

## No pairing problem

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**Abstract** Many have thought that there is a problem with causal commerce between immaterial souls and material bodies. In *Physicalism or Something Near Enough*, Jaegwon Kim attempts to spell out that problem. Rather than merely posing a question or raising a mystery for defenders of substance dualism to answer or address, he offers a compelling argument for the conclusion that immaterial souls cannot causally interact with material bodies. We offer a reconstruction of that argument that hinges on two premises: Kim's Dictum and the Nowhere Man principle. Kim's Dictum says that causation requires a spatial relation. Nowhere Man says that souls can't be in space. By our lights, both premises can be called into question. We'll begin our evaluation of the argument by pointing out some consequences of Kim's Dictum. For some, these will be costs. We will then present two defeaters for Kim's Dictum and a critical analysis of Kim's case for Nowhere Man. The upshot is that Kim's argument against substance dualism fails.

**Keywords** Jaegwon Kim · Pairing problem · Substance dualism · Physicalism

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## 1 The pairing argument

We'll begin by summarizing Kim's formulation of the Pairing Argument.<sup>1</sup> 'I wasn't there.' Therefore, 'I didn't do it.' That's the Pairing Argument against immaterial souls in a nutshell. Let's look at the details. Kim thinks that causal interaction between objects requires that those objects be spatially situated. To support this, Kim describes a situation involving two guns, *A* and *B*. The guns are simultaneously fired, resulting in the simultaneous death of Adam and Bob. Kim asks, 'What makes it the case that the firing of *A* caused Adam's death and the firing of *B* caused Bob's death, and not the other way around?'<sup>2</sup> He offers two possible answers. First, there might be a continuous causal chain connecting *A* to Adam's death and another chain connecting *B* to Bob's death, such that intermediate members of each chain are located between other members of the chain. Second, there might be distinct spatial relations holding between the firing guns and their respective targets. Either answer requires that the causes of death be located in space.

Kim then turns to a scenario in which Cartesian souls are causal agents. Two souls, *A* and *B*, perform mental acts of the same type, which results in a change in a material thing, *M*. Kim supposes that it is *A*, but not *B* that succeeds in causing a change in *M*. Yet he wonders what relation could possibly pair *A*'s act with the change in *M*. Since *A* and *B* are not spatially situated, no spatial relation could account for the pairing relation. Kim considers a few relations other than spatial ones but thinks none will do the job.<sup>3</sup> So, without a pairing relation in sight, Kim concludes that it is metaphysically impossible for immaterial souls to be causally related to material bodies. A modest formulation of the Pairing Argument can be put as follows:

- (1) For all *x* and all *y*, if *x* causes *y*, then there is a relation or relations, the *Rs*, such that their holding makes it the case that *x* causes *y*.
- (2) A spatial relation is among the *Rs*.
- (3) Souls stand in no spatial relations.
- (4) Therefore, no soul causes anything.

<sup>1</sup> As Kim acknowledges, the Pairing Argument has its origin in Foster (1991). Kim first developed the argument in his (2001), but we set our sights on his most recent presentation in Kim (2005, pp. 70–92). For recent discussion of the Pairing Argument, see Witmer (2006), Sect. III of Bennett (2007), Plantinga (2007), and Wong (2007).

<sup>2</sup> *Ibid.*, p. 78.

<sup>3</sup> Kim offers a couple reasons against thinking that a psychological relation (such as, *thinking about M*) could pair between *A* with *M*. First, it is difficult to see how the mental state of *thinking about M* could obtain without presupposing that there is a causal relation between *A* and *M*. So the pairing problem remains. Second, he doubts that *A* could pick out one mental substance from an exactly similar one (a scenario which Kim thinks should be possible if there could be Cartesian souls), unless *A* were to *already* bear a pairing relation to the one substance that she did not bear to the other. So, a psychological relation won't account for pairing.

Kim also considers whether a system of 'mental space' analogous to physical space might account for the pairing relation between *A* and *M*. Kim finds this proposal to be mysterious. Furthermore, O'Connor (2000) points out that mental space apparently cannot account for why we *continually* have the same pairings of individual souls to bodies, despite constant relational changes on the physical space. So, without a pairing relation in sight, Kim concludes that it is metaphysically impossible for immaterial substances to be causally related to material bodies.

