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Token Causal Powers

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Abstract: This paper proposes that the relation between property instances and token causal powers is akin to the relation between primary substances and property instances on the Aristotelian account of property instantiation. Derk Pereboom has suggested that an individual may have two tokens of the same type of causal power (Pereboom 2002, 504). Paul Audi has argued that this can't be: two tokens of the same power type are discernible, he claims, only if they are borne by discernible individuals (Audi 2012, 666). In the context of this criticism, he proposes that power tokens are individuated in part by the individuals bearing them. This paper responds to Audi's criticism and argues against his preferred view.

Words:

1. Causal Powers

Many things seem to have *powers*. Hammers have the power to drive nails; water has the power to dissolve salt; objects with mass have the power to attract other objects with mass. When theorizing about such things, it's not unreasonable to take this appearance at face value and propose that, indeed, causal powers make up a distinct ontological category. Once admitted into one's ontology, they may be used to explain causal relations and laws, and they may be explained by the properties with which they are associated. Hammers have the power to drive nails *because* they have properties like *being rigid*, *having a flat head*, etc. In turn, hammers in particular and in general do drive nails *because* they have the power to do so. We may say that an individual instantiates a property, and then the property confers its powers upon the individual. Given that causal powers seem to fit so neatly into metaphysical explanations, it's little surprise that as interest in metaphysical explanations has waxed, so has interest in causal powers. (See, e.g., Shoemaker 2001, Pereboom 2002, Ellis 2002, Heil 2005, Mumford 2006, Wilson 2011, Jacobs and O'Connor 2013)

While several accounts of causal powers have been given, and while many have tried to be clear about how powers relate to properties, laws, and causal relations, little has been said about how to individuate tokens of causal powers. As I read most contributors, the presumptive view entails that if token 1 = token 2, then it must be that 1 and 2 are conferred by the same property instance. Why think this? Because most think that token powers are conferred by instances of the properties with which they are associated. *Prima facie*, then, each instance of a property confers its own token of each of the power-types with which it is associated. If x is both F and G, and if F and G both confer power-type 1, it would be surprising if F and G both conferred the same token of power 1. Rather, F confers on x token 1_F of type 1 and G confers a distinct token 1_G of the same type. But this is no argument that power tokens are thus individuated; and it might be, of course, that the apparent presumption in the literature is mistaken or *merely* apparent. A defense of the apparent presumption is needed; this paper provides it. Call the apparent presumption the "Property Individuation Theory" or PIT. I defend it by appealing to a theory of powers I call "The Aristotelian View".

There are many discussions of powers in which it isn't necessary to be fully clear about how power tokens are individuated. We can ask whether laws and causal relations are grounded in powers, for instance, without deciding whether an individual can have duplicate tokens of a single power type. But in other cases, knowing how to individuate tokens of causal powers can guide theory choice. One such case involves property realization. Derk Pereboom claims that when a physical property instance P realizes a mental property instance M, both confer the token powers with which they're associated. Further, since Pereboom thinks that the powers associated with a realized property are a subset of those associated with the realizer property, the power *types* conferred by M will make up a subset of the types conferred by P. Thus, when M and P

both confer their token powers on the individual that is both M and P, that individual is endowed with two tokens of each of M's powers—one token from M and one from P. (Pereboom 2002, 504)

Paul Audi, however, has argued that this can't be. He claims that token causal powers must be individuated partly by the individuals that bear them. If it were otherwise, it would be possible for an individual, x, to bear two tokens of the same power type; but, Audi claims that anyone who accepts this possibility "faces troubling questions". (Audi 2012, 666) They would have to tell us, for instance, how an individual with two tokens of a power type differs from an individual with just one token of that type. Call the view that power tokens are individuated partly by the individuals that host them "The Host Individuation Theory" or HIT. If Audi's objections to PIT stand, then we have good reasons to prefer HIT. Taking HIT as given, Audi supposes that the powers conferred by Pereboom's realized mental property M must be token-identical to a subset of the powers conferred by realizing physical property P; but then each power token would have two conferrers—they would be overdetermined. Audi thus raises "a kind of exclusion problem" for Pereboom's view and others like it. (Ibid, 661)

