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# Concrete Individuals and the Failure of the Trope Bundle Solution

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## Abstract

What account can we give of the nature of the individuality of concrete particulars that allows many properties to inhere in them? Campbell argues that concrete particulars are bundles of tropes, or of instances of qualities. It is argued that we should individuate tropes spatiotemporally, as Schaffer suggests we should, and that such a spatiotemporal individuation principle makes Campbell's model require that the Identity of Indiscernibles be a necessary truth, which he rejects.

The problem of concrete individuals is the problem of how many distinct properties inhere in one, single individual. What account can we give of the nature of the individuality of concrete particulars that allows many properties to inhere in them?

Before putting forward his own solution to this problem, Campbell speaks of a proposed solution, the universal bundle theory. This solution states that for some concrete particular, *a*, if we list all the universals which *a* instantiates—say F, G, and H—then the bundle of F, G, and H will be *a* itself. However, says Campbell, there could be some concrete particular, *b*, which also instantiates all and only F, G, and H. Thus, on this view, *b* would be identical by definition with the very same bundle with which *a* is identical, merely on the basis that *a* and *b* instantiate the very same universals—in other words, on the basis of the indiscernibility of *a* and *b*. But, as Campbell points out, this solution makes the Identity of Indiscernibles a necessary truth, while in reality it is no such thing.

Campbell's own solution is that concrete individuals are bundles, not of universals, but of tropes—more specifically, bundles of all and only compresent tropes. While the

green universal of my backpack is identical with, and thus indiscernible from, the green universal of my spinach, the green trope of my backpack is neither identical with nor indiscernible from the green trope of my spinach. Thus, Campbell claims, no two distinct bundles of tropes will be indiscernible, so the problem of the necessity of the Identity of Indiscernibles does not arise.<sup>1</sup> Campbell's solution appears compelling, but on closer examination it will become apparent that the trope bundle solution succumbs to the same problems as does the universal bundle solution. To see why this is so, we must more closely examine the structure of the trope.

A trope, as Campbell describes it, is an instance of a quality. But importantly, tropes are also regional, and as such they have shapes and sizes, or are at least shaped and sized. Campbell says, "Real tropes are qualities-of-a-formed-volume."<sup>2</sup> I take him here not to be saying that tropes are qualities which have, perhaps necessarily, but not essentially, regions of a certain shape and size, but rather to be saying that a trope's region, its shape, and its size are in fact essential to it.

A trope, then, is not so simply structured as 'instance of a quality' makes it sound. Tropes are of at least three aspects—quality, shape, size. We must add yet a fourth aspect, one which will differentiate non-identical tropes of the same quality, shape, and size. Surely a one-acre-grassy-square trope in China is not identical to a one-acre-grassy-square trope in England. But what is the basis on which they are distinct? What is the fourth aspect of the trope?

As Schaffer points out, they cannot be distinct merely on the basis that the one-acre-grassy-square trope in China is the one-acre-grassy-square trope of field C, say, while the one in England is the trope of field E, as tropes, at least on Campbell's view, are taken to be fundamental, with concrete particulars dependent upon them for reality.<sup>3,4</sup> If the particularity of the field is dependent upon the particularity of the trope, the particularity of the trope cannot be dependent upon the particularity of the field.

Schaffer then claims that we are left with two possible principles for the individuation of tropes: Quantitative Individuation, and Spatiotemporal Individuation. I confess that I cannot imagine any other possible contenders. On the former view, tropes are individuated on the basis of their being quantitatively distinct; this view would have to take it as primitive that the trope in China and the trope in England are non-identical.

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<sup>1</sup> Keith Campbell, "The Metaphysics of Abstract Particulars," in *Properties*, eds. D.H. Mellor and Alex Oliver (Oxford: Oxford University Press, 1997): 131-132.

<sup>2</sup> Campbell, "Abstract Particulars," 137.

<sup>3</sup> Jonathan Schaffer, "The Individuation of Tropes," *Australasian Journal of Philosophy* 79, no. 2 (2001): 249.

<sup>4</sup> Campbell, "Abstract Particulars," 128.

On the latter view, “x and y are distinct tropes iff they are either not exactly resembling, or at distant locations ( $\text{Distance}(x,y) > 0$ ).”<sup>5</sup>

Schaffer provides many good reasons for why we should accept the principle of Spatiotemporal, rather than Quantitative, Individuation. For one thing, one of Campbell’s arguments against the substratum solution to the problem of concrete individuals—that is, the view that a concrete individual is a bare particular or unit of Prime Matter which qualities inform—is that the bare particular or Prime Matter or substratum will be imperceptible; all we can perceive are the qualities informing it. Likewise, quantitative identities are imperceptible, and so will create epistemic barriers for our individuation of tropes, which are supposed to be “the immediate objects of perception.”<sup>6</sup> These barriers do not exist if we choose Spatiotemporal Individuation, because we “can see whether [a trope] is *here* or *there*, but not whether it is *this* or *that*.”<sup>7</sup>

It should now be clear that if the individuating aspect of the trope is quantitative identity—that is, this red trope’s being *this* redness—then the trope bundle solution will not succumb to the difficulties faced by the universal bundle solution; since quantitative identity is not perceptible, we cannot use it as a basis to discern between tropes. Thus it will be possible for indiscernible tropes to be non-identical. That this difficulty *is* still faced once we determine that tropes are not individuated on the basis of quantitative identity will be argued below.

