

The Regress of Pure Powers Revisited

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The paper aims to elucidate in better detail than before the dispute about whether or not dispositional monism—the view that all basic properties are pure powers—entails a vicious infinite regress. Particular focus is on Alexander Bird's and George Molnar's attempts to show that the arguments professing to demonstrate a vicious regress are inconclusive because they presuppose what they aim to prove, notably that powers are for their nature dependent on something else. I argue that Bird and Molnar are mistaken. It is true that dispositional monism is popularly assumed to characterise powers as dependent entities, but this is not what the arguments aim to prove. They merely aim to demonstrate that it would be absurd to assume that all properties are dependent in this way. Finally, it is argued that there is an unresolved tension in Bird's and Molnar's account of powers. They characterise them as being for their nature dependent on the manifestations that they are for, and yet ontologically independent of those same manifestations. Until that tension is resolved, their accounts are not equipped to remove the threat of vicious regress.

1. Introduction

The purpose of this paper is to discuss what has been a popular objection to *dispositional monism*, the view that all natural properties are *pure powers* notably that it leads to a vicious infinite regress. To say that powers are 'pure' is to say that their nature is exhausted by their 'dispositional essence', that is, by what it is they are able to manifest. The manifestation however is assumed to be distinct from the power, wherefore the dispositional essence of powers is taken to be a 'direction toward something outside themselves' (Molnar 2003: ch. 3.4) or 'a relation to other properties' (Bird 2007a: 524).

The contrasting view among friends of powers is the mixed view that powers are somehow both qualities and powers, or neither. The difference between 'both' and 'neither' is negligible; on both accounts powers are neither pure powers nor pure qualities, but something in the neighbourhood of both (Martin 1997; Mumford 1998: vi; Heil 2003: ch. 10). One of the main reasons for adopting a mixed view is to avoid the vicious infinite regress that threatens dispositional monism.

Alexander Bird has recently argued that dispositional monism does not, contrary to popular belief, lead to a vicious regress (2007a). George Molnar also argues that the arguments professing to establish a vicious regress are inconclusive (2003: ch. 11). I think Bird's and Molnar's appraisal of the objections are problematic, and I think the source of this problem is to be found in an

unresolved tension between two apparently incompatible features that they wish to ascribe to powers; they want powers to be at once intrinsic and relational. Or, in other words, they want the nature of powers to be exhausted by their dispositional essence, their ‘direction toward something outside themselves’ (Molnar 2003: ch. 3.4) or ‘a relation to other properties’ (Bird 2007a: 524), but at the same time be ontologically independent of this something outside themselves or the properties they are related to.

I think Bird and Molnar (mis) perceive the objections as trying to establish that powers cannot be ontologically independent because a vicious regress ensues from the assumption that all properties are pure powers. They then judge the objections to be circular and void because a vicious regress only follows on the assumption that powers aren’t ontologically independent. I think it is correct that the objections presuppose that pure powers are ontologically dependent, but it is a mistake to think that this is what they profess to prove. The objections simply profess to reveal the absurdity of the assumption that all properties are ontologically dependent. It is assumed that dispositional monism itself presents powers as ontologically dependent entities. Bird and Molnar both deny that pure powers are ontologically dependent entities, but at the same time their manner of spelling out the nature of pure powers is not easily reconciled with that claim.

In this paper I hope to bring out in better detail than before what is found to be so disconcerting about dispositional monism, and then consider whether Bird’s and/or Molnar’s account of pure powers can calm the jitters of the sceptics. For the sake of simplicity, I will restrict my discussion to the three types of regress that Bird discusses. This means that I omit Blackburn’s version (1990: 63), because it leads into complications about possible worlds whose elucidation have no clear benefits for my present purposes,¹ and Psillos’ version (2006) because it is more a general Bradley style derivation of an infinite regress of ever higher order powers of each power rather than an infinite regress of relations between basic powers.²

Bird treats each type of regress separately and offers distinct answers to each. I think they are all symptoms of the same underlying worry, and, *pace* Bird and Molnar, I think this underlying worry is a serious problem for dispositional monism. In this respect I believe a mixed view has an advantage, but this is not the place to discuss it.