I'll argue that Audi's questions can be answered and the presumption in favor of PIT can be preserved if we adopt The Aristotelian View. Section 2 delineates The Aristotelian View and surveys some of its attractive features. Section 3 characterizes Audi's challenge to PIT; section 4 uses The Aristotelian View to meet Audi's challenge. Section 5 then argues that while HIT fails to preserve various intuitions about the relations between properties and powers, The Aristotelian View serves to systematize and explain those intuitions. Given this and the fact that The Aristotelian View also justifies the presumption commonly found in the literature, I conclude in favor of the Aristotelian View (and PIT) and against HIT. In addition to establishing a theory of

token causal powers where previously the literature contained only a presumed view and Audi's objections, this result suggests that Audi's charge of overdetermination against Pereboom fails.

The discussion here presumes that there are power types and tokens and that power types are associated with properties while power tokens are conferred by property instances. In addition, I follow Audi in taking it that *conferral* is a determination relation wherein a property instance determines the nature and existence of a token power.[i] (Audi 2012, 659-660) For the sake of simplicity and brevity of exposition, I consider only 'forward-looking' causal powers. As far as I can tell, explicitly considering 'backward-looking' causal powers would not change the substance of the discussion here at all. It would, however, complicate exposition. (See Shoemaker 2007 for discussion of backward-looking causal powers.)

2. The Aristotelian View

I propose that the relationship between properties and powers is analogous to that between individuals and properties on an Aristotelian account. According to the Aristotelian account (i.e. the account often associated with Aristotle), properties are modes of primary substances (i.e. individuals). The latter are metaphysically prior to the former, and when an individual instantiates a property, the property instance is nothing more than a way that the individual is.[ii] The property instance depends entirely on the individual for its nature and existence.

The proposal here is that causal powers are something like the properties of properties. The role that powers play vis-à-vis property instances bears many similarities to the role that properties play vis-à-vis individuals. Just as properties give the features of individuals, powers

characterize the 'causal features' of properties (see e.g. Shoemaker 2013). Just as one individual may have many properties, so may a single property-instance confer many power tokens—that is, both relations are one-many relations. Just as properties are (often) thought to be grounded in the individuals that instantiate them, powers are thought to be grounded in the property instances that entoken them.

The Aristotelian View of power tokens takes these points to be indicative of the ontological relationship between powers and properties. It adds that power tokens are modes of property instances, so that a token causal power depends entirely on a property instance for its nature and existence. Property instances bring token powers into existence, and a given token power can't exist without some property instance bestowing it on an individual. Properties are metaphysically prior to powers, and a power token is one way that a property instance is.

I take it, then, that token powers are individuated by (i) the type of power they are and (ii) the property instances by which they're conferred. If power tokens 1 and 2 are of the same power type, then power token 1 = power token 2 just in case 'they' are conferred by the same property instance. Thus, of course, if the property instance that confers 1 is different from the property instance that confers 2, then power token 1 ≠ power token 2. Compare two individuals, x and y, where each instantiates property F. There is an F-instance borne by x and one borne by y. Under what conditions is x's instance identical to y's? *Prima facie*, just in case x = y.[iii] Just as instances of the same property are individuated by their bearers, tokens of the same power type should be individuated by their conferrers. And thus, if we take these two points together, token powers are indirectly individuated by the individuals on which they're conferred. For if x ≠ y and x and y are both F, then x's instance of F shall be distinct from y's F-instance; and thus, the token powers that x's F-instance confers will be distinct from the token powers that y's F-instance confers.

3. Audi's Challenge

In an excellent and extended critique of the subset account of property realization, Paul Audi finds occasion to disagree with the Aristotelian View of power tokens. Although his remarks do not constitute a complete articulation and defense of a view, the rudiments of the approach suggested are fairly clear. He says that being conferred by different property instances doesn't suffice for distinct tokenhood; different tokens of the same power type must belong to different *individuals*. (Audi 2012, 666) Call this Host Individuation Theory or HIT. Consider Thing 1 and Thing 2. Each has the property *being hot*, so that each has the power to burn skin. Since Thing 1 ≠ Thing 2, if each has the power to burn skin, they have different tokens of the type. Furthermore, suppose that Thing 2 also has the property *being alkaline* and that this property also confers the power to burn skin.[iv] Say that Thing 2's instance of *being hot* confers token 1 of the power to burn skin and *being alkaline* confers token 2 of the same power type. Then, on the view Audi suggests, it must be that token 1 = token 2 because Thing 2 = Thing 2.