The conclusion is a modest one—more modest than the one Kim is after. Kim says that it's impossible for a soul to cause something, not just that none in fact do. The reason is that he takes the above premises to be necessarily true. So we'll be evaluating an argument with stronger premises<sup>4</sup>:

- (5) Necessarily, for all  $x$  and all  $y$ , if  $x$  causes  $y$ , then there is a relation or relations,  $R_s$ , such that their holding makes it the case that  $x$  causes  $y$ .
- (6) Necessarily, a spatial relation is among the  $R_s$ .
- (7) Necessarily, a soul stands in no spatial relations.
- (8) Therefore, it is impossible that a soul causes anything.

Premise (5) is the keystone to the Pairing Argument. It states that there must be a relation or relations that obtain in virtue of which one thing causes another. Such a relation is a pairing relation. Premise (6) says that a spatial relation is a pairing relation. We'll refer to the conjunction of premises (5) and (6) as Kim's Dictum. Kim's Dictum says, in short, that causes must be spatially paired with their effects. Premise (7) is what we shall call the Nowhere Man Principle, or just Nowhere Man. According to Nowhere Man, souls cannot be found anywhere in space.

## 2 KD: counting the consequences

Before arguing directly against Kim's Dictum (henceforth, KD), we shall note a few consequences of the view. First, KD implies that no immaterial entities could cause anything. So if sound, the Pairing Argument is an argument not just against substance dualism, but also against the metaphysical possibility of gods or angels entering into causal relations.<sup>5</sup>

Second, given a standard view of the Big Bang, KD entails that the singularity could not have been caused, given that the singularity is thought to represent the beginning of the existence of space.<sup>6</sup> Thus, models on which the singularity had a cause are automatically ruled out.<sup>7</sup>

Third, KD precludes certain kinds of co-location, given that co-located causes can't be spatially distinguished. Here are some examples. A cat and its flesh are entirely coincident—they overlap all their material parts. But the cat might have mental properties even while its lump of flesh doesn't. Suppose mental properties

<sup>4</sup> 'This argument shows that immaterial minds, if they existed, would be *incapable* of entering into any causal relations.' Kim (2005, p. 3, emphasis added). See also: 'The more we think about causation, the clearer becomes our realization that the *possibility* of causation between distinct objects depends on a shared space-like coordinate system in which these objects are located...' Ibid., p. 91, emphasis added.

<sup>5</sup> O'Connor (2000) disagrees. He proposes that Kim's argument would not apply to God since God is supposed to be the *unique* creator and sustainer of the universe and necessarily so. Thus, there is no need to ask why God should be causally paired with our universe. But put the universe aside. There is still a problem with respect to the possibility that God create a change in a material object: by virtue of what is *God*, as opposed to some other non-spatial soul, the cause of that change? The Pairing Argument crucially relies on KD, which entails that an entity cannot be the cause of some effect if no spatial relation holds between the cause and effect. Thus, the Pairing Argument is incompatible with theism.

<sup>6</sup> For this same point, see Moreland (2005, p. 468).

<sup>7</sup> See, for example, a model proposed by Smith (2002).

contribute causal powers; then the cat and its flesh have distinct causal powers despite their coincidence. A dollar bill—not the paper that constitutes it—enters into causal relations (in a transaction, say). But the dollar bill coincides with its paper. A statue may have aesthetic properties which confer on it causal powers (to affect viewers, say) even while the lump of clay constituting the statue lacks these aesthetic properties and causal powers.

These are controversial cases. But anyone inclined to accept one of them cannot accept KD. For some, this is a cost. Lynne Rudder Baker, for example, believes that a statue and the lump of clay that constitutes it are distinct, yet wholly coincident objects which house distinct causal powers. She is committed, therefore, to denying KD.<sup>8</sup> If KD is inconsistent with certain frameworks, that may count against those frameworks. Nevertheless, our purpose here is to draw attention to a few metaphysical consequences of KD that certain philosophers would not accept.