2. The Regress of Pure Powers

The worry that dispositional monism leads to vicious regress, popularly labelled ‘the regress of pure powers’, has been raised in various ways by a number of thinkers, for instance, by Keith Campbell (1976: 93), Richard Swinburne (1980: 316-19), John Foster (1982: 68), Howard Robinson (1982: 114), C. B. Martin (1997), David Armstrong (1997: 80), E. J. Lowe (2006: 138), and Kristina Engelhard (2010). Following Bird (2007a), I will present their worries as falling into three different types that can be paraphrased as follows:

Knowledge Regress: if all properties were pure powers we could never know a property because to know a power is to know its manifestation, but that

manifestation would also be a power we could only know by knowing its manifestation, *etcetera ad infinitum* (Swinburne 1980: 316–19).

Reality Regress: if all properties were pure powers they would lack reality because a power depends for its reality on the manifestation of properties that in turn are powers that depend for their reality on the manifestation of further powers, and those powers depend for their reality upon the manifestation of yet other powers, *etcetera ad infinitum* (Campbell 1976: 93; Robinson 1982: 114; Armstrong 1997: 80).

Identity Regress: if all properties were pure powers they would lack identity, because the identity of every power would be dependent on the manifestation of other powers, and the identity of those powers would in turn depend on the identity of still further powers, *etcetera ad infinitum* (Robinson 1982: 114; Lowe 2006: 138).

Swinburne's original argument is entangled in the problem of the inverted spectrum, which is not directly relevant here. Instead the knowledge regress that I present above is the one Bird eventually siphons from Swinburne's discussion. In this form the knowledge regress is clearly grounded in an ontological regress, notably that powers 'must have (potential) manifestations, which are themselves powers, and so forth' (Bird 2007a: 519). The epistemological regress that seems to follow from this ontological regress, is that it is not possible to acquire knowledge about a power J without also knowing about its (potential) manifestation K, which in turn can only be known by knowing its (potential) manifestation L...*etc.* You can see where this is going.

The epistemological argument is intended to show that knowledge is possible only if the regress ends somewhere in a property that is not a pure power, i.e. in something whose nature does not consist in a relation to some further nature; something which is not ontologically dependent on something else. Bird suggests that the regress can end in a state of mind that, while itself a pure power, can be knowledge of the power that brought it about:

If the mental property K is reliably brought about by J, then the subject's being in state K may itself be a state of knowledge (or belief that is justified) concerning the presence of property J. And there is no requirement that the subject additionally know (by detecting L) that she is in a state with property K. In general one can know without knowing that one knows (and likewise for justified belief). So simply being in K stops the regress, since the subject thereby knows about J, and thence about the preceding properties in the chain back to G and ultimately F (Bird 2007a: 518).

My immediate worry is that Bird is attributing to mental states a nature that is not easily reconciled with his dispositional monism. That is, he seems to attribute to K a nature that is *not* exhausted by what it is a power for, something more than simply the power to bring about L. K seems to be gifted with something that is related to the

power that brought it about, notably J, but which is not the power to bring about J, but rather to be about J; to represent what J is like. To my mind, this nature looks more like a powerful quality than a pure power.

I can admit that as soon as mental properties are incorporated into the picture, everything becomes a little difficult, in particular because mental content is often assumed to supervene on the physical. The physical power K might be said to give rise to a mental content K* which (epiphenomenally) is about J, while the nature of K itself is exhausted by its relation to L. But, surely, pure powers ontology must be able to work also for a world in which there are no minds, so I will not pursue this possibility further. Instead I will have a closer look at the ontological regress on which Bird suspects Swinburne's epistemological regress is based.

