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# Can the Realist Bundle Theory Account for the Numerical Difference Between Qualitatively Non-Discernible Concrete Particulars?

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#### RESUMEN

Según la versión realista de la teoría del cúmulo acerca de particulares concretos (RBT), los objetos concretos son totalidades complejas cuyos únicos constituyentes son universales. Una objeción que comúnmente se hace a RBT es el llamado 'argumento a partir de la diferencia numérica' (AND). Según AND, RBT falla debido a que no está capacitada para dar cuenta de la posibilidad de objetos que son al mismo tiempo cualitativamente indiscernibles y numéricamente distintos, una posibilidad que toda ontología de particulares concretos aceptable debería ser capaz de explicar. Este artículo (i) presenta AND, (ii) explica una estrategia que (*prima facie*) podría permitir liberar RBT de AND y (iii) argumenta que dicha estrategia está en conflicto con una característica metodológica propia de las 'ontologías constituyentes', el tipo de ontológica al cual RBT pertenece.

PALABRAS CLAVE: individuación (metafísica), universales, instanciación, constituyente, ontologías constituyentes.

#### SUMMARY

According to the realist bundle theory (RBT), ordinary concrete objects are complex wholes having universals, and only universals, as constituents. One charge usually levelled against RBT is the so-called 'argument from numerical difference' (AND). According to AND, RBT fails because it cannot explain the possibility of qualitatively identical yet numerically distinct objects, a possibility that any sound ontology of concrete particulars should be able to account for. This paper (i) presents AND (ii) explains one strategy that may prima facie liberate RBT from AND, and (iii) argues that this strategy comes at the cost of renouncing a methodological feature of 'constituent ontologies', the sort of ontology to which RBT belongs.

KEYWORDS: (Metaphysical) Individuation, Universals, Instantiation, Constituent, Constituent ontologies.

Bundle theories occupy a prominent place in contemporary analytic accounts of the nature of familiar concrete particulars. The general insight governing these theories is expressed by the two claims (i) that concrete particulars are complex wholes having an internal structure of more basic constituents and (ii) that these constituents are the properties – and the properties alone – that concrete particulars have. Now, there are two more specific versions of the theory, depending on how the term 'property' predicated in (ii) is understood. Bundle theorists of a nominalist bent conceive of properties as tropes and hence claim concrete particulars to be entirely constituted by tropes.<sup>1</sup> Those with realist inclinations, on the other hand, think of properties as universals and therefore claim concrete particulars to be entirely constituted by universals. The version of the bundle theory I shall discuss in this article views properties as universals. Let us call this version the 'realist bundle theory' (RBT). On this view, claim (ii) is captured by

(1) (x)(y) (y is a constituent of  $x \leftrightarrow y$  is a universal and x instantiates y)

where x stands for 'concrete particular' and y for 'property'.<sup>2</sup>

Enemies of RBT usually criticise this view by pointing out some basic metaphysical problems and contending that RBT cannot account for them within the framework of a realist constituent ontology. One of these problems is that of the individuation of concrete particulars. Metaphysically construed, the problem concerns the question of how to account for the possible case of numerically different yet qualitatively nondiscernible objects<sup>3</sup> (henceforth 'problem of numerical difference' (PND)).<sup>4</sup> According to this line of objection, any appealing ontology of concrete particulars must be able to provide an explanation of such a possibility, and the presupposition that concrete objects are entities of which universals are the sole constituents is unable to do so: either we renounce a realist conception of properties and invoke tropes as the ground of objects' individuation, or else we are bound to reject (ii) altogether.<sup>5</sup>

The purpose of this essay is twofold. First, it aims at providing a clear explanation of this line of argument against RBT (henceforth 'argument from numerical difference' (AND)). The second goal of the essay is to critically assess one proposal that has been made for liberating RBT from AND. I divide my exposition into four sections. Sections I and II provide a reconstruction of AND as it is deployed by RBT's enemies. Thus, in Section I, I disentangle and analyse the main claims upon which the argument is built. Then, in Section II, I explain how these claims are put to the purpose of refuting RBT. Section III puts RBT on the offensive. To do this, I focus on one of AND's claims disentangled in Section I and present an interpretation of RBT – first advanced by Rodriguez-Pereyra (2004) – that may be able to block AND. Section IV brings this interpretation into closer focus. I argue that although it has the virtue of allowing RBT theorists to remain within the context of a realist conception of properties as universals, it comes at a price which proponents of constituent ontologies – and hence RBT's advocates – might not be willing to pay. Depending on how significant the price is taken to be, the discussion in this final section might be used to support an affirmative or negative answer to the question posed above in the title.