### 3 Against KD

In the previous section, we identified metaphysical frameworks that are inconsistent with KD. In this section, we shall supply arguments against KD that do not rely upon partisan metaphysical frameworks. The plan is to put forward two defeaters to KD that would appeal to a broad audience of philosophers.

#### 3.1 Causal generality

Kim doesn't tell us why we should think that there should be a principled way to pair causes with their effects. He simply asks, 'What relation might serve to pair?' We have a guess as to the underlining reasoning for thinking that there must be a pairing relation: pairing is required because the satisfaction of a generality condition is necessary for causation. It turns out that there are a variety of generality conditions that might be necessary for causation, and not all of them result in a pairing problem for non-spatial souls (we'll return to this point later). One generality condition, however, that does seem to pose a pairing problem is as follows:

(GC) Necessarily, if *A* and *B* share all of their non-haecceitous properties, then *A* is no more qualified to count as the cause of *C* than *B* is.

By 'haecceitous' properties, we mean, roughly, those properties that are both unique and essential to a thing (e.g. *being identical to A*). For our purposes, a property will also count as haecceitous if its instantiation entails some fact about a particular contingent, concrete object—for example, *being such that A causes C*, or *being such that John knows that A causes C*. According to GC, then, for a thing *A* to be uniquely causally paired with an effect *C*, it cannot be the case that there is a thing *B* that is indiscernible from *A* in all non-haecceitous respects. There has to be something about *A* to distinguish it from *B* other than (say) the trivial (haecceitous) fact that *A* is identical to *A*, whereas *B* is not identical to *A*.

<sup>8</sup> See Baker (2000, Chaps. 2 and 7).

To see how GC motivates the need for causal pairing, consider a scenario in which there are just three evenly spaced, exactly similar concrete objects. Suppose the center object suddenly cracks in two. If GC is true, then neither of the end objects can qualify as the cause of the cracking. The reason is that the end objects are indistinguishable in all (non-haecceitous) respects. It's true that they have different locations. But given that the locations are the same distance from the cracked object, it seems that locations would only make a causal difference if haecceitous properties of the locations made a causal difference. Since haecceitous properties don't make a causal difference given GC, something besides the haecceitous properties of the end objects must be causally relevant if one end object rather than the other is to be the cause of the crack. It then makes sense to ask, "What relation might serve to pair a cause with its effect?" In the case of a non-spatial soul being produced by a physical structure, say, it makes sense to ask why that soul is causally related to the one physical structure rather than to another exactly similar physical structure.

Suppose, instead, that GC is false. Then it may be possible for one of the end objects in the above scenario to be the cause of the cracking even though the other end object is indistinguishable. More generally, it would be possible for there to be a cause *C* which causes an effect *E* even if there were no (non-haecceitous) property of *C* or of *E*—such as, being spatially oriented in the right way—whose instantiation distinguishes *C* from every other candidate cause of *E* in the neighborhood.<sup>9</sup> Hence, if GC is false, then a pairing relation may not be required for causation. KD, then, may be unmotivated unless support can be mustered up for GC.<sup>10</sup>

There may be alternative motivations for requiring a pairing relation. Hong Yu Wong, for example, in his discussion of the Pairing Argument puts forward a *different* generality condition which is consistent with the denial of GC (and consistent with singular causation). The condition says that causal transactions are governed by 'non-haecceitous' laws, whether those laws be deterministic or indeterministic.<sup>11</sup> It's not clear, however, why this condition should result in the requirement that a spatial pairing relation is needed for causal transactions. It seems to us that causal transactions between *non-spatial* souls and material things can be governed by non-haecceitous laws. For example, it may be that there is a law dictating that a physical structure exhibiting certain properties produces a non-spatial soul of a certain kind, and that there is a further law dictating that any soul produced by a structure will, under certain conditions, remain causally related to certain material parts of that same structure. Thus, it is not at all clear why Wong's generality condition is supposed to result in a pairing problem for non-spatial souls.