Audi claims that if we reject this view, we must shoulder an awkward explanatory burden.

> But anyone who denies [that power tokens of a given type are individuated by the individuals on which they're conferred] faces troubling questions. What would it mean to say that, e.g., someone had two powers to bring the glass to his lips—one conferred by his neurology, the other by his thirst? How would he differ from something that had only one such power token? I doubt there are any sensible answers to these questions, and that gives us reason to reject the assumption from which they arise, namely, that something can have two power tokens of the same type. (Ibid, 666)

Of course, the Aristotelian View claims that if individual x is both very hot and alkaline, then x has two tokens of the power to burn skin—one conferred by *being very hot* and one by *being alkaline*. The Aristotelian should try to find sensible answers to Audi's questions.

We have here two views on the individuation of power tokens. They disagree over cases in which an individual has two properties that confer the same power type. Suppose F and G both confer power type 1, that $F \neq G$, and that F confers token 1_F on a particular x while G confers on x token 1_G. Since $F \neq G$, the Aristotelian judges that $1_F \neq 1_G$, even though both belong to x. But since x = x, HIT concludes that $1_F = 1_G$, even though $F \neq G$. My aim in what follows is to offer grounds for deciding between these two. The situation may look on its face to favor either view. On the one hand, if F and G both confer power type 1 and $F \neq G$, then when F confers a token of 1 on an individual that isn't G, the token conferred is obviously independent of any tokens conferred by G. Why should it be any different when F confers a token of 1 on an individual that is G? It's hard to think of a good reason, but it must be different on HIT. For the token power conferred by F *is identical to* that conferred by G. On the other hand, Audi's challenge above is formidable. If we accept that some x can have two distinct tokens of the power to burn skin, we must explain how x differs from an individual that has only one such token. If we can't give an adequate explanation, we should reject the possibility. (Ibid, 666) We should say it's impossible for x to have two tokens of the same power type. This casts the Aristotelian View in doubt and leaves the presumption in favor of HIT.

4. Meeting Audi's Challenge

Given that Audi's intention wasn't to challenge the Aristotelian View *per se*, but to criticize Pereboom's account of property realization, we should expect that some reconstruction

and charity will be required in order to bring his point into the sort of relief necessary for our discussion. In that spirit, we should acknowledge that if we take Audi's challenge on its face, it is easily met, as follows. Suppose that Jones has two tokens of the power to bring a glass to his lips (one conferred by his thirst and one by a neurological property) and Zombie Jones has only one such token (conferred by a neurological property). Applied to this case, Audi's challenge asks, "How do Jones and Zombie Jones differ?" We can answer: precisely in that Jones has two tokens of the power and Zombie Jones has only one. Jones instantiates two properties that confer the type of power in question; each confers on Jones a distinct token of that power, and so long as Jones has either of these properties, Jones will have the power to bring a glass to his lips.

I don't mean to suggest that these claims resolve the difficulty that Audi has in mind, but I'd like to start with them so that we can focus on difficulties in seeing just what the problem *is*. If Audi's objection to the Aristotelian View is to stand, he has to say that these aren't sensible answers or they're not answers to his challenge at all. There should be some reconstruction of the challenge that shows either that they aren't sensible or that they don't answer the 'real' questions about the Aristotelian View. I'll consider two ways one might try to do so. Along the way, we'll clarify and elaborate on the Aristotelian View.

First, one might claim that neither powers nor property instances can be distinguished so easily—we can't simply accept that Jones differs from Zombie Jones when the alleged differences are *prima facie* unobservable. The Aristotelian can't simply help herself to the discernibility of the token powers when that very discernibility is what's in question.