## I

A good way of understanding AND is to begin by considering what it is that enemies of RBT are and are not willing to accept as true statements of a sound constituent ontology of concrete particulars. Consider the following propositions:<sup>6</sup>

- (2) Properties are identical in their instances
- (3)  $(x)(y) [(z) (z \text{ is a constituent of } x \leftrightarrow z \text{ is a constituent of } y) \rightarrow x = y]^7$
- (4) (x)(y) [(z) (z is a property of  $x \leftrightarrow z$  is a property of  $y) \rightarrow x = y$ ]

According to RBT's critics, any satisfactory constituent ontology of a realist sort – and hence RBT – should be such that propositions (2) and (3) are true but (4) false. And each of these propositions, with these specific truth values, plays a crucial role in AND. Before presenting the argument, it will thus be useful to be clear about the meaning of propositions (2)-(4), and particularly about the reason why (2) and (3) must be accepted whereas (4) rejected. We will focus on them in turn.

*Prop.* (2): (2) follows as a corollary of a realist conception of properties. According to such a conception, properties are *multiply* exemplifiable universals. The central insight governing it is that, as multiply exemplifiable entities, universals can be shared by, or repeated in, several individuals. For my concerns in this article, its main upshot is that, so conceived, properties *cannot* provide us with a criterion of numerical differentiation: insofar as properties are universals that concrete objects have in common, they are, as (2) contends, identical in their instances. Now, it is important to note that (2) restricts the scope of AND in a significant way. This is because not all bundle theorists, as I have already observed, are

metaphysical realists about properties. Denying the realist conception, trope-theoretic bundle theorists postulate 'abstract particulars' as the individuating principle of concrete objects: properties are not repeatable universals, but particularised abstract entities which always correspond to one particular only. Thus, advocates of tropes simply do not face PND: it is simply false that two or more objects can have even a single property in common. As Stout long ago put it, 'the green of this leaf is not the green of a neighboring leaf, however much alike the two may be ... [E]very abstract character of a particular subject is itself particular' [Stout (1952), p. 78]. Still, if one remains within the confines of metaphysical realism – and defenders of RBT are indeed bound to do so – then the truth of (2) must be accepted.

*Prop.* (3): (3) is what has been called the principle of constituent identity. It claims that any (prima facie) two or more concrete objects sharing the same constituents are (really) one and the same object. Some philosophers consider (3) uncontroversial for anyone willing to accept the idea – expressed in (i) earlier in this article – that concrete particulars are complex wholes having more basic constituents.<sup>8</sup> In Section III, I will put this principle at the centre of the discussion, so, in order to avoid repetition, I will not say anything here about the reasons that might count for or against it. For the time being, the important point to bear in mind is that (3) claims identity of constituents to be *sufficient* for numerical identity, and that this would be so by virtue of the idea, essential to any ontology of the constituents sort, that individuals are complex wholes having more basic constituents.

*Prop.* (4): (4) is the well-known principle of identity of indiscernibles. It claims that any (prima facie) two objects having the same properties are (really) one and the same object. That is, indiscernibility of properties entails numerical identity. Now, enemies of RBT take it for granted that this principle is false. In fact, as I anticipated, their very motivation for rejecting RBT springs from the assumption that there must be a way of explaining how two entities that have all their properties in common can still be two distinct beings. Yet that such a case is actually possible is not immediately obvious.