<sup>9</sup> In this situation, *C* and *E* may be related by a singular causal relation—a relation that isn't an instance of a law. But singular causation is not the only logical possibility. It's logically consistent that they be related by an instance of a 'haecceitous' law applying just to *C* and *E*. For an explication and defense of singular causation, see Tooley (1997, pp. 89–92).

<sup>10</sup> For what it's worth, some substance dualists explicitly endorse the possibility of what we're calling causal singularism. See Foster (1991, p. 167ff) and Unger (2006, Chap. 7, especially Sects. 6–7).

<sup>11</sup> For example, let *A*, *B*, and *C* be intrinsically similar objects. If there is a .2% chance that *A* affects *B* in a certain way whenever *B* is 2 m from *A*, then there is also a .2% chance that *A* effect *C* in the same way whenever *C* is 2 m from *A*. See Wong (2007, pp. 180–181).

If there are motivations other than GC for thinking that a (spatial) pairing relation is required for causation, it is not obvious what they might be. Thus, anyone who thinks KD can be motivated without appeal to GC owes an account of what that motivation is.

We'll now consider two reasons one might doubt GC. The first is based upon a connection between a certain conception of free will and the denial of GC. It's common for immaterialists about human persons to think that a person can enjoy agent causal powers that allow her to choose an action among a range of alternative actions. The idea is that no property instantiated prior to the time of the agent's action fixes exactly which action she performs (besides, of course, properties such as *being omniscient and believing that p will be the case*, or *being such that p will be the case*, and the like). We think such immaterialists would happily grant in addition that indistinguishable agents would (or at least could) have the same causal capacities. Now consider a world in which two persons, Tim and Tom, are exactly similar in all respects (excluding, of course, their haecceitous properties). Suppose that Tim and Tom each have the same two options available to them—to cause *A* or to refrain from causing *A*. If Tom happens to cause *A* while Tim refrains, then we have a situation in which GC fails. The reason is that Tom and Tim are indistinguishable and yet Tom counts as the cause of *A*, whereas Tim does not. Notice that we haven't made any assumptions about whether or not causation can take place outside a spatial framework. The assumptions brought into the scenario were merely the assumptions about free will that many immaterialists hold. If those assumptions are true, then GC is false. Therefore, many immaterialists are already committed to the denial of GC.

A defender of the Pairing Argument might doubt typical immaterialist views about free will. But recall our present place in the dialectic. The Pairing Argument is directed toward those who countenance immaterial substances. So if the Pairing Argument is to make converts, it ought not presuppose the falsity of beliefs that potential converts hold. Unless we couple the Pairing Argument with an argument for GC, it seems reasonable for many immaterialists to resist the pairing problem by reasoning as follows. There are possible exceptions to GC, or, perhaps, *for all we know*, there are possible exceptions to GC. Therefore, a pairing relation is not (or, is not, for all we know) a necessary condition for causation. Therefore, the Pairing Argument provides no reason to think that an immaterial agent would have to be spatially situated in order to act on a material object. The Pairing Argument fails to exclude, for example, the possibility that a physical structure via a singular causal act produces a non-spatial soul. (The causal act may still be governed by a probabilistic law.) For some immaterialists, there is also the possibility that an agent, such as God, causes a soul to be causally connected to a certain physical structure (via a singular causal act).<sup>12</sup> In light of these possibilities, immaterialists need not accept GC or KD.

<sup>12</sup> How does a soul *continue* to be related to a certain body? One possibility is that a law dictates that souls causally interact with the parts of whatever structure produced them. A more partisan option is to suppose that God continues to pair mental events with certain physical effects and vice versa. For an elaboration of this possibility, see Plantinga (2007, pp. 132–133).

One need not believe in immaterial souls or in a certain conception of free will to have doubts about GC. Michael Tooley, for example—no believer in souls—offers several arguments that imply the falsity of GC. Here's one of them. Consider a world in which the following laws obtain:

- (L1) For any  $x$ ,  $x$ 's having property  $P$  will give rise to either  $x$ 's having  $Q$  or to  $x$ 's having property  $R$ .
- (L2) For any  $x$ ,  $x$ 's having property  $S$  will give rise either to  $x$ 's having  $Q$  or to  $x$ 's having property  $R$ .