The Aristotelian View claims that just as we may distinguish between two instances of property F by distinguishing between the individuals that are F, we may distinguish between two tokens of power 1 by distinguishing between the property instances conferring power 1. And,

since we have ways of distinguishing between instances of different properties belonging to the same individual, we have ways of distinguishing between the token powers conferred on a given individual. In other words, since we can distinguish between x's instances of *being very hot* and *being alkaline*, we can distinguish between the token powers conferred by these two property instances. Similarly, if both neurological property N and thirst property T confer the power to bring a glass to one's lips, then someone who has both T and N differs from something with only one token of the power in that the first person has both properties, T and N. If we can detect the differences between an individual with both T and N and an individual with just (say) N, then an individual with two tokens of the power—one conferred by T, one by N—can be distinguished from an individual with just one such token. If we *can't* distinguish between individuals with both T and N and those with just N, then we won't be able to detect differences between Jones and Zombie Jones, of course, but we shouldn't blame it on the Aristotelian View. It's because of the relationship between properties like T and properties like N.

Thus, I take it that if we spell out Audi's challenge this way, it doesn't throw doubt on the Aristotelian View. If the challenge is to succeed, there must be some other reason for rejecting the answers with which we began. Perhaps, then, the concern is that Jones and Zombie Jones don't differ *in their manifestations of the power to bring a glass to one's lips*. That's to say, the questions may be: *with respect to bringing a glass to one's lips*, how does Jones differ from Zombie Jones? How does Jones's manifestation of the power type differ from Zombie Jones's—does Jones somehow manifest the power type twice? And, what does it mean, *in terms of bringing a glass to his lips*, to say that Jones has two tokens of the power to do so? Indeed, we can ask more generally: how will Jones's two *tokens of the power* distinguish his behavior from Zombie Jones's?

For *these* questions, I think it's true that there are no sensible answers (aside from "not at all" and the like). It seems that having two tokens of a power type at a time shouldn't change an individual's manifestation of that power type at that time.[v] But it's not clear that this fact gives one an argument against the Aristotelian View. Why not? Because an advocate of HIT should answer these questions in the same way. On HIT, when N confers on Jones token power 1_N and T confers 1_T, $1_N = 1_T$. And whether this one token is conferred by T or N or both presumably does nothing to affect how the power manifests. Jones and Zombie Jones *are* indiscernible in their power to bring a glass to lips.

But perhaps this is exactly Audi's point: if there's no difference between Jones's manifestation of the power and Zombie Jones's, we should deny that there is a difference in the powers themselves. And this is just what Audi recommends: each has just one token of the power. The Aristotelian view, by contrast, claims that there's a difference in Jones's and Zombie Jones's power tokens that makes no difference in their power manifestations.

As far as I can tell, the Aristotelian should grant this point. But she should note that these very same considerations underwrite an objection to HIT. While it may be intuitive to accept that Jones and Zombie Jones don't differ in their powers if they don't differ in their power manifestations, this claim comes with a cost. For Jones and Zombie Jones *do* differ in their property instances. And, since both parties agree that property instances confer powers, it should be that if they differ in their property instances, they differ in their powers. An advocate of HIT has to reject this conditional.

Meanwhile, Audi's objection pushes the Aristotelian to reject a similar conditional, namely: if Jones and Zombie Jones don't differ in their power manifestations, then they don't differ in their power tokens. Note that this is just the contrapositive of: if they differ in their

power tokens, then they differ in their power manifestations. What this might show is that cases like Jones and Zombie Jones pose a difficult theory choice for both views of token individuation. For both views accept the broad priority relations among properties, powers, and power manifestations: property instances determine power tokens, and power tokens in turn determine power manifestations. These suggest the following conditionals:

1. If x and y differ in their property instances, x and y differ in their power tokens.
2. If x and y differ in their power tokens, x and y differ in their power manifestations.