Suppose there are two concrete particulars, a and b, having the same size, colour, figure, weight, smell and so on. Objects such as a and b would be clear counterexamples to (4).<sup>9</sup> However, proponents of a

broadly Leibnizian view could reply that there is a way to show that these counterexamples ultimately fail. The point can be explained by drawing a distinction between two kinds of properties, namely *pure* and *impure* properties.<sup>10</sup> Briefly, following Rodriguez-Pereyra, the distinction can be put as follows: a property is pure if it is intrinsic or if it is relational but does not depend on the identity of the *relata* – e.g. 'being red' (pure/intrinsic property) and 'being three meters away from' (pure/relational property). An impure property, on the other hand, is a relational property to which the identity of at least one of the *relata* is essential – e.g. 'being three metres away from *a*', where '*a*' is a concrete particular [Rodriguez-Pereyra (1999), p. 434]. That is, a property is impure if it involves reference to one or more concrete particulars.<sup>11</sup>

On the basis of this distinction, let us revert to our objects a and b. And let us suppose they are spatially located so that a is to the left of b. Their similarity, the counterexample has it, ranges over all of their properties. Nevertheless, it seems clear that there are certain properties that aand b cannot have in common. For a has the *impure* property of 'being to the left of b', which b clearly lacks: otherwise we would have to say that bhas the property of 'being to the left of itself'. Now, this case, advocates of (4) go on to say, can easily be generalised. For, by definition, a concrete particular always exists in a spatio-temporal order. So, for *any* pair of concrete particulars falling under the same qualitative description – sharing the same pure properties - it will always be possible to identify some set of impure properties that they do not share with one another. Hence, there appears to be no counterexample to (4): there are no two objects sharing exactly the same properties.

Does this distinction tackle the assumption that (4) is false? Yes and no. If one interprets 'property' in (4) so as to include both pure and impure properties as types falling under it, then the distinction undermines (4). But while one may concede this conditional as a whole, the relevant question here is whether the idea expressed in its antecedent is or is not available to RBT theorists in the first place. And the answer, pretty clearly, is 'no'. The reason is rather simple. RBT theorists promise us to provide an ontological explanation of concrete particulars by reference to entities – namely properties conceived as universals – which do not pertain to the category of concrete particulars. This being the case, the ontological analysis of concrete particulars cannot assume concrete particulars. Yet the very notion of impure property already presupposes concrete particulars: a property like 'being to the left of a' includes the concrete particular a. In this sense, the notion of impure property, as Garcia points out, 'assumes that it is possible for an ordinary concrete particular to be an ontological *constituent of an abstract object like a property*' [Garcia (2013), p. 3]; in other words, it assumes that a concrete being can enter into the ontological constitution of a universal. But that RBT theorists must reject this assumption is obvious. For, if properties, as they believe, are constituents of concrete particulars, and if concrete particulars, as the notion of impure property implies, are constituents of properties, then any ontological analysis of concrete particulars will inevitably lead to an infinite regress: the analysis of concrete particulars will involve properties as their constituents, and these properties will in turn involve concrete particulars as their constituents, and so on. Thus, proponents of RBT must acknowledge that the properties in (4) can only be construed as pure properties; that is, (4) can only mean that

(4\*) (x)(y) [(z) (z is a pure property of 
$$x \leftrightarrow z$$
 is a pure property of y)  
 $\rightarrow x = y$ ].

But, of course, objects such as a and b are valid counterexamples against (4\*). Therefore, given their own beliefs, proponents of RBT must acknowledge that (4) is, in the end, false. And that is precisely what their enemies want them to do.

#### Π

On this basis, we are now on a position to present AND. As RBT's enemies deploy it, the argument has the form of a *reductio*.