Let the world also be one in which a thing has properties  $P$ ,  $Q$ ,  $R$ , and  $S$ . Given the laws above, does  $x$ 's having  $P$  cause  $x$  to have property  $Q$ ? Or is  $x$ 's having  $Q$  instead caused by  $x$ 's having  $S$ ? There can be no answer to these questions unless a *singular causal relation* can hold between, say,  $x$ 's having  $P$  and  $x$ 's having  $Q$ . If one thinks such a world is possible, and if one thinks that  $x$ 's having  $Q$  would be caused either by  $x$ 's having  $P$  or else by its having  $S$ , then one should be inclined to accept the possibility of singular causal relations.<sup>13</sup> That is, one should be inclined to accept the possibility that two events be causally related, without that relationship being an instance of (or determined by) some non-singular causal law.<sup>14</sup> Yet if singular causal relations are possible, then it seems that it should be possible for a cause to stand in a singular causal relation to an effect while there is an indistinguishable candidate cause in the neighborhood, given that singular causal relations are not fixed/determined by the properties that a thing has. Thus, we believe that those who accept a Tooley-styled argument like this one for the possibility of singular causation should be inclined to doubt GC.

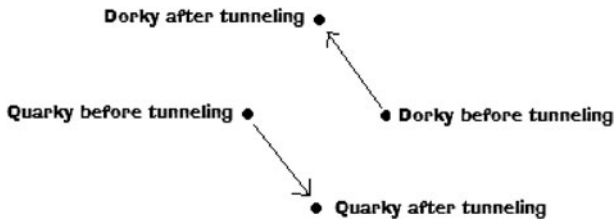
To sum up, support for the pairing premise depends upon something like GC. Yet many immaterialists and materialists alike believe in the possibility of singular causation and are therefore committed to the denial of GC. Unless support can be found for GC, then, the pairing premise is unsupported.

### 3.2 Quantum tunneling

A second defeater to KD comes from an example of causation without a pairing relation, which assumes realism concerning quantum physics. Consider two quarks, Quarky and Dorky. If we assume a standard Copenhagen interpretation of quantum mechanics, then at a certain time (relative to some arbitrary reference frame), Quarky and Dorky both “quantum tunnel” (during which their locations are ontologically indeterminate) a full meter from their respective starting points. Dorky's resulting position bears the same (or symmetrical) spatial relation to his starting position as it does to Quarky's starting position. Similarly, Quarky's resulting position likewise bears the same (or symmetrical) spatial relation to his starting position as it does to Dorky's starting position. The situation is pictured below:

<sup>13</sup> See Tooley (1997, p. 200).

<sup>14</sup> See Tooley (1990).



The problem is that no spatial relation can pair Quarky (or Quarky events) after tunneling with Quarky (or Quarky events) before tunneling. In virtue of what does Quarky end up where it does after tunneling rather than where Dorky ends up? No causal account can be offered if causal relations require a spatial pairing relation. For Quarky ends up just as far from *its* original position as it does from Dorky's original position. Why, then, is Quarky-before causally paired with Quarky-after? Spatial considerations cannot answer that.

One might object that our situation presupposes a mistaken understanding of quarks as *substances*. Some quantum physicists, for example, claim that a more accurate understanding of quarks is that they are perturbations in a field and so are not entities that persist through time.<sup>15</sup> Nevertheless, even if quarks do not persist through time, all that we require is that there be quark *events* that stand in causal relationships to other quark events. For, there appear to be events, Quarky-before and Dorky-before, occurring at some time  $t_0$  and events Quarky-after and Dorky-after occurring at  $t + 1$ . The result is the same: Quarky-before is causally related to Quarky-after, but not by virtue of any spatial relation.

#### 4 Against nowhere man

In this section, we contest Nowhere Man, and defend the possibility of souls in space.<sup>16</sup> Kim addresses this strategy and considers the prospect of souls as extensionless geometric points. He finds this option unpromising for three reasons. Let's take a look at them.