But if we accept that Jones and Zombie Jones differ in their property instances but not in their power manifestations, we have to reject 1 or 2. The Aristotelian accepts 1 and rejects 2; HIT accepts 2 and rejects 1. On the face of things, the best option for these theories is to deny that Jones/Zombie Jones cases are possible, but whether we do or don't, neither theory is in a position to claim an advantage here. While it may be unattractive for the Aristotelian to reject 2, I claim that it's just as unattractive for HIT to reject 1. We stand at a stalemate on this point.

I'm not certain either that I've unearthed the grain of truth in Audi's challenge or that I've shown there to be no such grain. But I think I have shown that if there is some deeper objection to the Aristotelian View to be found in Audi's remarks, it calls for substantial clarification. Furthermore, to the extent that we've found objections in Audi's challenge, we've shown that the Aristotelian View can answer them. This is enough, I submit, to take the burden of proof off of the Aristotelian. That is to say, with these considerations in mind, the presumption is no longer against the Aristotelian. I will now argue that HIT has unattractive consequences that tip the balance of reasons in favor of the Aristotelian View.

5. Against HIT

I think that rejecting 1 above carries more unattractive consequences than does rejecting 2. I'll note some of those consequences below. Overall, the difference, I suggest, is that rejecting 2 yields an account of how powers are manifested that might surprise some, but it does little damage to the core theory of causal powers. We have to say that in some cases, x and y may differ in their token causal powers at a time without differing in their power manifestations at that time. Manifestations are sensitive to power *type*, not power token. The Aristotelian may thus accept a slightly modified version of 2: if x and y differ in their power *types*, x and y differ in their power manifestations. I find this modified version more intuitive, but I don't want to dwell on this here. The point is that the core claims about causal powers and their metaphysical-explanatory relations may be preserved even while 2 is rejected in its original form.

But in rejecting 1, Audi's view does damage to these claims. For it is in tension with a crucial claim about how causal powers fit into a broader metaphysics: that property instances necessarily confer tokens of their associated causal powers. Unusual consequences follow.

First, it seems an advocate of Audi's view must deny the *general* claim that if a property F is associated with a power 1, then if an individual x instantiates F, F confers on x a token of 1. This would be the most straightforward way of understanding the claim that property instances confer token powers on their bearers, but it isn't open to Audi. For, if x already has a token of power 1, Audi has to deny that F will confer another. Suppose, for instance, that F is *being very hot* and G is *being alkaline*. While we might think that each would confer on some individual x the power to burn skin, Audi has to add a caveat: *provided x doesn't already have the power in question*. For if x is already alkaline, then when it instantiates F, *being very hot*, F can't confer

another token of the power to burn skin—Audi thinks it's impossible for x to have two such powers. So it must be that F doesn't always confer the power to burn skin. F *would have* conferred its power on x, but this was somehow blocked by x's already having G.

This might not be so implausible, but it gets a bit worse. Suppose now that x was alkaline at noon and not very hot, but then at 1pm, x had both properties. As we've just seen, when x acquires F, *being very hot*, F doesn't confer on x a token of the power to burn skin. But if at 2pm x ceases to be alkaline but is still very hot, presumably x will still have the power to burn skin, and presumably, this is because x is very hot. So it must be that when x loses G, then F *does* confer a token power to burn skin.

Finally, suppose that x re-acquires *being alkaline* at 3pm. This time, since x is already very hot, *being alkaline* won't confer burning powers on x. Notice that in this case, whether F or G is giving x the power to burn skin depends on which x had first. At 1:05pm, x can burn skin because it is alkaline—F's power to burn skin was blocked. But at 3:05pm, x's burning power depends on F, and G's power is blocked. Thus, if scientists studying x at 3:10pm are to discover why it burns skin, they'll have to figure out which property 'got there first', F or G. Indeed, confronted with anything alkaline and very hot, we can understand why it burns skin not by physical experimentation but only by historical analysis.

These cases are incredible in part because they fly in the face of the most plausible interpretation of the claim that property instances determine power tokens. *Prima facie*, if a metaphysical theory claims that instances of property F determine tokens of powers 1, 2, and 3, then it is essential to F's nature that it confers these powers on whichever individuals are F. If the claim is supposed to be contingent upon which properties a given individual already has and in which order it acquired them, we should expect there to be further metaphysical explanations of

these contingencies—facts on which the contingencies are contingent. There should be deeper metaphysical truths about properties, powers, and individuals. Until these further explanations are provided, however, we have little understanding of the nature of properties and powers. What we do know is that properties don't confer their powers in every case. Rather, there are some rules—we don't know which—governing when a property instance will confer the power with which it is associated and when it won't.