The ontological regress that underlies the epistemological regress, as I see it, starts from the claim that the nature of powers is exhausted by their relation to the manifestations they are for, that is, that their essence is a 'direction toward something outside themselves' (Molnar 2003: ch. 3.4) or 'a relation to other properties' (Bird 2007a: 524). Consequently, the determinate nature of the power J should be given entirely by the determinate nature of its manifestation K. The problem is that K's determinate nature (which determines J) is in turn determined entirely by the determinate nature of its manifestation L, whose determinate nature (which determines K (which determines J)) is in turn determined by the determinate nature of its manifestation M, whose determinate nature (which determines L (which determines K (which determines J))) is determined by its manifestation N, ...*etc.* That is, from J (and likewise from K, L, M, *etc.*) we get an infinite series of determination relations that only lead further away from determining J (or K, L, M, *etc.*), never closer. On this reading we get a different kind of epistemological regress. The problem is not really that *knowledge* of J will always be incomplete without knowledge of K, and L, *etc.* The problem is that the *nature* of J (or K, L, M, *etc.*) cannot be known because it never fully acquires a determinate nature that can be known; it remains forever indeterminate. I think we have here a fourth type of regress, which I will call the *Nature Regress*:

Nature Regress: if all properties were pure powers no power would have a determinate nature, because the nature of every power would be determined by the manifestation of other powers, and the nature of those powers, in virtue of which they determine the first power, would in turn depend on the nature of still further powers, *etcetera ad infinitum*.

I think it is this worry that drives C. B. Martin to insist that powers must also be 'qualitative', by which I think he simply means that powers must have a determinate *intrinsic* nature independently of anything else (2008: 63-64). He does not mean that they must be 'categorical' in the Humean sense of being intrinsically inert, because he thinks powers are intrinsic and causally efficacious, i.e. he only means to say that whatever nature they have is not determined by a relation to a manifestation.

If anything is to have a nature at all, the objection goes, the determination of natures via relations to something else has to stop somewhere, either in objects that simply have a nature in themselves or in relations that have a nature in themselves. However, Molnar and Bird deny that powers have any other nature than their relation to their manifestation and still they insist that powers are basic and intrinsic properties. The regress of pure powers, in all its various forms, really boils down to the worry that if powers only have a nature by association to something else, and if all properties are powers, then everything has a nature only by association to something else, which in turn means that everything wants a nature but nothing provides a nature.

On the reading above, Swinburne's argument comes very close to Robinson's reality regress, notably (1) that every real object must possess a determinate nature, and (2) that the nature of a power is supposedly given by its manifestation, which leads to the conclusion that the reality of the power depends on the determinacy of its manifestation. Consequently, if every manifestation is really just a manifestation of a new power whose determinate nature is in turn given by its manifestation, then nothing ever has a determinate nature and fails to be real (1982: 114–15). The knowledge regress returns here in a different form, notably that no power can be known because no power has a nature that can be known.

Even the identity regress follows readily from the nature regress, adding merely the premise that the identity of any entity is grounded in the determinate nature of that entity. If pure powers lack an ontologically determinate nature, they also lack identity. Indeed, that powers lack reality and identity, and cannot be known, follows from the alleged failure of powers to have a determinate nature in and of themselves, i.e. a nature that is intrinsic to the power itself independently of other things and their properties. It seems to me then that there is one underlying worry, the one expressed by the 'nature regress', from which all the other versions can be derived.

3. Identity, Essence, and Nature.

There are two interrelated complications that need to be addressed, that have to do with the relationship between identity, essence and nature of properties.³ First, the difference between identity and nature may not appear to be straightforward—in particular if we take the identity of properties to be grounded in their nature—wherefore the difference between the identity and nature regress may also appear problematic. Second, one popular suggestion about how the identity regress may be stopped does not obviously address the close connection between identity and nature that gives rise to the identity regress; indeed it seems even to suggest that the identity of properties is not grounded in their nature at all. I am here thinking of the suggestion that the identity of powers can be determined 'holistically' by each power's unique position in some sort of web of interconnected properties (Mumford 2004: ch. 11.2; Bird 2007*a*; Williams 2010). This raises the suspicion that there may be at least two conceptions of 'identity' at play.