Here's his first reason. If my soul is a geometric point in my body, it must be either in the top half of my body or its bottom half. If it's in the top half, it must be either in its left or right half, and so on, and we should be able to corner the soul into as small and specific a region of my body as we like. But this is absurd.<sup>17</sup>

We respond in two ways. First, suppose souls are extensionless geometric points located in, say, the pineal gland of their respective bodies. There is nothing impossible about this supposition, so far as we can see. So it's not clear how Nowhere Man is supposed to follow from Kim's remarks. Second, we are unsure

<sup>15</sup> We owe this objection to Alvin Plantinga. See also Redhead (1988, pp. 9–23).

<sup>16</sup> It's worth noting that this idea—souls located in space—isn't a new one. See, e.g., Clarke (1978, pp. 784–795). Contemporary defenders of substance dualism who endorse the spatial location of souls include Hart (1988) and Hasker (1999).

<sup>17</sup> Kim (2005, p. 89).



what the argument in this passage is supposed to be. If there is a puzzle here having to do with souls being *point-sized*, why not instead consider souls to be spatially extended beings? Thinking of souls as geometric points may be strange, but the substance dualist need not do this. Here's a story we think substance dualists can tell. Souls occupy regions of space. They are extended, but neither physical nor material. And a particular soul is tied to a particular body ("its" body) by virtue of occupying the same region of space as that body.<sup>18</sup> Since souls are spatially situated, they enter into spatial (that is, pairing) relations, and are hence candidate causal relata. This story meets one of Kim's desiderata: it does not employ the concept of causal interaction to explain the possibility of causal interaction. Now take Kim's paradigmatic problem scenario containing souls *A* and *B* and the material substance *M*. Kim asked what could pair soul *A* (and not soul *B*) with body *M*. We have an answer to Kim's question. *A* caused the change in *M* because *A* exactly occupies the same region of space as *M*. *B* occupies another region of space, and hence did not cause the change in *M*.

Let's turn to Kim's second objection to the strategy of locating souls in space. If souls are extended in space, 'why aren't souls just material objects, albeit of a very special, and strange, kind?'<sup>19</sup> We respond that extension does not obviously entail physicality or materiality. It is plausible to think that the physical, whatever else it may be, must not be fundamentally mental.<sup>20</sup> But souls, whether extended in space, points in space, or otherwise, are fundamentally mental, and hence not physical. The same goes for the material, we'd think; material objects are not fundamentally mental. So souls are not material either.

And now for Kim's final argument against spatially located souls. He asks, 'what of co-location?' If souls are located, what is to prevent a soul from occupying the very same region of space as another intrinsically indiscernible one? If duplicate souls occupy the same region of space, how can we count one soul rather than the other as the cause of some activity in a body? Kim suggests that the substance dualist must employ a principle saying that no two souls can exactly occupy the same region of space, a principle analogous to the 'impenetrability of matter'. Kim further argues that there is little reason to believe such a principle is true. Let's grant the point and see what the substance dualist can say.<sup>21</sup>

Take a sort of folk substance dualism according to which there are ghosts and their ilk in this material world: immaterial substances which nonetheless occupy regions of space and exert causal influence on the material world. Now say that one of these ghosts exactly occupies the region of space that my soul and my body also occupy. When my right arm flings into the air, there is a question of whether it is I or the ghost who caused my arm to move. There are a couple options available for the dualist to consider. One option is that the one who moved the arm is the one who

<sup>18</sup> There are various relations an object might bear to a region of space. The substance dualist has options here. For discussion, see Hudson (2005, pp. 98–106) and Parsons (2007).

<sup>19</sup> Kim (2005, p. 90).

<sup>20</sup> See Wilson (2006) for an extended defense of this idea, especially her discussion of the 'No Fundamental Mentality Constraint.'

<sup>21</sup> Kim (2005, p. 90).

*intended* to; or if we must say that both intended to move the same arm (if I and the ghost are intrinsic duplicates, say), then we have a case of causal overdetermination. Compare the case of two souls moving the same arm with a case of two bullets simultaneously tearing into a person's heart causing death. If we can't say which bullet caused the death, then it seems that we should also not be able to say which soul caused the arm to move.