At this point, an advocate of Audi's view might like to take a different tack. One may hope to claim that properties necessarily confer their associated powers by accepting that if some individual x is both F and (F ≠) G, and if both F and G are associated with power type 1, then x's having a single token of power type 1 is simply overdetermined. The unattractive features surveyed above may be strong enough to push one toward simply 'biting the bullet' when it comes to overdetermination. After all, one might say, it's unclear what's so bad about overdetermination in the first place (cf. Sider 2003).

Adopting this view, however, doesn't help much. To see this, note first that the overdetermination posited here is unlike paradigmatic cases of *causal* overdetermination. When two gunmen in a firing squad fire fatal shots at the dictator, for instance, each shot seems to bring about the dictator's death at the same time and each, it seems, can claim to be the cause of death at that time. But if x is alkaline and not very hot at noon, then x has the power to burn skin at noon thanks entirely to its instance of *being alkaline*. Only *being alkaline* (and not at all *being very hot*) can claim to have determined x's having a token of the power to burn skin at noon. If x then becomes very hot at 1pm, though, the advocate of this overdetermination view claims that x's instance of *being very hot* then also determines that x should have that very same token of the power to burn skin—i.e. the token that x's instance of *being alkaline* had already fully

determined. Somehow, then, long after x first came to have a token of the power to burn skin thanks entirely to *being alkaline*, x's becoming very hot made it the case that x should have that very token.

But it's not just that the conception of overdetermination here isn't causal overdetermination. Rather, it seems to me that the conception of *determination* that is operative here can't be our usual conception, whether causal or non-causal. We can get a sense for this by adjusting the firing squad case of causal overdetermination to more closely resemble the case of the very hot, alkaline thing as understood by the overdetermination view. In this case, the first gunman kills the dictator, and then an hour later, the second gunman fires a shot that would have been fatal had the dictator been alive. But the dictator was not alive, so the second gunman's shot didn't determine the dictator's death. To be very clear: in this case, the second shot does not determine the dictator's death. He is already dead. So it just doesn't seem to be a case of overdetermination.[vi] Similarly, it would seem that *being alkaline* makes it the case that x can burn skin at noon by bestowing on it a token power, and then an hour later, *being very hot* comes along and, with respect to x's having that very token power to burn skin, does nothing. As far as things go with the power to burn skin, *being very hot* gives x neither a new type of power nor a new token. Nonetheless, the overdetermination view says that *being very hot* confers on x the power to burn skin. There may be a viable conception of determination at work here, but I take it to be clear that it requires defense and elaboration. The advocate of the overdetermination view must provide us with the details before we can consider her view a viable alternative to the Aristotelian View. On the face of things, there is no sense of "determination" on which *being very hot* determines it that x has the token power to burn skin that *being alkaline* has already given to x.

Moreover, even if the advocate of the overdetermination view can find a viable account of determination, there are reasons to doubt that she can find an account of *conferral* that will make sense of her claims. For, it seems that the advocate of the overdetermination view must reject a plausible necessary condition on conferral. In particular:

[*Change*] If F confers power 1 on x at t and didn't confer 1 on x at t-1, then some change is thereby brought about at t.

I take it that this claim is not only intuitive, it is plausibly a minimal condition on *any* conception of conferral. Indeed, it's tempting to say that *at the very least*, the claim that F confers 1 on x entails that something or other has happened. But, plausibly, the overdetermination theorist has to deny it. For, again, when x is already alkaline and *being very hot* confers on x the power to burn skin, this conferral, according to the overdetermination theorist, *changes nothing* about the token or type powers that x has to burn skin. Note that while there may indeed be changes in x that F brings about (e.g. conferring *other* powers), the issue here concerns the changes that F brings about *by conferring on x the power to burn skin*. If *that* conferral changes nothing about x's power tokens or types, then it doesn't seem to meet the minimal condition for being a conferral at all.

