological grounds, thereby making it a thesis (akin to Ockham's razor; cf. Cameron 2008, 13) that is useful to investigate *our* world, without ruling out that there are, so to speak, other possible worlds in which NWF is true.[7] The crucial methodological principles to rely on are these:

C3. Other things being equal, a thesis that allows for a unified explanation of certain phenomena is theoretically more useful than a competing thesis that does not allow for a unified explanation of the same phenomena.

C4. If a thesis T is theoretically more useful than its denial $\sim T$, then chances are that T is (at least contingently) true and $\sim T$ is false.

In the light of C3 and C4, and with C1 available, C2 is supported by the following further tenets:

C5. NWF does *not* allow for a unified explanation of the existence of every dependent entity.

C6. WF *does* allow for a unified explanation of the existence of every dependent entity.

The reasons behind C5 and C6 are, respectively, C5a and C6a, below.

C5a. Given NWF, we can get an explanation of the existence of a dependent entity such as the fact *Fa* (e.g., we explain the existence of *Fa* by appealing to the existence of E^2Fa, the existence of the latter by appealing to the existence of E^3E^2Fa, etc.), but we *cannot* have a *unified* explanation of the existence of

[7] Cameron plausibly views Ockham's razor as a principle that can back up the contingent but not the necessary truth of certain propositions. What he has in mind can, I think, be illustrated as follows. In the light of Ockham's razor we rule out, for instance, that that there is an event c_1 (say, the presence of an autoimmune syndrome) whose existence can causally explain the existence of event e (e.g., the presence of certain symptoms), once we have postulated for independent reasons an event c that suffices for a causal explanation of c_2 (such as the presence of a certain virus). This makes sense on the assumption that *our* world is simple in the sense that (at least in typical cases) there are not many causes of the same phenomenon. But there is no need to further assume that *every* possible world is simple in the same sense. In an analogous fashion, as I understand Cameron, the methodological principles C3 and C4 below can back up the claim that a certain thesis is contingently true. The idea is that when we prefer a thesis T_1 to a thesis T_2 because the former is better than the latter in allowing for a unified explanation of the phenomena at issue (whatever this means; see below), all we need assume is that *our* world is made in such a way that it contains phenomena that allow for a unified explanation. We need not rule out the existence of other worlds that do not have this feature.

every dependent entity, for we cannot appeal to a collection of independent entities that explains the existence of every dependent entity.

C6a. Given WF, we can appeal to a collection of independent entities in order to provide a unified explanation of the existence of every dependent entity.

3. The fact infinitist's reply

Cameron's reasoning crucially relies on C3. This may well be a plausible methodological principle, but it should be noted that it involves, and rightly so, the *ceteris paribus* clause, 'other things being equal'. Hence, to confirm that C3 can carry the burden of taking us to the intended conclusion, we have to see whether there really is an explanation of the 'different phenomena' in question here that takes care of this clause. More specifically, it must be an explanation with the following features: (i) it can be granted if we uphold WF, (ii) it cannot be granted if we adhere to NWF rather than to WF, (iii) it is 'unified' in a way that gives it an advantage over alternative explanations that are not similarly unified, and (iv) its being 'unified' is a plus that leaves the 'other things' equal, i.e., it is such that, while having an advantage over alternative explanations on account of its treating all the different phenomena in a uniform way, it is not worse than these alternative explanations in other crucial respects (cf. Hansson 1996).[8] For a final verdict, we should then examine all the candidate explanations and see how they perform.