Suppose there are two concrete particulars, a and b, sharing exactly the same properties. According to RBT, as (1) claims, the only constituents of concrete particulars are the properties they instantiate (impure properties excluded, as we have seen). Yet, in this scenario – the argument proceeds – RBT's theorists would be bound to affirm that a and bare necessarily *one and the same individual*, i.e. that (4\*) is true. For where could we possibly find the ground for the numerical differentiation between a and b? Not, of course, in the properties of a and b, for, by hypothesis, they instantiate the same properties, and properties, as (2) states, are identical in their instances. Nor could we find it in some other constituent of a and b, because, as (1) claims, the only constituents a thing has are its properties. But identity of constituents, says (3), entails numerical identity. Therefore, a and b must be the same object. In other words: (1), (2) and (3) entail (4\*). But (4\*) is false. Hence, RBT theorists must reject either (1) or (2) or (3) or some combination thereof. Since they are metaphysical realists and consequently cannot include tropes in their ontology, they cannot reject (2). But given that, *qua* constituent ontologists, they subscribe to the view that concrete objects are complex constructions having constituents, they cannot – in principle, at least – reject (3). Thus, to reject any possible combination including (2) and/or (3) is unacceptable as well. So, the only available option is to reject (1): concrete particulars cannot be entirely constituted by their properties. Therefore, RBT falls short of providing us with an adequate account of individuation.<sup>12</sup>

Or does it?

### III

As it stands, AND is quite strong. For it shows not only that RBT is false, but that it is false by virtue of the constituent-realist framework that it itself favours.

But is there any way of blocking AND while remaining within this framework?

Proponents of AND claim RBT to be false because it entails (4\*), which is false. However, as the discussion in the previous section in fact shows, RBT does not entail (4\*) by itself. Note, first, that what RBT asserts is (1), according to which the only constituents of concrete particulars are the universals they instantiate. Now take again our concrete objects a and b. As we know, they share all their (pure) properties or instantiate the same universals. Given (1), it follows from this that they share all their constituents. However, this does not suffice to make a and b numerically identical and thus render (4\*) true. In order to reach (4\*) from (1), indeed, a further principle is needed: it must be true that identity of constituents is sufficient for numerical identity. That is, (3) must be a true principle.<sup>13</sup> This creates room for RBT to adopt the following strategy: if (3) can be shown to be false, then (4\*) will not follow from (1), and consequently AND would not tackle RBT.

So, is (3) true?

At the beginning of this essay, I said that bundle theories combine two main claims, the first of which is that ordinary concrete object are not irreducibly fundamental beings, but derivative constructions arising from more basic constituents.<sup>14</sup> Call this claim the 'constituent-whole claim' (CWC). Of course, CWC is not only essential to RBT but to any ontology of the constituent-whole sort. Now, *one* way of interpreting CWC is this: concrete objects are not irreducibly fundamental beings but derivative constructions whose reality is *exhausted* by those constituents which ontologically ground them. We can put this interpretation of CWC as follows:

(5) For any concrete particular x there is some (collection of) constituent(s) y such that x is *identical* with y.

(5) has been endorsed by M. Loux. For constituent ontologists, according to him, concrete particulars '*are nothing more* than the items that go together to constitute them' [Loux (2002), p. 112; my emphasis]. Now, if (5) is the correct way of reading CWC, (3) is straightforward. For, if a concrete particular *is* the entities that enter into its structure as constituents, then two concrete particulars sharing all their constituents must be one and the same individual.

But is (5) the correct (or at least the only plausible) way of reading CWC?

A full treatment of this question would require us to enter into the vexed issue of what exactly the constituency-relation is. Fortunately, however, we need not go so far afield in order to assess (5). Instead, we can assess it indirectly by focusing on the narrower claim that

(6) For any concrete particular x there is some (collection of) universal(s) U such that x is *identical* with U,

which is nothing more than a translation of (5) into the appropriate language of RBT specified by (1), and which, if (5) proves right, follows from it under the assumption that RBT is an ontology of the constituent sort. At the same time, this move allows us to narrow down the strategy for RBT to block AND described above: if (6) can be shown to be false, then (5) will be a bad reading of CWC, in which case (3) will be ungrounded. In turn, this will liberate RBT from its purported commitment to (4\*).

So, is (6) true?