Considering the relationship between identity and nature, then it is the explicit view of Bird (2007a: 523) and Molnar (2003: 195) that nature is the same as essence and that essence determines identity. Very clearly, they perceive the identity regress to revolve around this close connection, and one may therefore ask whether the identity and nature regress really are distinct regresses. To my mind they are not equivalent, although it would be of little consequence for the conclusion of this paper if they were; all regress versions could still be traced back to a single worry about the determinate nature/identity of properties.

However, one reason to think that the two regresses are not equivalent is that we seem to be able to formulate the nature regress, and understand it, without any mention of identity. We can think about the determinate/indeterminate nature of entities, independently of the identity of entities that have a determinate/indeterminate nature, because when we ask about the nature of a property we are not concerned about the nature of a particular property instance, but of any instance of its kind. To understand what it is to be red does not require us to understand what that involves for any particular object, or any particular instance of redness. The question about identity of properties is thus an additional complication having to do with distinguishing between instances of the same kind, not to say what is to be of a kind. Not even the question about determinate property instances is a question about distinguishing between instances, at least if we accept that there can be many instances of a determinate of a determinable, not just many determinates of a determinable. Nominalists will of course disagree, but it goes beyond the scope of this paper to deal with that kind of complication.

A related complication concerns the applicability of the distinction between numeric and qualitative identity in the case of objects and properties, respectively. While it appears to make good sense to say that an object is qualitatively unique and so could have a numeric identity in virtue of its nature, this appears not to make as much sense for properties. For one thing, *if* we want to allow there to be many instances of a determinate property we can hardly distinguish numerically between them by appeal to a difference in nature because then they would be either different types of properties or different determinates of the same determinable. Furthermore, it is not clear that the nature of a thing is a numerically distinct entity in its own right, to be counted separately from the thing that has them. Like Marmodoro (2010), I am persuaded that substances and their nature are to be counted as one, and so to think that property instances are numerically distinct only in so far as they can be attributed to distinct substances. Again, nominalists will object.

The upshot of all this is that with regards to properties there is, arguably, a difference between the ‘identity’ of a property *K* construed in terms of what that property is in itself (an essence that *cannot* be unique to any instance, *k*, if we allow that there can be many determinate property instances of the same kind, *K*), and ‘identity’ construed in terms of which particular instance *k* is, among all the instances

of the kind K. Arguably the first kind of identity is purely qualitative, while the latter is purely numeric. The numeric identity of property instances is a matter either of different spatiotemporal location of instances, or of their tie to different property bearers.⁴

In light of the above, we can now appreciate that the ‘holistic’ approach to determining the identity of powers arguably addresses a different idea about identity than the one that gives rise to the identity regress. The original identity regress is based on the idea that the identity of every entity is grounded in their essence, i.e. the determinate nature in virtue of which the entity is what it is (echoing Locke’s definition of real essence in the *Essay*, III, III, 15). The holistic solution however attributes to each entity an identity in virtue of its unique position in the whole. It strikes me that this solution trades on intuitions about numeric identity, and provides a way to numerically individuate instances but provides no solution to the nature regress, and so no solution to the original identity regress which is formulated as a worry about the individual essence of entities.

To be fair, Mumford does not offer his web of interconnected powers as a solution to the identity regress but as an alternative to the Humean view of a reality in which nothing is connected. Williams, on the other hand, does address the worry that if the nature of powers is grounded ‘holistically’ in a web of interconnected powers then each power appears to be ontologically dependent on the whole and lacking in an intrinsic nature. Williams’ attempt to show that this worry is unfounded turns on a rather problematic understanding of intrinsicness and of ontological independence, notably that it only ‘concerns the having of the property, not what the property itself is like’ (2010: 95). This understanding presupposes that the property is a distinct entity in its own right, as opposed to a way an object can be; in the latter case the having of a property cannot be ontologically independent from what the property itself is like, because the property *is* what the object is like. As pointed out by Lowe (2010: 24), such a power ontology implies that powers are purely abstract entities. A power which is an entity in its own right, with a nature independently of whether it is possessed by an object, must be an abstract entity. The further assumption that all powers are of that kind, implies that the structure that lends it its nature must be an abstract structure. If not absurd in its own right, this view is certainly contrary to the aims of the proponents of the holistic approach (see section 4 for further discussion).