I can see three candidate explanations that can aspire to simultaneously fulfil roles (i)-(iv). But before turning to them, let us be clear on what the different phenomena that need explaining are and on what counts as a unified explanation in this context. Patently, the different phenomena are all 'phenomena' such as the existence of *x*, the existence of *y*, etc., where *x*, *y*, etc. are all the dependent entities. Moreover, the unified explanation is presumably an explanation that assumes that there is a collection *C* of independent entities and, for each dependent entity *x*, appeals to *C* in order to account for the existence of *x*. Now, it seems to me that we can think of *C* in two possible ways, i.e., either as a

[8] An anonymous referee has suggested that the *ceteris paribus* clause in C3 should perhaps rather be interpreted as follows: 'leaving other features of the compared theories, which could make us favour one theory rather than another, aside'. It seems to me however that, if we follow this line, C3 becomes too weak to do the work intended by Cameron. For it becomes a principle that can too easily fail to help us in choosing a thesis correctly. To see this consider a thesis, T_1, that looks better than another one, T_2, because it has, contrary to T_2, the desirable feature of interest to us here (allowing for a unified explanation of the phenomena). Suppose further that T_2 has, contrary to T_1, many other features that make it very palatable. Given the interpretation in question, C3 allows us to neglect these good features of T_2 so as declare T_1 'theoretically more useful' than T_2. But it would be methodologically highly questionable to choose T_1 on these grounds, because it would mean that the nice features of T_2 are disregarded.

multi-membered or as a one-membered collection. Given the first option, the members of *C* could be viewed, in the Aristotelian tradition, as distinct 'substances' that can exist independently of each other in a sense that philosophers such as Lowe 1998 and Schnieder 2006 have recently tried to characterize (for example, persons or individual selves or basic physical entities might be such substances). Alternatively, we might perhaps view the members of *C* as mutually independent fundamental facts such as the exemplifications at space-time points of 'intrinsic qualities' envisaged in Lewis' controversial thesis of Humean supervenience (cf. Lewis 1986, ix-x). Given the second option, the one member of *C* should be seen, following the Spinozistic tradition, as the one *real* substance, the only fundamental entity on which everything else depends, i.e., something like God or perhaps something like a 'maximal whole', a concrete object that is ontologically prior to every other concrete object as in the priority monism recently revived by Schaffer (based on the idea that a whole is ontologically prior to its parts; cf. § 3.2 in Schaffer 2008). The first option allows us to appeal to *C* in two different ways, either by considering separately its different (possibly one-membered) subcollections, or by considering all the members of *C* in one fell swoop. This is why we have in the end three candidate unified explanations.

Let us then consider the first one. This is an explanation that, for each dependent *x*, always appeals to the same multi-membered collection *C* of fundamental entities (say, Aristotelian substances or the fundamental facts of Lewis' Humean supervenience) by claiming that *x* ultimately depends on the member(s) of some subcollection *S* of *C* (another dependent entity, *y*, will depend on the member(s) of a different subcollection *S'* of C). This is hardly an explanation worth having. It is like saying that there is a uniform causal explanation of two disparate phenomena, the breaking of the glass and John's recovery from pneumonia, because there is a collection of two events, namely {Tom's hurling a stone, John's taking antibiotics}, such that one of these two events caused the glass to break and the other John to recover. Clearly this kind of 'uniformity' is too gerrymandered for it to confer any advantage over rival explanations that do not enjoy a similar uniformity and thus in this case role (iii) is not fulfilled.[9]

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[9] A referee has pointed out that what we could aptly call *fact finitism* might seem to be, from the point of view of Cameron's methodological principle C3, preferable to fact infinitism. *Fact finitism* is the view that a fact such as *Fa* depends on fact E^2Fa, which in turn depends on E^3E^2Fa, which however does not depend on anything. The point is that in fact finitism we may seem to have a unified explanation of the existence of all dependent entities in terms of a set of independent entities. For the dependent *Fa* and E^2Fa are explained by recourse to E^3E^2Fa and similarly, e.g., *Gb* and E^2Gb are explained in terms of E^3E^2Gb (let us neglect for present purposes that there may be other facts and dependent or independent entities that are not facts). But upon closer inspection we can see that fact finitism can grant a 'unified' explanation of the existence of all the dependent entities only in the gerrymandered sense in which the breaking of the glass and John's recovery from pneumonia are uniformly explained by recourse to the disparate events of Tom's hurling a stone and John's taking antibiotics. For the existence of *Fa*, E^2Fa, *Gb* and E^2Gb are explained in the same way only in the sense that there is one set of two facts (which are as disparate as you like), namely $\{E^3E^2Fa, E^3E^2Gb\}$, such that a member of this set explains the existence of *Fa* and E^2Fa, and *another* member of the set explains the existence of *Gb* and E^2Gb. Be this as it may, fact finitism can hardly be preferred to fact infinitism on other grounds: once Bradley's regress convinces us, given *Fa*,