To begin with, note how far (6) strays from what is actually stated in (1). According to (1), the only constituents concrete particulars *have* are the universals they instantiate. According to (6), on the other hand, concrete particulars *are* only the universals they instantiate. In the former sentence, 'only' qualifies 'constituents', thus precluding other kinds of constituents (such as bare particulars) that are sometimes invoked by constituent ontologists. In the latter, contrastingly, 'only' functions as an adverb which qualifies the verb 'to be' predicated of concrete particulars themselves. These considerations reveal, explicitly and in few words, the crucial assumption on which the entire weight of AND relies, as well as what precisely the challenge is for ontologists on the side of RBT. At bottom, the entire burden of AND rests on a transition from the idea that concrete particulars have only universals as constituents, to the idea that concrete particulars are only the universals they have. If this is so, insofar as the specific kind of entity with which concrete particulars are identified, i.e. universals, is unable to ground the numerical identity of objects, then AND does actually succeed. So, the challenge that RBT ontologists must face is clear: they must provide us with a coherent version of RBT which may be able to (i) *decline to identify* individuals with collections or bundles of universals and (ii) identify individuals with a sort of entity capable of individuating.

Such a version has been advanced by Rodriguez-Perevra (hereafter 'instance-view').<sup>15</sup> Consider a concrete particular a. For (6) to be the case, the complete analysis of a's being would have to have the form of, say, 'a is  $P_1, P_2, \dots, P_n$ , where 'is' is the 'is' of identity: *a* is identical with, or nothing more than, the bundle or collection ' $P_1, P_2, \dots P_n$ '. However, qua concrete particular, a exists in a place. And when the bundle  $(P_1, P_2, \dots, P_n)$  is in a place, there is another entity there: there is an *instance* of the bundle. Insofar as it is a bundle of multiply exemplifiable universals, 'P1, P2,... Pn' can be in more than one place at once, and this implies the possibility for there to be an exactly similar, qualitatively indiscernible bundle. Only qualitatively, though. For unlike the bundle itself, each instance of the bundle cannot be in more than one place at once. So, each (non-overlapping) instance of the bundle will be numerically different from every other. Thus, in a universe in which 'P1, P2,...Pn' occurs, say, twice, 'this bundle of universals wholly located here is the same bundle as that bundle of universals wholly located there, but this instance here of the bundle in question is not the same as that instance there of the same bundle' Rodriguez-Pereyra (2004), p. 78].<sup>16</sup> To be clear, this explanation does not violate, as it might appear at first, Prop. (2). Rather, it offers an interpretation of it: for properties to be identical in their instances means that an instance or occurrence of a property or of a bundle of properties, qua property or bundle of properties, cannot be qualitatively differentiated from another instance or occurrence of the same property or bundle of properties.

Though qualitatively indiscernible, the two instances of a property or bundle of properties are nonetheless discernible in another respect. For, *qua* instances, they exist in different regions of space and thus are numerically different from one another. So, by distinguishing between bundles of properties and instances of bundles of properties, this interpretation can break with (6): a concrete particular *is not* (identical with) a collection or bundle of universals. In positive terms, a concrete particular *is* an instance of a bundle of universals, which is a sort of entity capable of performing the function that universals (and bundles thereof) are unable to perform: a unique, unrepeatable entity. And none of this prevents RBT's theorists from upholding (1): properties continue to be universals and universals continue to be the only constituents concrete particulars have.

## IV

I will not be attempting anything so ambitious as a thorough assessment of either the virtues or drawbacks of the instance-view version of RBT here. Instead, I should like in closing to reconsider the main insight on which the strategy sustaining it relies. Then I will outline what I take to be one important methodological feature of ontologies of the constituent sort. Since the instance-view is meant to be a variety of RBT and, in turn, RBT is a variety of constituent ontologies, it is reasonable to think that proponents of the instance-view would like to retain that feature. However, I will argue that they cannot.

We have seen that the instance-view can accommodate the falsehood of (4\*) because it can accommodate the falsehood of the Principle of Constituent Identity in (3). Fundamentally, however, what structures the dialectical interchange between enemies of RBT and defenders of the instance-view are different readings of CWC. In fact, as I have explained, it is precisely on account of their disagreement concerning CWC that their attitudes towards the truth value of (3) differ. Particularly, enemies of RBT take CWC to be the claim that familiar concrete particulars *are nothing but* their constituents. The strategy sustaining the instance-view consists in rejecting this strong, reductionist reading of CWC. Concrete objects are indeed complex wholes having constituents, but this does not mean they reduce to, or are identical with, these constituents; they only 'have' them.