Finally, even if the advocate of the overdetermination view can find some viable account of conferral, it seems she must say that there are several different conferral relations and that properties don't always confer powers in the same way—how they confer will depend on which powers an individual already has. Consider again the x that is alkaline at noon. When it becomes very hot at 1pm, what it is for *being very hot* to confer on x the power to burn skin does not involve the property instance's bestowing upon x a token of the power. For x already has a token of that power. Later, though, when x is no longer alkaline but is still very hot, then *being very hot*'s power conferral will be different. At that time, what it is for *being very hot* to confer the

power on x *does* involve its bestowing upon x a token of the power. If this weren't true, then x wouldn't have *any* tokens of the power to burn skin even though it is very hot. Perhaps, then, there are at least two conferral relations: a 'bestowal' conferral relation and a 'non-bestowal' conferral relation. If G and F are both associated with power 1 and G has already bestowed a token of power 1 on x, then when x later instantiates F, F's conferral of power 1 on x will be the non-bestowal sort of conferral. But if x stops being G while continuing to be F, then F's conferral of 1 on x will come to be the bestowal sort of conferral.

I hope it's clear, however, that this overdetermination view is no better than the original version of Audi's view. If the nature of a property instance's power conferral is contingent, then just as I said above, there should be deeper metaphysical truths about properties, powers, and individuals. Until these further explanations are provided, however, we have little understanding of the nature of properties and powers. What we do know is that properties don't *bestow* their powers in every case. Rather, there are some rules—we don't know which—governing when a property instance will bestow the power with which it is associated and when it won't.

But this is absurd. That properties confer the powers with which they're associated is meant to express a metaphysical law that grounds or is grounded in the natures of two fundamental ontological categories, viz., properties and powers. As a metaphysical law, it should hold with metaphysical necessity. If one accepts that properties confer the powers they're associated with, then *prima facie*, one commits to a metaphysical necessity. Unless one offers an alternative account of the relation between the two ontological categories, then, one shouldn't accept that the metaphysical necessity is defeated by contingent states of affairs. It should hold, rather, in all metaphysically possible worlds. The proposal here, however, is that this metaphysically necessary law is not metaphysically necessary: for a property fails to confer

tokens of the powers it's associated with on an individual x just in case x already has a token of the relevant power type. The metaphysical law on this view is metaphysically contingent. But surely that can't be. We should reject the presumption with which we started then: it's not true that properties confer the powers with which they're associated only under some conditions. It is metaphysically necessary, rather, that properties confer they're associated powers.

I suggest, then, that neither Audi's view of token powers nor the overdetermination view is the right view, and we do know when a property instance confers (and bestows) its powers: in every case, as the Aristotelian claims.

6. Conclusion

I conclude in favor of the Aristotelian View of power tokens. It claims that the relation between a property instance and the token causal powers it confers is similar in essential respects to the relation between an individual and its property instances. This paper articulated the Aristotelian View, tried to clarify Audi's challenge, defended the Aristotelian View against various versions of Audi's challenge, and finally raised problems for the Host Individuation Theory and for a modified view that I called "the overdetermination view". It's a consequence of the Aristotelian View that an individual may have two tokens of the same type of causal power, each token conferred by a different property instance. If this is possible, then it is in principle possible for a realizing property P and a realized property M to confer two tokens of the same type of power on a single host individual. Derk Pereboom and others who would like to claim as much without incurring the charge of overdetermination should appeal to the Aristotelian View in spelling out their accounts of property realization.

Audi raises the charge of overdetermination against subset accounts of property realization in order to level a further charge, namely, that realized properties on the view are not in fact 'nothing over and above' their realizers. He offers this as support for the inference:

> …if (allegedly) realized properties overdetermine the powers with which they are associated, there seems little reason to treat them as *realized* properties, as opposed to autonomous properties. (Ibid, 663)

If an advocate of the subset account adopts The Aristotelian View, the worry about overdetermination goes away: if realized property M is not identical to realizing property P, then M and P confer different token causal powers on their host, so there is no one token causal power that both confer, and so no token is conferred twice. But does this allay Audi's further concern about whether the realized property are "autonomous"?