Consider then the second candidate. Its leading idea is to appeal to a multi-membered collection *C* of independent entities in the sense that each dependent *x* is claimed to have its ultimate ontological basis in all the members of *C*. In this case, we presumably have to grant that the explanation is unified in a serious sense, serious enough to accomplish the fulfilment of role (iii). Yet, this is achieved at too high a cost and thus this time role (iv) is hardly fulfilled. To see this, consider, e.g., a certain smile *s* of Tom and a certain grin *g* of Mary. Here we may want to say that Tom and Mary are independent entities and that *s* depends on Tom and *g* on Mary. There should be of course no temptation to say that *s* also depends on Mary and *g* also depends on Tom. But this is what we are forced to say if we buy this option.

We are thus left with the third candidate. To be sure, for most of us an explanation that takes care of role (iii), i.e. is unified, by sneaking into the picture God or even the maximal whole of the priority monist is without further ado costly enough to be discounted as incapable of also fulfilling role (iv). Nevertheless, one might say that this road still shows an important advantage that WF has over NWF: only the former is palatable to the theist who wants to claim that the existence of each dependent entity is explained by appealing to its dependence on God, and only the former is palatable to the priority monist who wants to claim that every concrete object other than the maximal whole is ontologically dependent on the latter. But is it really so? Recall that we came to consider NWF simply because of fact infinitism's endorsement of the externalist Bradley's regress. Now, it seems to me that the fact infinitist, who supports NWF simply because of her endorsement of the externalist Bradley's regress, has no serious trouble in making the theistic or monist move, if she wishes to. For just like the theist who believes that all substances ultimately depend on God can claim that there are *created* substances that are independent in the sense that they depend only on God (who strictly speaking is the only independent substance; cf. Schnieder 2006, 413), the theist fact infinitist can similarly say that, *letting dependence on God aside*, each member of a 'Bradley series' *Fa*, E^2Fa, E^3Fa, ..., fails to have an ultimate ontological basis, since this series does not come to an end. Similarly, the fact infinitist who is also a priority monist can claim that although each member of this Bradley series fails to have an ultimate ontological basis, the item *a* 'contained' in each member of the series, which for present purposes can be thought of as a non-maximal concrete object, is ontologically dependent on the maximal whole.

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of the existence of E^2Fa and E^3E^2Fa, it would be quite *ad hoc* to stop at that without admitting $E^4E^3E^2Fa$, etc., into the picture.

4. *Conclusion*

In sum, some candidate unified explanations of the existence of the dependent entities readily come to mind, but they all fail to support Cameron's claim that WF is contingently true and his consequent rejection of fact infinitism. Perhaps other candidate unified explanations that would do the trick exist, but the burden of proof is now on those who think they can produce them. As long as such explanations are not exhibited, NWF and fact infinitism cannot be dismissed by an argument such as Cameron's. This of course does mean that fact infinitism cannot be attacked by other arguments. For example, one could argue against it by claiming that a theory that upholds WF rather than NWF is likely to be more ontological parsimonious than fact infinitism and should therefore be preferred to the latter in the light of Ockham's razor. It must be admitted that any theory that embraces an infinite regress incurs a 'large quantitative ontological commitment' and that this 'quantitative extravagance' is a theoretical cost, but it may well be that it is a cost worth paying and whether or not this is the case can be judged only by comparing the theory in question to rival approaches, for these may happen to feature other costs that outweigh their lack of such extravagance (Nolan 2001). In sum, in response to this charge the fact infinitist can call for an examination of the rival accounts of the unity of states of affairs (or more generally of complexes) to see whether they have problematic aspects that tell against them in spite of any ontological parsimony that they may exhibit. But this is another story (for my take on this, see Orilia 2007).[*]

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