If the intention is to provide an ontology of the properties of the concretely existing reality we live in, I find it difficult to see how their nature/essence, as opposed to their numeric distinctness, can be determined by a whole and still be ontologically independent of other parts of the whole. More importantly, to assume that properties have their nature/identity in virtue of a whole does not strike me as the best way to introduce connections between properties in the world. I think it makes better sense to think that properties can *constitute* an interconnected web of properties *if they are granted* an ontologically independent nature to begin with, instead of having that nature in virtue of its relation to everything else. This is an alternative

both Mumford and Williams seem to overlook. Mumford at least presents us with a choice between a world where the nature of every property is wholly determined by its relations to everything else, and a world where nothing is related to anything else. Surely there is the intermediate position, notably that objects have a nature in themselves independently of anything else, a nature that still can ground relations to other objects.

There are more complications tied to the issue of identity than I care to address here. Identity is a core problem in philosophy in its own right. What matters here is that the equivalence of identity and nature is not a threat to the overall position presented in this paper, and that further development in this issue requires a more thorough investigation of the problematic relationship between ‘identity’ and ‘nature/essence’. Lowe’s (2010) and Marmodoro’s (2010) discussions are two notable attempts to delve deeper into this issue.

4. Do the Regress Objections Presuppose what they Profess to Prove?

It seems to me that the critics take for granted that pure powers only have a nature in virtue of something else, notably their manifestations, and then proceed to draw out the consequences of the assumption that all properties are of that kind. Bird however, perceives the assumption that powers ‘do not have enough actual reality, or ontological content, on their own to be all there is to the properties of things in the world’ as an unwarranted assumption that ultimately renders the objections circular and void: ‘This objection fails because it simply assumes what it sets out to show, that dispositions do not have sufficient reality to be genuine properties without the support of something else’ (Bird 2007a: 521). As I have already said, I agree that the objections do assume that powers depend on something else for their nature, but I think it is a mistake to think that this is what they set out to prove. They only set out to prove the absurdity of assuming that every property is something whose nature is exhausted by a ‘direction toward something outside themselves’ (Molnar 2003: ch. 3.4) or a ‘relation to other properties’ (Bird 2007a: 524). This assumption is taken to entail that powers are ontologically dependent. Bird and Molnar must therefore show that pure powers aren’t relational, or they must show that entities whose nature is wholly relational do not have a nature only in virtue of something else.

It is in this respect that I detect an unresolved tension in Bird’s and Molnar’s views about powers, because although they explicitly describe the nature of powers as being exhausted by a relationship to the manifestation that they are for, then they also strive to establish powers as being independent of their manifestations. The question is, can powers be independent from and still necessarily related to, their manifestations, in a way that allows them to derive their very nature from their manifestations and still be independent from them?

5. Powers: Independent *and* Directed?

According to the pure powers view, the nature of powers is exhausted by their relationship to the particular outcome for which they are powers. Molnar initially characterises this relationship in the following way:

DIRECTEDNESS. A power has directionality, in the sense that it must be a power for, or to, some outcome. It is this directedness that provides the prima facie distinction between powers (dispositions) and non-powers (2003: 57).

Although not explicitly stated, the passage raises the suspicion of a relational account of powers, and later Molnar apparently confirms this suspicion: ‘These properties have an object towards which they are oriented or directed. The objects of powers are usually called “manifestations” [...] Directedness is an essential feature of power properties [...] Having a direction to a particular manifestation is constitutive of the power property’ (2003: 60). Bird is even more explicit about the relational nature of powers:

Dispositional essences are relational—the essence of a property is a relation to other properties (2007a: 524).

Dispositional monism is the view that all there is to (the identity of) any property is a matter of its second-order relations to other properties [...] the second-order relation in question is the relation that holds, in virtue of a property’s essence, between that property and its manifestation property—which we will call the *manifestation relation* (2007a: 527).