The answer depends on how the alleged overdetermination is meant to relate to the charge of autonomy, but it is unclear what that relation is supposed to be. As I see it, if one would like to respond to the arguments in this paper by claiming that the charge of autonomy still stands, then one must claim that the charge of autonomy was not based on the charge of overdetermination against the subset account. To put it another way, in answering how the two charges relate, the opponent of the subset account faces a dilemma. Either the charge of autonomy is supposed to follow from the charge of *over*determination or it is supposed to follow simply from the charge of *determination*. If the first horn is taken, then because the present paper clears the subset account of the charge of overdetermination, the account is cleared of the autonomy charge as well. On the second horn, however, the charge of autonomy is untouched by the arguments of the present paper.

The problem with this horn, however, is that it goes too far. It says that if realized properties determine *anything*, then that is reason to regard them as autonomous. For instance,

note that if this claim were true, then even if realized property M and realizing property P are identical, if M determines anything (which is to say that P determines something), that is reason to regard M as autonomous from P. But they're identical! If applying the point to a case in which M = P seems an unfair characterization of Audi's objection here, ask yourself whether it's unfair to apply it to the case in which M is a proper part of P. The part-whole relation, after all, is one model for the subset strategy of realization. But if the heavy end of the bat determines *anything*—suppose it hits the baseball—, is that reason to say the bat's heavy end is 'autonomous' from the bat? If so, it isn't so in any way that's problematic for a theory of bats and their heavy ends. Given that on the subset account, the relation between realized M and realizing P is modeled in part on relations like this, the presumption should be that the same holds for M and P as holds for the bat's heavy end and the bat itself. If Audi or someone else would like to overturn this presumption, they must bear the burden of showing it to be false.

On either horn, of course, Audi's exclusion problem is solved. That's the good news for subset accounts. There's also bad news. Or, rather, there's bad news for some subset theorists. On the subset account, if property P realizes property M, then $P \neq M$. If one accepts this and the Aristotelian View (or any Property Individuation Theory), then one should take it that for any individual c that instantiates both P and M, there is at least one type of power such that P and M confer on c two distinct tokens of the power. This isn't a problem for Pereboom's view—it is Pereboom's view. But it rules out views according to which realized and realizing properties confer identical power tokens. Jessica Wilson has adopted a view of this sort. (Wilson 2011, 2012) If the Aristotelian View holds, her view and others like it must be modified.

NOTES

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[i] I take these assumptions to rule out anti-realist approaches to powers. Such views are certainly worth exploring, but since both Audi and Pereboom seem to include token causal powers in their ontologies, I take it as tangential to this discussion to consider whether powers are (say) ideological rather than ontological.

[ii] If one worries that this is obscure, some comfort may be found in Heil 2012, especially chapter 4.

[iii] But see, for instance, Lynne Rudder Baker on properties had derivatively and non-derivatively, Baker 2000, 46-58. See Author article 1 for discussion.

[iv] The example of a thing that is both hot and alkaline and where both properties confer the power to burn skin is from Audi.

[v] I'm adding "at a time" and the rest so as to skip a tedious discussion of how we might observe that Jones still has the power to bring a glass to his lips after losing property N, assuming that thirst is multiply realizable.

[vi] Rather, it's a case of late causal preemption (see, e.g., Paul and Hall 2003). When Billy and Suzy throw rocks at the kitchen window but Suzy's rock breaks it before Billy's gets there, Billy's rock doesn't *also* break the window. It's preempted. Similarly, if one were to adopt a causal model of determination for power conferral, then in cases where F *would* confer a token power on x but G has already done so, one would have to say that the later property instance, F, simple doesn't confer the token power that has

already been conferred. It has been preempted. The problem with such a view is similar to one problem with the views discussed in the main text: it makes it only a contingent truth that a property confers the powers with which it is associated—just as it's a contingent truth for some rocks that they break kitchen windows. But it was supposed to be a necessary truth that properties confer their associated powers.