A second option is that there simply is no fact of the matter about which being caused the arm to move. This idea is consistent with the folk notion of possession by a ghost: when a possessed human lifts her hand, for example, it's not determinate whether a human soul-event caused the lifting of the hand, or a ghost-event.

It is true that the above options permit cases in which a soul cannot be causally paired with a body. In the case of overdetermination, for example, we can't pair bodily movement with one soul rather than with others in the neighborhood. We don't take this to be a problem for soul-body interaction in general. What the substance dualist needs in order to exonerate soul-body interaction is not a principle according to which souls can't be co-located; all she needs is that in the ordinary cases where souls are not co-located, there is a way to account for the causal pairing of souls with bodies. If souls are spatial, then the vast majority of soul-body interactions can be explained by use of a pairing relation, even if there are outlying cases where such an explanation is not forthcoming.

Putting aside the options of over-determination and indeterminacy, what's so bad about the 'impenetrability of souls' principle? Kim thinks that the principle is ad hoc. Maybe it is. On the other hand, it's not easy to see why a dualist should be troubled if the Pairing Argument implied that co-located souls are impossible. If there's a cost for the dualist here, it's not clear that dualists (viz., those who don't accept the over-determination or indetermination options) shouldn't be willing to pay it.

We have told a story according to which soul-body interaction is possible. But perhaps our story pushes the problem backwards a step. One might wonder, for example, why it is that over time certain souls (and not others) occupy the same regions of space as do certain bodies. Why is it that certain souls seem 'glued' to certain bodies, such that, when a body moves in space (say, as the result of a push or a pull), its soul does the same? We might call this the Diachronic Pairing Question. We propose that a satisfying answer to the Diachronic Pairing Question consists in answering why the following proposition is true:

(Glued): For any time  $t$  at which  $A$  and  $M$  both exist, if  $M$  were to have exactly occupied some region  $R$  of space at  $t$  instead of the one it actually did,  $A$  would have exactly occupied  $R$  as well (and the converse counterfactual is true, too).

The substance dualism we have in mind is committed to (Glued) being true with respect to many (if not all) souls and bodies in the actual world. (Glued) asserts that there is a counterfactual relation between where  $A$  is located and where  $M$  is located:  $A$  and  $M$  are glued together, so to speak.

Can the substance dualist account for why (Glued) is true? We believe she can. The substance dualist may explain (Glued) in terms of causal relations between  $A$  and  $M$ . The locations of  $A$  and  $M$  are counterfactually related because  $A$  and  $M$

causally interact in the following way: when *A* moves (as the result of an intention on the part of *A*, say), *A* causes *M* to move. Similarly, when *M* moves (as the result of a push or a pull from some other material body, say), *M* causes *A* to move. Note that the substance dualist has not invoked causal interaction to explain the possibility of causal interaction. The possibility of causal interaction obtains in virtue of facts about the locations of *A* and *M* at times. It is only the counterfactual relationship between these locations at times that obtains in virtue of causal interaction between *A* and *M*. Making this distinction allows us to see that there is no objectionable circularity at play here.<sup>22</sup>

The upshot of all this is that the impossibility of spatially located souls has not been established. Thus, we see no reason to accept Nowhere Man. With both Kim's Dictum and Nowhere Man unmotivated (and the former facing counterexamples), the Pairing Argument fails to cast doubt on substance dualism.<sup>23</sup>

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<sup>22</sup> Kim might be tempted to reply to this section that while Nowhere Man is, strictly speaking, false, it is a tenet of the sort of substance dualism he was attacking: a Cartesianism according to which souls mustn't be located in space or extended. Still, note that in *Physicalism or Something Near Enough*, Kim employs the Pairing Argument to rule out substance dualism simpliciter. See Kim (2005, p. 3).

<sup>23</sup> While the authors of this paper agree on the unsoundness of the Pairing Argument, we don't agree on substance dualism; one of us is a physicalist (or something near enough). Another of us suspects that souls exist but are spatially extended. And another of us thinks that souls exist but are not spatially situated.

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