Another strength of the principle of Spatiotemporal Individuation is that it allows the trope theorist to avoid two powerful objections levelled against her. These are Armstrong’s swapping and piling objections. Let us call the one-acre-grassy-square trope in field C ‘Bill’, and the one in E ‘Bob’. The swapping objection points out that between our world and a world exactly like ours except that Bill and Bob are swapped—that is, if Bill were to become a trope of field E and Bob a trope of field C—the trope theorist with the principle of Quantitative Individuation will claim that there is a real difference, that the two worlds are distinct, even though there is in principle absolutely no empirical or causal difference between the two. As Schaffer says, the “difference seems purely verbal.”<sup>8</sup> On the other hand, if the trope theorist embraces the principle of Spatiotemporal Individuation, she will not have to claim that any real difference between the worlds; on her view, the one-acre-grassy-square trope at the location of E in the other world is the closest counterpart to the Bob in our world, and the one in the location of C in that world is the closest counterpart to the Bill in our

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<sup>5</sup> Schaffer, “Individuation,” 249.

<sup>6</sup> Campbell, “Abstract Particulars,” 130.

<sup>7</sup> Schaffer, “Individuation,” 249.

<sup>8</sup> Schaffer, “Individuation,” 250.

world. Thus with Spatiotemporal Individuation, Bob is the trope of E in the location of E and Bill is the trope of C in the location of C in both worlds.<sup>9</sup>

The piling objection takes any field which is one acre and square, and asks whether it can have two grassy tropes. For instance, can field C have as tropes both Bill and Ben, another one-acre-grassy-square trop quantitatively distinct from Bill? Again, there will be no empirical or causal difference between a world in which both Bill and Ben are tropes of C and an otherwise alike world in which just Bill is a trope of C. Yet the trope theorist holding principle of Quantitative Individuation must claim that there is a real difference between the two worlds. Once again, the trope theorist with the principle of Spatiotemporal Individuation can deny any difference between the worlds. “A ‘pile’ of [grassinesses] is just a grassiness here and a grassiness also-here, which are now seen to be identified. [Spatiotemporal Individuation] flattens the pile.”<sup>10</sup>

These seem to me the most powerful of Schaffer’s many objections to the principle of Quantitative Individuation, and I take them to be successful in demonstrating the obligation on the trope theorist to accept the principle of Spatiotemporal Individuation. Once the theorist has done this, we can add spatiotemporal location, as the differentiator, to the list of aspects of a trope. We now have as the aspects of a trope <quality, shape, size, location>.

Another way of saying that location is one aspect of a trope is to say that tropes are essentially located. As located, tropes can have spatiotemporal relations just like any other located object. It can be said, for example, that there is some trope, j, is ten miles from some other trope, k.

Imagine a trope, T1, and another trope, T2, non-identical to T1. T2 either will or will not be compresent with T1. First suppose that it is. Recall that the principle of Spatiotemporal Individuation implies that if two tropes are distinct, like T1 and T2 are by hypothesis, then either they are not exactly resembling or are not at zero distance. But since we have supposed that they are compresent, they *are* at zero distance; so we must conclude that T1 and T2 are not exactly resembling. T1 and T2 must differ either in quality, in shape, or in size. As these aspects are all perceivable, it would be possible to discern between T1 and T2 on the basis of any of them. Thus if they are compresent, T1 and T2 cannot be indiscernible if they are not identical.

Now suppose that the two tropes are not compresent, and so that they are not at zero distance from each other. We can pick an arbitrary point, P, in space time such that  $\text{Distance}(T1,P) \neq \text{Distance}(T2,P)$ , as we can for any two located objects. On the basis of their differing distances from P, we can now discern T1 and T2, so once again, they are

<sup>9</sup> Schaffer, “Individuation,” 253.

<sup>10</sup> Schaffer, “Individuation,” 251.

not indiscernible. Thus, whether they are compresent or not, if T1 and T2 are not identical, then they are not indiscernible. By contraposition, then, if two tropes are indiscernible, then they are identical.

Let us now consider, not tropes, but bundles of tropes. Suppose bundle U contains some green trope and some grassy trope, and that bundle V likewise contains some green trope and some grassy trope. Further, supposed bundle W contains the green universal and the grassy universal, and that bundle Z likewise contains the green universal and the grassy universal. We all recognize, following Campbell, that U and V are not necessarily identical, while W and Z are. But we must also recognize that, while W and Z are necessarily indiscernible, U and V are not.

Now suppose that bundle U and V are, as a matter of fact, indiscernible. This will require, of course that the green tropes in X and Y be indiscernible, and that the grassy tropes in X and Y be indiscernible. However, as we have seen above, if tropes are indiscernible, then they are identical. If the two tropes in X are identical to the two tropes in Y, then X and Y are themselves identical; they are bundles of the very same entities, and so, are the very same bundle. Campbell's trope bundle solution to the problem of concrete individuals thus requires the necessity of the Identity of Indiscernibles just as much as the universal bundle solution does. The substantive criticism Campbell makes of the universal bundle solution—that it makes the Identity of Indiscernibles a necessary truth—thus applies equally to Campbell's own trope bundle solution.

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