Be careful to note that for Bird the identity of a property is grounded in its essence, so by adding ‘(the identity of)’ he is not indicating an additional concern about identity, but merely noting the equivalence of identity and essence. But, more importantly, note the vacillation between a relational and non-relational characterisation of powers in this passage. On the one hand Bird claims that the essence of a power *is* nothing but a relation—that the relation constitutes the essence—but on the other hand he claims that this relation is a *second*-order relation that holds in virtue of a property’s essence. The latter seems to imply that the essence grounds the relation. But, what, I ask, is the first-order essence in virtue of which the second-order relation holds, if the second-order relation is all there is to the essence of any property? To my mind, Bird, like Molnar, is torn between a characterisation of powers as having an intrinsic essence, and as having that essence in virtue of a relation to something else.

I think it is clear that Bird *wants* the power to be an intrinsic property of the bearer, one that the bearer can have even in the absence of any manifestation. Indeed, Bird claims at one point that powers are everything that a categorical property is, only more (Bird 2007b: ch. 5.2). But, then, conversely, it must imply that a dispositional property has something more than just a dispositional essence, because a categorical property has an intrinsic nature, which is supposedly not dispositional. This is what the mixed view insists must be the case, but it does not rhyme well with the

dispositional monist's claim that the nature of powers is exhausted by their relation to their manifestation.

A similar vacillation can be found in Molnar, who depicts powers as essentially directed towards 'something outside themselves' but are at the same time *actual*, *intrinsic* and *objective* features of objects *independently* of their manifestation (2003: ch. 2.4). However, Molnar notes that the claim that powers are independent from their manifestations is a "fertile source of philosophical puzzlement" (2003: 57), and goes on to state the source of this puzzlement in no uncertain terms:

If powers can exist when they are not being manifested, and powers are properties that owe their identity to their manifestation, then, it would seem, they are properties whose very nature depends on something that may not exist. This is a peculiar feature for properties to have. INDEPENDENCE is in need of elucidation (2003: 82–83)

Let me then note that the problem is not with independence itself, but with the assumption that it applies also to entities whose essential and only nature is their directedness to 'something outside themselves'. Independence, as Molnar describes it, is just the same kind of independence that is typically bestowed on every intrinsic property, notably that it has a certain nature independently of the property instances of other property bearers. If there is a puzzle about the independence of powers, then it is the puzzle of how a property's very being can be its directedness towards some other property while at the same being independent of that property.

The conflict between the independent and relational characterisation of pure powers comes to the fore in Molnar's and Bird's attempts to resolve the problem of how pure powers can be essentially directed towards 'outcomes' even when these 'outcomes' do not exist. Molnar's preferred solution is simply to claim that a power can be directed towards 'outcomes' that do not exist. Molnar is here inspired by U.T. Place's (1996) suggestion that powers have a kind of physical directedness that is analogous to mental intentionality.

Bird, on the other hand, insists that these 'outcomes' must exist if the power is to be directed towards them, but since they clearly do not exist during times that the power is not exerted, he resorts to postulating the existence of 'outcomes' in the form of *possibilia*. Bird favours this view because he wants to avoid commitment to Meinongian objects to which he thinks Molnar is committed.

I am not entirely sure I grasp what the difference in ontological status is supposed to be between Bird's *possibilia*, Molnar's 'objects of powers' and so-called Meinongian objects. To be sure, Bird claims that his *possibilia* exist, but when we consider what this alleged existence consists in, the difference seems not too great. As far as I can tell, the term 'Meinongian objects' are in this context used for that broad category of objects that do not have being (for the details see Marek 2009: 4.3.2), and which are distinct from objects that have being mainly by not being conditioned by temporality, which is something they have in common with both Molnar's 'objects of powers' and Bird's *possibilia*. Arguably, the sense in which Meinongian objects are

necessary but non-existent beings is very close to the sense in which Bird's possibilia necessarily exist but do not necessarily 'occur'. Indeed, it is not too far-fetched to ascribe to Molnar the same view, notably that the objects of an unmanifesting power must be somehow real since they are distinct from the power and something to which the power is directed, but they lack being in the sense of not 'occurring' at any particular place or particular time. In any case, the objects postulated by Bird, Molnar, and Meinong to resolve the problem of directedness to objects that are not located in space-time, are all, in one way or the other, *abstracta*. They just disagree about the existential status of such abstracta.