But are there any reasons for embracing the strong, reductionist reading of CWC? I think there are.

In a justly famous article, Nicholas Wolterstorff - to whom the origin of the 'constituent-whole' terminology is usually attributed<sup>17</sup> - characterises constituent ontologies as a certain kind of philosophical project. The chief ontological proposal governing this project is that familiar concrete things are 'identical with' complexes - or 'facts', in Wolterstorff's words - of more primitive entities that do not pertain to the category of concrete particulars [Wolterstorff (1970), p. 111]. Now, thus formulated, this ontological proposal sets the framework for a fundamental methodological claim, one which articulates and bestows unity on the constituent project as a whole: the question What are ordinary concrete things?' can be translated into the question What are the constituents of ordinary concrete things?' [Wolterstroff (1970), p. 111]. Pretty clearly, this is only possible if one embraces the constituent ontological proposal in the exact terms Wolterstorff uses to describe it. For, surely, the 'identical with' idiom does a lot of work: it is precisely because ordinary things are 'identical with' their constituents that the question about the constituents of an ordinary thing can be translated into the question about what that thing is. So, it seems clear that there is something quite attractive in interpreting CWC in its strong form: it guarantees the completeness of the constituent-whole ontologies project. To use Loux's words, it allows one to characterise constituent ontologies as the project of giving 'a complete "recipe" for complex things by identifying the items that count as their constituents' [Loux (2002), p. 112)].

Yet, if the instance-view is a correct version of RBT, then, I submit, that project falls apart.

The instance-view claims particulars to be instances of bundles of universals. This permits one to block AND because concrete particulars are not metaphysically reducible to bundles of universals that cannot individuate: they are instances of bundles of universals that occupy a single region of space at any given time and hence can individuate.<sup>18</sup> Now, according to (1), the only constituents of an object are universals. And the instance-view accepts, of course, (1), for the instance-view is a variety of RBT and (1) is integral to RBT. So, it follows that, on the instance-view, what makes an object numerically one is not a *constituent* of the object. This means that, if the instance-view is true, then the question about concrete particulars' being cannot be equated with that about their constituents, as constituent-whole ontologies' methodological claim demands. On the instance-view, indeed, the complete determination of the identity conditions of concrete particulars involves reference to *two* distinct determining principles, namely the constituent universals on the

one hand, and the instance on the other. Thus, in order to give a complete recipe for familiar concrete particulars, proponents of the instanceview must go beyond the limits of the constituent ontology project within which that view is supposed to work: the analysis of things' constituents falls short of providing us with an explanation of the thisness of things. Therefore, I conclude that, if the instance-view is the correct interpretation of RBT, then RBT can no longer be conceived as a selfstanding enterprise of philosophical analysis. Further, since RBT is supposed to be the right way of understanding constituent-whole ontologies and constituent-whole ontologies are supposed to be the right way of understanding ontology, I conclude that, if the instance-view is the correct interpretation of RBT, then RBT and constituent-whole ontologies just fail to be what they are supposed to be. That's the cost.

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## NOTES

<sup>1</sup> Classical defenders of this view are Campbell (1990), Williams (1953) and Stout (1952), pp. 77-79. Further sub-versions of the trope bundle theory are distinguished by Simons (1994).

<sup>2</sup> With slight variations, I take this formulation from Rodriguez-Pereyra (2004), p. 72.

<sup>3</sup> On this formulation of the 'metaphysical problem of individuation', see Moreland (1998), p. 251. The epistemological side of the problem, i.e. that concerning our capacity to single out objects, will not be considered in this essay. For the distinction between a metaphysical and epistemological side of the problem of individuation, see Lowe (2003), pp. 75-6.