Postulating abstracta doesn't really take away the problem at hand because these abstracta must surely also be entities that mirror their instances (or vice versa) and therefore their nature should be exhausted by a (non-temporal) relation to other properties, whose nature is exhausted by a (non-temporal) relation to other properties, *etcetera ad infinitum*. There is still the problem of how to reconcile the intrinsic and yet relational nature of abstracta.

It should be noted that I am to some extent reading Molnar 'charitably' when I ascribe to him the view that manifestations are abstracta. Unlike Bird he never explicitly commits to that view, as far as I have been able to discern. However, to my mind there is a choice between attributing to Molnar a view on the ontological status of the objects of unmanifesting powers—after all, he explicitly claims that they are distinct from the powers themselves—in which case the view that they are abstracta is the best option, or suggesting that he simply has no view on their ontological status. I prefer the former strategy.

6. Conclusion

I have tried, firstly, to elucidate what I think is ultimately the ontological basis of the regress of pure powers, the worry that if everything depends for its nature on something else, then nothing has a nature at all. This is a familiar enough claim, here only presented in different clothing. Secondly, to argue that Bird and Molnar misperceive the regress arguments as attempts to demonstrate that powers are ontologically dependent, when in fact these arguments only profess to draw out the consequences of the assumption that all properties are ontologically dependent. Thirdly, to elucidate an unresolved tension in Bird's and Molnar's accounts of pure powers as ontologically independent, notably that they nevertheless present them as essentially relational, which invokes the suspicion that they are dependent and independent at the same time. Until this tension is resolved, the threat of vicious regress remains.

Bird's and Molnar's attempts to reconcile the two features have in common the postulation of an essence whose only characteristics is its relation to abstracta, but they differ on the details about the ontological status of these abstracta and consequently about the nature of the relation. However, I don't think these attempts really resolve the problem at hand because the same problem arises even if all pure powers were abstracta.

I do not claim to have provided any decisive argument against pure powers ontology; such arguments are rare in metaphysics. But I hope to have specified in greater detail what the basic worry is, and what I judge to be the main shortcomings of Molnar's and Bird's attempts to show that there is nothing to worry about. This will hopefully help to address these worries, and perhaps to overcome them.

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¹ Blackburn claims that dispositional monism construes the intrinsic properties of objects as counterfactual essences, and that this leads to a truthmaker regress where truths about actual objects are always grounded in truthmakers in other neighbouring worlds. For a discussion of this argument, see Molnar (2003: ch. 11.2.2.).

² For a discussion of Psillos' regress see Anna Marmodoro (2010). It bears to mention already here that Marmodoro's suggestion about how Psillos' regress can be blocked has close affinities to my discussion in section 3 below, about the relationship between essence and identity of substances and properties, respectively.

³ I thank an anonymous referee for bringing this to my attention and providing helpful advice on how to address it.

⁴ The reader might be reminded here of Lowe's distinction between 'identity' and 'individuation' (2010: 9). Lowe construes identity as a relation any entity holds only to itself, which, as far as I can tell, is then equivalent to numeric or absolute identity. On the other hand, individuation is a relation between distinct entities of which one, the 'individuator', determines or 'fixes' the identity of the other. Indeed, Lowe suggests a criterion (2010: 12) that specifies how powers are individuated by a combination of individuators that are all distinct from the power: a manifestation, the possessor of the power, and the time of possession. However, Lowe's criterion makes the individuation of powers an entirely extrinsic affair, and so I find it difficult to understand it as a specification of the *essence* of a power in the Lockean sense of what makes something the very thing that it is. According to Locke, an essence is to be understood as 'the real internal, but generally (in substances) unknown constitution of things, whereon their discoverable qualities depend' (*Essay*, III, III, 15).