<sup>4</sup> That such a case is actually possible is usually assumed in discussions of RBT. Orthodox Leibnizians will of course complain: as they see things, there is no such thing as numerically different objects sharing all their properties. Thus,

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the PND is simply not a problem. I will come back to this below. See pp. 4-5 (*Prop.* (4)).

<sup>5</sup> To reject (i), of course, is not an option if one wants to remain within the framework of constituent ontologies. Now, within this framework, the main advocate of the second alternative is bare particularism. According to this doctrine, concrete objects are complex beings constituted by properties plus a 'bare' (or 'thin') particular: a property-less, non-repeatable entity which plays the role of individuator of concrete objects and/or property bearer. I shall not discuss this doctrine in this essay. However, when I talk about 'enemies of RBT', it is mainly this doctrine that I have in mind. In fact, the argument I will be dealing with is usually deployed as part of a larger argument for bare particularism – and not only against RBT. For further details, see Garcia (2013).

<sup>6</sup> In this preliminary account of the argument I have been helped by Loux (2002), pp. 111-3; Moreland (1998), pp. 252-3; Garcia (2013).

<sup>7</sup> I borrow this formulation from Garcia (2013), p. 5.

<sup>8</sup> See e.g. Moreland (1998), pp. 252–3; Loux (2002), p. 152.

<sup>9</sup> A famous argument in this line is mounted by Black (1952), p. 156.

<sup>10</sup> This distinction underwrites the so-called notion of 'Leibnizian essence' ('individual' essence) or 'Plantinga-style essence', advanced by Plantinga (1974). As on Leibniz's view, on this account an essence is by itself the object's individuator. For more on this, see Garcia (2013), pp. 3-4; Rosenkrantz (1993), pp. 77 ff.

<sup>11</sup> On the distinction between pure and impure properties see also Loux (2002), pp 114-5 (n. 19).

<sup>12</sup> For a similar reconstruction of AND, see Loux (2002), p. 113. A different, more elaborated one is found in Garcia (2013), p. 6.

<sup>13</sup> See e.g. Loux (2002), pp 112-3; Loux (2006), p. 128; Moreland (1998), p. 252; Rodriguez-Pereyra (2004), p. 75-6; Garcia (2013), pp. 5-6. All these philosophers take (3) to be an essential premise of AND.

<sup>14</sup> See p. 25, (i).

<sup>15</sup> See Rodriguez-Pereyra (2004). Van Cleve has also developed a version of the RBT which breaks with the identification between concrete particulars and bundles of universals [Van Cleve (2001) pp. 127-30]. However, his version and the one I am about to present differ significantly regarding their positive accounts of what concrete particulars are.

<sup>16</sup> One might think this to be a re-description of the trope version of the bundle theory. I think it is not. The reason is that, while according to the trope version properties (conceived as abstract particulars) are individuators of objects, on this view the individuator principle is the instance. Properties, on the instance-view, continue to be universals and thus cannot be individuators. The (bundle of) property(ies), as Rodriguez-Pereyra remarks, is *not* the same entity as the (bundle of) property-instance(s).

<sup>17</sup> See Loux (2006); Van Inwagen (2011), p. 403 (n. 8).

<sup>18</sup> There are difficulties here that space does not allow me to develop in this essay. In short: Does the instance have a nature or reality of its own, or

does it derive its unrepeatability from space itself? Although Rodriguez-Pereyra does not elaborate on this, I take it that his position is the former. Otherwise, I cannot see how it is possible that, as he affirms, 'both relationalism and absolutism about space are live options for this version of the bundle theory' [Rodriguez-Pereyra (2004), p. 80]. If space itself were the ground of objects' numerical identity (i.e. of the instance's unrepeatability), relational space would not be a live option. However, this seems to raise a problem for the instance-view. For, if the instance has a nature, what precisely is that nature? As Casullo points out, an instance of a universal (and, by extension, of a bundle of universals) must be either (i) an abstract particular or trope, or (ii) the exemplification of a universal by a *sub-stratum* [Casullo (1982), p. 592, n. 2]. But neither of these options is available for the instance-view: for the view is meant to be a version of the realist bundle theory, which as such endorses universals and rejects substrata.

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